EXPLORING WRITTEN ARTEFACTS

OBJECTS, METHODS, AND CONCEPTS

VOLUME 1

Edited by Jörg B. Quenzer

Exploring Written Artefacts

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Objects, Methods, and Concepts

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Gleichstellung und Bezirke der Stadt Hamburg

Jörg B. Quenzer
Introduction: In Honour of Michael Friedrich

1 Commemorating a caesura

This two-volume work is exceptional in the series Studies in Manuscript Cultures (SMC). In contrast with the previous publications of that series, which were primarily either the outcome of long-standing individual research or the result of workshops or thematic discussions, the occasion for these volumes is personal. Michael Friedrich, undisputed godfather and *spiritus rector* of the Centre for the Study of Manuscript Cultures (CSMC)[1] at the Universität Hamburg, will formally retire in October 2021 from his position as ordinary professor. Although this administrative and legal caesura does not necessarily mean the end of his activities at the centre, there was a consensus that this occasion should not pass by unnoticed; so a group of colleagues at the centre took the initiative to promote the publication of a Festschrift in honour of our much esteemed colleague.

There was also a clear consensus that such a Festschrift should go beyond a mere collection of articles, a 'bouquet of flowers' of quite different provenance – e.g. remembrances, anecdotes, and the like – often to be found in this genre, and instead feature scholarly, peer-reviewed contributions, embracing the broad range of topics and themes that have been subject to profound research at the centre since its formal inauguration in 2012 and earlier. In this regard, the editor of these volumes was able to draw on an outstanding example. Michael Friedrich himself, as editor of a Festschrift with the programmatic title *Han-Zeit*, dedicated to Hans Stumpfeldt (1941–2018), who was a renowned sinologist at the Universität Hamburg for more than twenty-five years, has set the highest standards for a publication that, despite the ambivalent genre, is convincing both in its conceptualization and in the quality of its contributions.[2]

Those familiar with the centre and its manifold activities during the last two decades are well aware of the fundamental role of its founder. Michael Friedrich acted and acts as spokesperson for the three past and present institutional

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1 Even though the formal establishment of the CSMC only dates to the year 2012, the term 'centre' has already become a loose designation for adjacent activities at Hamburg and is sometimes used anachronistically in the following pages.
2 Friedrich 2006.

incarnations – the *Forschergruppe* (research unit) Manuscript Cultures in Asia and Africa (2008–2011), the *Sonderforschungsbereich* (collaborative research centre) 950 Manuscript Cultures in Asia, Africa, and Europe (2011–2019), and the present cluster of excellence Understanding Written Artefacts (2019–). He was and is the pivot point, either conceptually, organizationally, politically, or at a personal level, of all activities and the driving force behind several more or less closely related projects. This introduction, therefore, serves a twofold purpose. It unfolds the multifaceted academic career of Michael Friedrich, and at the same time integrates, in a rather abridged manner, the institutional framework he has established during the last twenty years.

The scope of the following *laudatio*, however, has its limits. The main perspective of this two-volume collection, the background shared by all the colleagues who have come together to praise the achievements of the dedicatee, is the field of manuscript studies and the understanding of written artefacts. Here we can only hint at Michael Friedrich's other academic personalities during the last thirty to forty years, each deserving their own appraisal by experts in the respective fields.

First among these personalities is the renowned sinologist, who started his career at the Universität Freiburg, before moving to the Ludwig-Maximilians-Universität München. In sinology, he specialized foremost in the history of ideas – with a dissertation on Daoism[3] and a *Habilitationsschrift* (postdoctoral thesis) focusing on the relationship between thought and language in Chinese intellectual history[4] – but always open to other realms within the field: literature, mythology, linguistics, and much more. Since 1994, Michael Friedrich has held the chair for the Language and Literature of China at the Universität Hamburg. During the last twenty-seven years he served as the primary supervisor for more than thirty doctoral students; more than five of his students are now professors in the fields of sinology or East Asian studies. Neither should his many years of commitment as member of the prestigious review board (*Fachkollegium*) in the German Research Foundation (DFG) for his field be overlooked.

Second, we ought to mention his long-standing interest in Buddhism, both with regard to the history of ideas in East Asia, and as a cultural momentum, spanning the Indian subcontinent as well as Central and East Asia.[5] For a long time, he served together with colleagues from Sanskrit studies as representative for the Numata Foundation (later institutionalized as the Zentrum für

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3 Friedrich 1984.

4 Friedrich 1989.

5 Friedrich 2000.

Buddhismuskunde) at the Asien-Afrika-Institut (AAI), Universität Hamburg, until the inauguration of a Numata Chair for Japanese Buddhism with an emphasis on its historical setting in East Asia. In recent times, he has to his credit the inclusion of East Asian studies at Hamburg in a worldwide project for the academic study of Buddhism and East Asian cultures, founded by the Social Sciences and Humanities Research Council of Canada and the GloriSun Group.

A third field of interest, which we mention here because of its interdisciplinary focus and because it serves as an early example of Michael Friedrich's ability to bring together expertise from very different fields, was embodied in the working group Hermeneutik interkulturell – intrakulturell – transkulturell, active during the late 1990s and early 2000s.[6] In hindsight, the intention that would later become the basic principle of the CSMC's approach to manuscript studies is evident: to expand a field that the European traditions have already dealt with extensively, by comparing it with non-European traditions and thus forcing both sides to adopt new perspectives and thereby generate previously unknown insights. At the same time, this approach created an opportunity in basic research (*Grundlagenforschung*) for those fields whose textual, material, or methodological basis did or does not have the same degree of development. From discussions within this group, one comprehensive contribution emerged: an extensive exposition of classical commentaries on some verses from the *Book of Odes* (*Shijing* 詩經).[7]

2 Chinese manuscripts and beyond

Michael Friedrich has studied the tomb library of Mawangdui 馬王堆, an important archaeological site in Changsha that was discovered in 1972, since the mid 1980s and held his first seminar on related topics just a few years later. In 1986, on the occasion of a conference in Shanghai, he came into contact with some of the most renowned Chinese scholars dealing with the texts found in this tomb; this contact would expand and intensify during the following years. The topic first becomes manifest with an article on two versions of the famous

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6 With Friedrich Niewöhner (1941–2005), another leading force behind this group, Michael Friedrich shared not only an interest in the history of ideas but also in practices of reading and writing; see Niewöhner 1994 on the 'Lese- oder Schreib-Maschine', arguing that the famous book wheel (*Bücherrad*) at the Herzog August Bibliothek Wolfenbüttel was used as a writing instrument by the cataloguers.

7 Friedrich 2007.

Laozi 老子 texts found at the site, already taking into consideration various aspects of the physical object, even though the main objective of these studies was rather a question of textual criticism and orthography.[8] The tomb of Mawangdui – the manuscripts it contains, its functions, and the question of the persons involved – is also the subject of later essays.[9]

With the research project on Yao manuscripts, conducted between 1995 and 1999 together with his colleague Thomas O. Höllmann and others at the Ludwig-Maximilians-Universität München, Michael Friedrich expanded his expertise beyond Chinese manuscripts in the narrow sense. The impetus for this project was the collection of more than 1,000 Yao manuscripts acquired by the Staatsbibliothek München (Bavarian State Library Munich). The project's realization was part of the large-scale Katalogisierung der Orientalischen Handschriften in Deutschland (KOHD), the results of which are published in the series Verzeichnis der Orientalischen Handschriften in Deutschland (VOHD).[10]

A notable feature of this project on Yao manuscripts is that the actual use of the artefacts, i.e. their role in a religious and performative context, was understood as essential for building the catalogue.[11] The idea of an exhibition for the interested public, accompanied by a catalogue,[12] is also something that will be returned to later at Hamburg. The interaction of the Chinese writing system with other languages, especially in South-West China and South-East Asia (including Vietnam and Laos), remained an area of Michael Friedrich's interest in the decades to come and is also present in the current research framework of the cluster of excellence under the heading 'Multilingual manuscripts'.

It is possible only to mention some other contributions. These include a thorough analysis of the statement by a Chinese editor from the first century BCE; the analysis highlights early philological methods in the realm of manuscript studies *avant la lettre* and elaborates on the historical terminology used.[13] Of very recent interest are matters of provenance within the framework of

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8 Friedrich 1996.

9 Friedrich 2008, 2009b, and 2010 (a Chinese translation of 2008).

10 Friedrich et al. 2004. For this undertaking see the contribution of Tilman Seidensticker in the present collection, who deals in detail with the history of the Arabic section of this mammoth German academic project.

11 On a general level, the relationship between manuscripts and ritual was taken up again as a research field of the SFB 950; see below.

12 Höllmann et al. 1999.

13 Friedrich 2009a.

monetary or ideological interests best examined in the realm of forgeries, a recurrent theme of the tomb findings mentioned above.[14]

The enormous influence of the image of China on European intellectual history is reflected in a contribution on the reception of Chinese script in Europe, published by Aleida and Jan Assmann in the famous series Archäologie der literarischen Kommunikation.[15] This article provides an in-depth examination of another research focus of the dedicatee: the history of the intellectual discovery and functionalization of 'China' in Europe. In this article Michael Friedrich scrupulously traces the difficulties of understanding the unknown writing system according to the Aristotelean conception of writing and its medieval reception. The constant friction between such an understanding of signs and the matrix of the alphabetic script on the one hand and the Chinese writing system on the other led to the supposition that the latter had pictorial character or secret scripts (ciphers) – the impact of that supposition can still be seen today, and not only in popular literature.

3 The path to institutionalization

The nucleus of what would later become the success story of a huge research institution can be located in the broader context of the dissertation project by Matthias Richter under the guidance of Michael Friedrich.[16] Both Friedrich and Richter organised the first two of several workshops on manuscripts from early tombs in China, bringing together colleagues from Europe and overseas.[17] The field of interest even at this early stage included not only manuscripts written with brush on wood, bamboo, or silk, but also inscriptions, which became a central topic much later in the cluster of excellence. The shared interest of the participants took institutional form in the European Association for the Study of Chinese Manuscripts, with Michael Friedrich as its first chairman.[18]

Palaeographic discussions emanating from a follow-up project by Matthias Richter led to initial contact with the Department of Informatics at the Universität

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14 Friedrich 2020; for the topic of forgeries in general, see Michel and Friedrich 2020a and 2020b.

15 Friedrich 2003.

16 Richter 2005a.

17 For the results see Richter 2003 and 2005b.

18 More details on this group can be found on its website: <https://www.zo.uni-heidelberg.de/eascm/> (accessed on 15 July 2021).

Hamburg; the manuscript scholars were looking for OCR applications that could help identify scribal hands on an objective basis – e.g. through automatic, large-scale analysis of stroke angle and stroke order – rather than by relying on the eye and expertise of a few specialists. This cooperation with computer science became a cornerstone of the research unit discussed below.

Finally, in 2004, the author of this introduction joined the sinologists at Hamburg with an interest in Japanese medieval manuscripts, thereby taking the project one step further towards an interdisciplinary research agenda.

4 The Asien-Afrika-Institut (AAI)

Michael Friedrich's long-standing interest in matters pertaining to manuscript studies in his own field was one necessary condition for the interdisciplinary approach to manuscript studies that Hamburg is known for today. In order to be successful on a sustainable basis, this approach had to be complemented by an institutional framework that could facilitate lasting engagement with the subject. Michael Friedrich found this framework in the Asien-Afrika-Institut. This discovery, however, was not a coincidence, since he was able to draw on expertise and interests within a structure that he himself had decisively helped to create. And even today, projects from Africa and Asia account for more than 50 per cent of the total number of projects at the centre. For these reasons, too, a brief digression into the history of the AAI is in order here.

The Universität Hamburg has a long tradition in the study of non-European languages and cultures, a tradition that reaches back before the founding of the university itself.[19] The so-called Kolonialinstitut, originally established for training merchants and colonial officials, established the chair for East Asia (later: Sinology) in 1909. One year later, a chair for African languages was added, and in 1914 a chair for Japanese studies, before these and other chairs related to overseas and especially to Asia became part of the Universität Hamburg, which was founded in 1919.

Michael Friedrich was one of the colleagues in the former Fachbereich Orientalistik (Department of Oriental Studies) who argued for a realignment of the department in the mid-1990s, guided by existing models in Europe, such as the famous School of Oriental and African Studies (SOAS) at the University of

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19 On the history of the Asien-Afrika-Institut in the broader context of the city of Hamburg and its university, see Friedrich 2002 and Paul 2008.

London. He was the first to clearly recognize that in times of financial and political pressure the idea to unite all non-European languages and cultures under one umbrella would not be sufficient. Of course, the 'gaze of the Other', the interest in cultural and linguistic diversity, or the challenges in teaching (e.g. very few students enrol with adequate language knowledge) did ensure an internal basis of support for the umbrella idea. But such mutual understanding was no help in the face of threats to cut chairs and budgets. This was the crucial point at which Michael Friedrich identified the study of writing, and especially the subject of manuscripts, as a unifying factor both for internal scientific cooperation and as a strategic means to demonstrate the significant potential of such an infrastructure of officially labelled *Kleine Fächer* (small subjects).

The conditions beyond his own field were promising too. Sanskrit studies at the Universität Hamburg long hosted the Nepal-German Manuscript Preservation Project (NGMPP, 1982–2002) and its follow-up, the Nepalese-German Manuscript Cataloguing Project (NGMCP, 2002–2015). Other colleagues (e.g. Thai studies, Ethiopian studies) had taken part in the previously mentioned nationwide cataloguing project KOHD, or conducted individual research projects on specific manuscripts (e.g. Japanese studies). The mutual interest continues to this day. Owing part of its institutional base to the Asien-Afrika-Institut, the CSMC continues to operate as a magnet attracting colleagues from non-European disciplines to join both the AAI and the centre's own activities.

5 From manuscripts to written artefacts: About these volumes

The academic and institutional history of the three incarnations mentioned at the beginning of this introduction is only partly a thing of the past. That alone is a good reason for not trying to retrace the entire research programme of the last fifteen years – the ongoing discussions are too complex for such an attempt. We can content ourselves here with reiterating the main credo: written artefacts remain the starting point and the central point of reference. The written artefact is to be studied as a material object, in its interaction both with other objects and with humans at a given time, and with a view to its transmission both in the course of time and between cultures. Further details concerning the history of

the three core institutions and the prominent figures affiliated with them can be found on the centre's website.[20]

In the context of these volumes, however, it may be more appropriate to point out a few stations along the way that are particularly relevant to the impact of Michael Friedrich – topics that form at the same time a constitutive part of these volumes, its articles, and its structure. The Festschrift consists of ten main chapters comprising fifty-four articles by sixty-seven contributors. The overall structure of the book picks up on a number of central concepts developed or redefined over the last two decades in the broader context of the activities at the centre, thus allowing readers to trace parts of the centre's history (though not in a chronological order). As an aside, the integral approach internalized by the contributors is evident in that many of the articles could have been assigned to different chapters, the final arrangement reflecting only one of several possibilities.

Many of these concepts are tied in with traditional approaches, e.g. codicology, palaeography, and others, often labelled 'auxiliary sciences of history'. It is, however, part of the centre's aim to overcome the perception of these disciplines as merely auxiliary, and to regard them instead as integral to the new field of manuscript studies; this aim entails adapting those traditional approaches to a broader perspective.

To give a striking example from the field of codicology: readers might encounter throughout the volume the rather unfamiliar abbreviation MTM ('multiple-text manuscripts'), a term coined to differentiate more precisely what has often been called a miscellany in the European scholarly traditions. The abbreviation MTM, to quote Friedrich, 'designates a codicological unit "worked in a single operation" [...] with two or more texts or a "production unit" resulting from one production process delimited in time and space'.[21] The subject of MTMs has been addressed quite often during the centre's workshops and seminars and appears in many of its publications.[22] In these volumes, one will find a separate chapter, 'Realms of Codicology', reflecting aspects of the ongoing discussion, and there are repeated references to MTMs in other chapters.

For many projects, the relation between the physical object and its function as a carrier of text – in other words, the philological dimension of written artefacts – is crucial. It is no coincidence that many of the suggestions that play an important role in establishing the centre's research framework come from the

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20 See <https://www.csmc.uni-hamburg.de/sfb-950/about.html> (accessed on 27 July 2021).

21 Friedrich and Schwarke 2016, 15–16.

22 See, for example, Friedrich and Schwarke 2016, and Bausi et al. 2019.

European traditions of philology, especially medieval studies and its meta-discussions. These suggestions have been and are being taken up and developed across the research fields, especially with regard to their applicability to non-European cultures. The chapter 'Rethinking Philology' gives an impression of the range of theoretical and methodological considerations in this area, without neglecting the contributions of indigenous discourses.

Another topic addressed from several angles and in different contexts is the variable setting of the artefacts in time and space. The chapter 'Transmission in Time and Space' contains compelling examples of transcending or, from another perspective, connecting time and space via written artefacts, with some of the artefacts even providing new linkages that constitute social groups. Such evidence of movability, both of the objects and their content, often comes in the form of *paracontent*, e.g. colophons or other accompanying parts of manuscripts.

5.1 Research unit, collaborative research centre, and cluster of excellence

But back to our history. In retrospect, the early decision of Michael Friedrich to start with the two major regions of Asia and Africa has proven to be the right one, enabling the respective fields to conduct basic research and to reach a common level of discourse without the need to follow from the very beginning the complex methodological achievements of the European cultures. The research unit consisted of eight sub-projects in Asian and African Studies together with the previously mentioned project from computer science. The group was united by a common guiding question, *variance in dependency on the medium*, thus focusing on the interchange between handwriting and manuscripts in the larger context of other ways of producing and receiving information. This, too, is an ongoing topic, reflected in these volumes under the heading 'Changing Media'.

After four years, the research unit was ready to evolve into a larger entity, from that point on incorporating projects from European fields such as European art history or Greek studies: the *Sonderforschungsbereich* (SFB 950) Manuscript Cultures in Asia, Africa, and Europe. The complexity of the new institutional framework demanded new forms of conceptual organisation, and not only because of the sheer numbers of projects approved. The SFB framework also allowed for the association of individual projects both on an organisational level and as conceptual complements. During its eight years of existence, the SFB research unit identified various thematic priorities dealt with in working

groups (also known as 'research fields'); each working group included scholars of various manuscript cultures, dealing with different time periods and genres but adopting one common perspective. Our volumes rely heavily upon these perspectives and reflect many of their major aspects.

The impact of the newly integrated field of art history can easily be detected in the subject of the working group for *visual organisation*. This topic highlights one of the basic strengths of handwriting to the present day – its capacity to arrange visible signs in a flexible way across a given layout, combining, for example, text, images and notation, mixing different scripts or categories of scripts, or forming the setting for a given artefact's various modes of use. The chapter 'Visual Matters' deals with all the visual aspects of a handwritten artefact, ranging from the design of a single character to the overall layout of a codex.

The working group for *paratexts*, to name another of these topics, dealt with all accompanying handwritten parts located before, beside, or beyond the main text. In an attempt to overcome the conceptual restrictions of Genette's original term, deriving from Early Modern book history in Europe, the term was coined anew during a later stage due to internal theoretical discussions as 'paracontent'.[23] Among other matters, the eponymous chapter 'Paracontent' deals with typical examples including marginal comments, colophons, and object-related phenomena such as seals.

Learning and *collections*, two different but related research groups, provide the background for the chapter 'Repositories of Knowledge'. Manuscripts as repositories in a broad sense can also be identified as a residuum of handwriting, even in the digital age: depending on the situation, many people still prefer to scribble notes with pencil and paper, or organize drafts and notes in notebooks. In earlier days, it was both a convenience and a necessity to compile texts from different sources for one's own use or to supplement those texts with one's own findings.

We have already briefly touched on the subject of rituals. Manuscripts can act, in the same manner as the aforementioned repositories, as containers that allow knowledge about rituals or the content of a specific performance to be recorded, preserved, and transmitted. But the working group for *rituals* discussed, among other matters, a quite different use, partly reflected in the chapter 'Performance and Ritual': manuscripts can also become an integral part of a ceremony or a ritual, whose agency results directly from the written artefact.

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23 Ciotti et al. 2018.

The third and current institutional phase, the cluster of excellence Understanding Written Artefacts, which is based on all the aforementioned activities, has also brought the most far-reaching changes, both in thematic diversity and the quantity of projects. The SFB provided a first systematic testing ground for close cooperation between the humanities, computer science, and the natural sciences. In the cluster of excellence, this collaborative research has reached a new level. Both the collaboration and the diversity of fields involved, ranging from chemistry, biology, mineralogy, and physics to computer science, as well as the variety of methods used, focusing especially on non-destructive and non-invasive technologies, are discussed in the chapter 'Measuring, Analysing, Computing'.

The integration of epigraphy and related phenomena into the study of manuscript cultures represents a paradigm shift, with the resulting change in language from 'manuscripts' to the category of 'written artefacts'. This perspective, which allows all written artefacts made by humans, by hand, to be studied together, overcomes previous limitations and constraints. In the present volumes, the new research field focusing on *inscriptions*, together with artefacts such as clay tablets, is reflected in the chapter titled 'Matters of Materiality'. Unsurprisingly this chapter contains contributions on the oldest written artefacts to be treated in these volumes: Mesopotamian writing, inscriptions from the Greco-Roman world, and Chinese bronze inscriptions.

5.2 Outreach

Since its inauguration, the centre has functioned as a huge umbrella, offering shelter and support for many other projects. Among these quite different activities, a personal interest of the dedicatee must be singled out. One thing that the history of written artefacts can teach us is the tension between durability and fragility. At first glance, this is a matter of materiality – stone inscriptions have a tendency to last longer than a paper slip from the mid-twentieth century, not only because of their different cultural settings. For many regions in Asia, texts that are not repeatedly copied are simply lost due to the interaction of climatic conditions and the properties of the writing materials (e.g. paper or palm leaves). As this example shows, the question of durability or sustainability is always tied to cultural practices. And here we touch on the realm of cultural heritage, which, for various reasons, has attained utmost importance, especially in the twentieth and twenty-first centuries. The preservation of endangered written artefacts was and is one of Michael Friedrich's main concerns at the centre, both with respect to the objects themselves and with respect to improving

expertise in their preservation and conservation. The project Safeguarding the Manuscripts of Timbuktu[24] and the Kairouan Manuscript Project are just two examples of his commitment in this regard.

Research activities are of little use if they cannot be observed, discussed, and developed by other members of the scientific community. This, among other reasons, is why publications are still the main currency in the academic world. Since the beginning of the centre Michael Friedrich has insisted on promoting different publication formats for different purposes, but on an equal level. Consequently he acts as editor-in-chief not only for the series in which this volume appears (Studies in Manuscript Cultures, 2012–), but also for an academic journal (*manuscript studies*) and the monthly presentation of particularly interesting or peculiar objects (*Manuscript* [now: *Artefact*] *of the Month*, primarily accessible via the internet),[25] to name just the most visible formats. Anyone who has ever published a monograph or an article in the context of the centre is familiar with his intensive guidance, scrupulous comments and painstaking corrections, all of which ensure the high quality of the centre's output.

6 Some final words

Even if the genre of the *laudatio* may suggest otherwise, these volumes are no mere look back. On the contrary, the articles reflect the contributors' current research interests as well as new approaches of a methodological or thematic nature whose demonstration and elaboration will be a task for many years to come. In this respect, our Festschrift is a promise for the future. It takes seriously the central attitude of the dedicatee: without his forward-looking approach, without his focus on a common goal, the accomplishments briefly surveyed here would not have been possible. It is to this attitude, beyond all his personal encouragement and valuable advice, important as they are, that the colleagues who have contributed to this Festschrift probably owe the most.

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24 See <https://www.csmc.uni-hamburg.de/timbuktu.html> (accessed on 27 July 2021).
25 Partly reprinted in Friedrich 2014 and 2018.

Formal matters

A volume of this size poses a number of formal challenges. Among the most important decisions are the following:

– For longer citations, the original text is given first, followed by the transliteration, translation, or both.

– As for transliteration, we follow the style guide for all publications at the centre (e.g. Pinyin instead of Wade-Giles). When justifiable, exceptions to this rule are allowed (e.g. in linguistics).

– East Asian names are given in the customary order, with surnames preceding given names. Within the bibliographical references, the precise representation takes into account the language of the work cited (e.g. original language contribution versus an article in English).

– Although the reader will easily detect a tendency to a common terminology, which has been developed over the last two decades at the centre, we have restrained ourselves from requiring contributors to adopt it: some research traditions still have to stick to their terms and concepts.

– A certain standardization is, however, required of an index. Building an index for a two-volume work such as the present one is a particular challenge. In favour of interdisciplinary and comparative references, we have refrained from overly specific terms or names that are primarily of interest to specialists in a given field. The need for such indexing is adequately served by the digital version of this work: each article can be downloaded as a searchable PDF file. The index is also useful for readers interested in exploring a particular field of study, e.g., 'Sinology' or 'Assyriology', since the relevance of an article to a field is not always easily detectable from the article's title and since some articles pertain to more than one field.

Bruno Reudenbach, Tilman Seidensticker, Jan van der Putten, Sam van Schaik, and all the anonymous peer reviewers.

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For turning the text into correct English and placing more than 400,000 words into a stylish order – and in so doing discovering the most hidden errors – we are deeply indebted to Richard W. Bishop. For the challenge of combining text, tables, and images, and giving all of it such a convincing form, our sincere thanks and appreciation go to Laurence Tuerlinckx.

The final and most prominent word of thanks is reserved for Caroline Macé, a perspicacious reader and stern critic who was always coming up with a brilliant solution to any problem and who last but not least kept a tight rein on the schedule.

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Alessandro Bausi

'Paleografia quale scienza dello spirito': Once More on the Gəʿəz Inscription of Ham (*RIÉ* no. 232)

Abstract: First published by Giorgio Brunetti in 1927 and re-edited by Carlo Conti Rossini in 1939, the inscription of Ham (*RIÉ* no. 232) has since received attention from several scholars in Ethiopian and Eritrean studies, from Ugo Monneret de Villard to Enrico Cerulli, Sergew Hable Selassie, and, in the last twenty-five years, Gianfranco Fiaccadori and Manfred Kropp. The latter author has proposed a precise dating to 873 CE, before the recent appearance of the posthumous contribution by Abraham Johannes Drewes, who is the last one to have systematically discussed the inscription. Without pretending to solve all problems that arise from the inscription, the scope of the present note is to provide a fresh re-examination of some of the palaeographic and linguistic features of the Ham inscription, which remains a Gəʿəz epigraphic document of exceptional importance for the Ethiopian and Eritrean Middle Ages, and to propose a dating to 23 December 974 CE.

Michaeli Friderico
grato dicatum animo

1 Introduction

The quotation '*Paleografia quale scienza dello spirito*' ('Palaeography as a science of the spirit') refers to the title of a well-known contribution by the great classical philologist Giorgio Pasquali, where he praises palaeography as a 'spiritual science' that transcends its assumed auxiliary role becoming *ante litteram* an all-encompassing *history of a given manuscript culture*.[1] The present study, in reconsidering the evidence afforded by the inscription of Ham, does not set out to provide an exemplary application of this approach to palaeography, nor will

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1 See Pasquali 1931; the essay was republished several times in Pasquali's *Pagine stravaganti* (1934, 1968, 1994).

this be the last word on a much debated issue – since I am not proposing here a fully satisfactory explanation of the most debated passage. Nevertheless, I would argue that these considerations have at least the merit of not only spotting some weaknesses in the previous proposals, but also developing previous intuitions towards a still unexplored direction, and highlighting some overlooked palaeographic and linguistic features of the inscription, also in the light of new manuscript evidence.

The Gəʿəz inscription of Ham (*RIÉ* no. 232, here Fig. 1), with its fifty-four words, or better, orthographic units marked by vertical word dividers, that are distributed in fifteen lines of text, is a true milestone of Ethiopian epigraphy, since it provides – according to the hypothesis advanced by Manfred Kropp – a precise date: the 27 (𐩿𐩿) of the month of Taḥsās[2] of 590 (𐩿𐩿𐩿) of the Era of Diocletian (or Era the Martyrs, or Era of Mercy according to the Ethiopian denomination), which corresponds to 27 Taḥsās 866 of the Ethiopian calendar (or Era of the Incarnation), and to 23 December 873 CE in the Julian calendar (Figs 2 and 3).[3] This dating would be essential for placing the inscription in its precise historical context as well as for providing an exactly dated term of comparison for palaeographical and linguistic features.

The inscription was once placed on the façade of the old church of St Mary (Beta Māryām) in the village of Ham, in the Eritrean region of ʾAkkala Guzāy, although we have no certain evidence that this was its earliest and original

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2 Since the name of the month is given in this form in the inscription, and since there is no apparent binding etymological reason to write Tāḥśāś (see Leslau 1987, 573a) as normally given by the later tradition, for the sake of simplicity I will always write the name of the month according to the orthography of the inscription, that is, Taḥsās.

3 See Kropp 1999, who, following Fiaccadori 1993, 325–331, provided the bibliographical state of the art to date. One might observe that Uhlig 1988, 155, 159, 166, 170–175 does not provide any decisive consideration for dating the inscription; and that this, more than rare, unique written artefact from the Post-Aksumite time, is not even mentioned in the comprehensive overview offered by Phillipson 2012; in this respect, the synthesis on Aksumite history by Munro-Hay 1991, 247–248, which provides more than just a tentative translation after Carlo Conti Rossini and Ugo Monneret de Villard (for which see below), is still worth reading, even if it does not propose any new hypothesis, as noted by Kropp 1999, 165, n. 7. A short mention with due importance given to the site of Ham provides Schmidt et al. 2008, 324–325. The exercise of translation and commentary drafted by Damien Labadie (to which Manfred Kropp kindly drew my attention), a 'Travail effectué dans le cadre du cours d'épigraphie sémitique de l'Institut Catholique de Paris, dispensé par M. Axel van de Sande', available for some time on a blog (<http://damienlabadie.blogspot.com/> in the 'Série Byzance et l'Orient chrétien') and apparently now removed from the internet, misses the bibliography of the last thirty years and has the stand of a term paper. Hatke 2020, 324, attributes the inscription of Ham all importance it deserves as one of the few evidences available from the dark phase of the early Ethiopian Middle Ages.

location. The inscription was later removed from the old church and incorporated into the inside wall of the new church of St Mary in the same village, where it was documented, to my knowledge, for the last time in 1993 and 1994, a few years after the new church had been built. The village of Ham is located on the highland next to an escarpment where the historical monastery of Dabra Libānos is located. The latter monastery, which lies opposite to other historical sites in Təgrāy and is located above a valley that marks the Eritrean-Ethiopian border, is at the centre of an area that was prominent from the late Aksumite period (at the latest) to the Post-Aksumite period.[4]

First published by Giorgio Brunetti in 1927 and re-edited by Carlo Conti Rossini in 1939, the inscription of Ham has since received attention from a number of well-known scholars, including Ugo Monneret de Villard – who keenly observed its material relationship with Nubia given its peculiar shape resemblance to Meroitic offering tables –, Enrico Cerulli – who discusses it in his history of Ethiopian literature –, and Sergew Hable Selassie.[5] In the last twenty-five years the three most important contributions on this inscription are those by Gianfranco Fiaccadori, who tried to re-examine the whole question from a new point of view;[6] Manfred Kropp, who dated the inscription to 873 CE, as reported above, within a comprehensive interpretation of the inscription that set out to tackle all the problems posed by its most difficult passage (ll. 4–5);[7] and Abraham Johannes Drewes, whose contribution appeared posthumously.[8]

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4 See Bausi and Lusini 1992, 26–31, pls 4–7, figs 7–15; fig. 10 is reproduced also on the cover of Lusini 2018; to my knowledge, my field trips to Ham in 1993 and 1994, within the framework of the Missione Italiana in Eritrea (1992–1997) led by Irma Taddia, were the last visits carried out within a research programme by a non-Eritrean who documented the site; as I remarked, the lack of the technical equipment unfortunately prevented me from taking pictures of the inscription in its new placement; on the site of Ham (not 'Ḥam' as given by some authors), see 'Däbrä Libanos (in Šämäzana)', *EAe*, II (2005), 28a–29b (Alessandro Bausi); 'Ham', *EAe*, II (2005), 980b–981b (Alessandro Bausi); see also Derat 2018, 96–98, on the inscription (following Kropp's proposal), and *passim*, for the historical context; for the nearby ecclesiastic and monastic context on the Ethiopian side of the border, see Nosnitsin 2013. The geographical coordinates of the old church of Ham are 14°30'53.2"N 39°18'24.2"E (14.514775, 39.306726), those of the nearby new church are 14°30'54.0"N 39°18'24.3"E (14.514985, 39.306747).
5 See Conti Rossini 1939; Monneret de Villard 1940; Cerulli 1968, 18–19; Sergew Hable Selassie 1972, 198–199.
6 See Fiaccadori 1993, 325–331, § 1 'Sull'iscrizione di Ḥam'; in addition to the criticism by Kropp 1999, see the further arguments against Fiaccadori's hypothesis by Drewes, in *RIÉ* IIIB, 328–332.
7 See Kropp 1999, who remarks that a picture of the inscription of Ham, photographed by Guy Annequin, is available also in van der Stappen 1996, 219, n. 4. I note here that Manfred Kropp must have written this important article 'ganz in der Eile', as Germans would say, with the

2 The state of the art up to Manfred Kropp's interpretation

To sum up the state of the art: there is a general agreement that the text of the inscription is clear and plainly understandable, with the only exception of a passage in lines 4–5 that poses serious problems. Aside from Fiaccadori, who had suggested a new reading as well as a new interpretation – and whose hypothesis I will not discuss here in detail, because I think, along with others, it cannot be accepted for reasons of palaeography and linguistic plausibility – there is agreement on the reading of the text that I give here, which is based on the edition in transcription by Abraham Johannes Drewes and Roger Schneider,

intention of revealing a breath-taking true interpretation of the dating of the inscription. This results in a few inconsistencies that affect the flow of his argument. I note the following: Kropp 1999, 169, ll. 14–19: 'Nach Ende des ersten großen 532-Jahreskalenderzyklus im 9. Jhdt. kam es beim linearen Durchzählen der Diokletian-Ära, im Gegensatz zum Neubeginn mit dem Jahre 1 im Zyklus der Jahre der Gnade, zu einer häufigen Gleichsetzung "Jahre der Gnade" = "der Märtyrer" = "Diokletians", für die wir in der Inschrift von Ḥam den ersten äthiopischen Beleg haben, nämlich aus dem Jahre 690 Diokletians': correct '690' to '590'; Kropp 1999, 169, n. 18: 'Zu dem Aufkommen und Gebrauch der Ära Diokletians als Ära der Märtyrer im christlichen Nubien vgl. nun MacCoull/Worp 1997. Die ältesten Belege stammen aus den Jahren 502 (785/6 n. Chr.) und 600 (833/4 n. Chr.); vgl. Łajtar 1997: 107 f. Ich danke Herrn Kollegen Łajtar für wertvolle Auskünfte und eine – notwendige! – Kontrolle der Datumsumrechnungen.': correct 'MacCoull/Worp 1997' to 'MacCoull/Worp 1990'; 'Łajtar 1997' is not in the bibliography, where there is only 'Łajtar 1993', which does not contain any page 107; in the same title, the pages '243–247' must be corrected to '245–247' (pp. 243–244 in the same journal contain another separate note by Łajtar, with a different title); Kropp 1999, 170, n. 20: 'Eine erste Vermutung, es könne sich um nubische Zahlzeichen handeln, zunächst geboren aus einer falschen Identifizierung des Datums mit dem Jahr 690, scheidet nun aus': here too, correct '690' to '590'. In a previous contribution (Bausi 2019a, 87, n. 37) I had already noted one more inconsistency, probably connected with the wavering between 590 and 690 noted above, concerning the parallelism established by Monneret de Villard 1940, 67, with the Nubian inscription of ʿAlwa dated to 897: 'Damit ist sie lediglich 125 Jahre jünger als die Inschrift aus Ḥam', where '125' should be first corrected to '25' and then also to '24' (897 – 873 = 24). Also note that in Kropp 1999, 176, the line numbers are wrong ('Zahl "27" Zeile 1' refers to line 2 and 'Zahl "590" Zeile 2' refers to line 4), see here Figs 2 and 3. I must instead withdraw my observation concerning Kropp's transcription of 'ʾəla', without gemination, which in fact corresponds, in the edition (Kropp 1999, 167), to the general criterion (also adopted in *RIÉ* I) not to render morphological gemination, whereas gemination is noted elsewhere as expected (see Kropp 1999, 168, 'ṣärrə-nä ʾällä-sahl', this latter so written in order to highlight that they form a noun phrase, even though ʾalla śahl are clearly separated by the word divider in the inscription).
8 See *RIÉ* IIIB, 326–333.

with the only addition of morphological gemination in round brackets where required, the corresponding text in Gəʿəz script, and my English translation of the lines where there is agreement, whereas the end of line 4 and the entire line 5 are not translated:[9]

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9 See *RIÉ* I, 134. The first editor, Brunetti 1927, 82, reads: [(1)] ሞተት ፡ ጊሐ ፡ ውለተ ፡ መንገሣ ፡ በወር|[(2)]ጎ ፡ ታሕሳስ ፡ አሜ ፡ ሸ[N] ፡ ለሠርቀ ፡ እ|[(3)]ሜ ፡ መኃታዊሁ ፡ ለጌና ፡ በዕለተ ፡ ረ|[(4)]ቡዕ ፡ ወዓርፋ ፡ ዓመተ ፡ እኔን ፡ (but suggesting �) ጸረ|[(5)]ኔ ፡ (but suggesting ጸርኑ ፡) አለ ፡ ሃህል ፡ …, and translates: [(1)]'Morì Gihä, figlia di Mängäsa, nel me-|[(2)]se di taḥsas, nel 28 all'alba, nel-|[(3)]la viglia del Natale, in giorno di mer-|[(4)]coledì e riposò l'anno, 790. Io procla-|[(5)]mai tuttavia la Misericordia [di Dio]', with 'viglia' for either 'veglia' or more likely 'vigilia' in the text. Conti Rossini 1939, who is the only scholar working on the inscription of Ham who was able to use a calque of the inscription provided by Antonio Mordini (cf. p. 7, n. 2), does not provide an edition, but his readings can be deduced and reconstructed from his commentary and translation (pp. 11–13): [(1)]'È morta Giḥo figlia di Mangaśā nel me- |[(2)]se di tāḥsās, addì 27, all'alba, nel |[(3)] dì precedente la vigilia di Natale, in giorno di mer-|[(4)]coledì, e la sua … |[(5)] … Ella Sàhel', with the following presupposed readings: [(1)] ሞተት ፡ ጊሐ ፡ ውለተ ፡ መንገሣ ፡ በወር|[(2)]ጎ ፡ ተሕሳስ ፡ (or ታሕሳስ ፡) አሜ ፡ ፳፯ ፡ ለሠርቀ ፡ እ|[(3)]ሜ ፡ መኃትዊሁ ፡ ለጊና ፡ በዕለተ ፡ ረ|[(4)]ቡዕ ፡ ወጎሪፋ ፡ ዓመት ፡ እኔን ፡ ጸራ|[(2)]ኔ ፡ እለ ፡ ሃህል ፡ …. Cerulli 1968, 18, translates: 'Morì Ghiho figlia di Mangascià nel mese di "tahsâs", il giorno 27, all'alba, il giorno precedente alla vigilia di Natale, giorno di mercoledì; essendo questo l'anno … Ella Sahel'. Sergew Hable Selassie 1972, 198, reads as follows: [(1)] ሞተት ፡ ጊሐ ፡ ወለተ ፡ መንገሣ ፡ በወር ፡ (*sic*) |[(2)] ጎ ፡ ታሕሳስ ፡ አሜ ፡ ፳፯ ፡ ለሠርቅ ፡ እ|[(3)]ሜ ፡ መጎተዊሁ ፡ ለጌና ፡ በዕለተ ፡ ረ|[(4)]ቡዕ ፡ ወጎሪፋ ፡ ዓመተ ፡ እኔን ፡ ጸረ|[(5)]ኑ ፡ እለ ፡ ሀህል ፡ …, and translates: [(1)] Giho the daughter of Mengesa died in the mon-|[(2)]th of Tahsas (Dec.) on the 27th day, on |[(3)] The (*sic*) eve of Christmas on the day of We-|[(4)]dnesday. And died a year later after we had (conquered?) Our en-|[(5)]emy Ella Sahl'. Fiaccadori 1993, 325–327, reads as follows: [(1)] ሞተት ፡ ጊሐ ፡ ውለተ ፡ መንገሣ ፡ በወር|[(2)]ጎ ፡ ተሕሳስ ፡ አሜ ፡ ፳፯ ለሠርቅ ፡ እ|[(3)]ሜ ፡ መኃታዊሁ ፡ ለጌና ፡ በዕለተ ፡ ረ|[(4)]ቡዕ ፡ ወጎሪፋ ፡ ዓመት ፡ እኔን ፡ ጸረ|[(5)]ኑ ፡ (as suggested by Brunetti) እለ ፡ ሠሀል ፡ …, and translates: 'È morta Giḥo figlia di Mangaśā nel mese di tāḥsās (sic), il 27, all'alba, nel dì precedente la vigilia di Natale, in giorno di mercoledì; e l'età sua (era di) un anno. "Ahimè" – gridarono quanti furono mossi a pietà [o: al compianto]', supposing an Amharism ('ənen, 'said if a child falls – i.e. if only what happened to you had happened to me instead', see Kane 1990, 1211a, based on Guidi 1901, 460) and a reading ጸሩ ፡ that is not supported by palaeography. Kapeliuk 1997, 494, discussing the possibility that *ḥarifu* might be a gerund, translates 'a year having elapsed from [the time of] Ella Sāhl the Ṣarane'. Finally Kropp 1999, 167, follows faithfully *RIÉ* I, safe for ጸረኑ ፡ instead of ጸራ ፡ (ll. 4–5, for which variance I did not find any explanation in his article, see below), in turn emended to ጸርኑ ፡, and, as we will see, ፳፱ ፡ (l. 5) instead of እኔን ፡. Concerning other contributions, Mordini 1959, 48 accepts a dating to the eighth century. No further light comes from the short entry by Irvine 1975, who places Giḥo in the seventh century ('in the reign of Emperor ʾEllä-Ṣähel, but the King Lists record several rulers of this name in the century or so before Emperor Gäbrä-Mäsqäl') and the inscription in the seventh or eighth century. Out of focus are the sparse remarks on the inscription by Ricci 1991, 196, 200, and 203 (dating dubitatively the inscription between the fifth and seventh century),

[(1)] *motat giḥo wəlata mangaśā bawar*|[(2)]*ḫa taḥsās ʾame 27 laśarq ʾa*|[(3)]*me maḥātəwihu lagen(n)ā baʿelata ra*|[(4)]*buʿ waḥarifu ʿāmat ʾənen ṣara*|[(5)]*ne ʾəl(l)a śahl …*

[(1)] ሞተት ፡ ጊሐ ፡ ውለተ ፡ መንገሣ ፡ በወር|[(2)]ኃ ፡ ተሐሳስ ፡ አሜ ፡ ፳፯ ለሠርቅ ፡ አ|[(3)]ሜ ፡ መኃትዊሁ ፡ ለጌና ፡ በዕለተ ፡ ረ|[(4)]ቡዕ ፡ ወኀሪፉ ፡ ዓመት ፡ እኔን ፡ ጸረ|[(5)]ኔ ፡ እለ ፡ ሥህል ፡ …

[(1)] Giḥo, the daughter of Mangaśā, died on the mo-|[(2)]nth of Taḥsās, on the 27, at dawn, on |[(3)] the day before the eve of Christmas, on Wednes-|[(4)]day; and the present year was the year … |[(5)] …

While the text is overall quite legible, the words *ʾənen ṣarane ʾəl(l)a śahl* require additional explanation or emendation. The first editor of the inscription of Ham, Brunetti, had a fundamental intuition that was rejected by all following inter-preters, from Conti Rossini to Fiaccadori, until Kropp resumed his idea. His intuition was that the stonecutter who worked on the inscription must have tried to reproduce some numerical signs with which he was not familiar and which he did not understand completely: in Brunetti's hypothesis, the day of the month was 28 (ሸ^N ፡ = ፳፰ ፡) and the year was 790 (እኔን ፡ = ፯፻፺ ፡, but he wrote ፮፻፺ ፡, that is, 690).[10] No doubt Brunetti committed several trivial mis-takes in his reading and interpretation, but most of all he did not consider that 28 Taḥsās 790 was a Sunday, and even 28 Taḥsās 690 would have been a Mon-day, while the inscription mentions a Wednesday.

Resuming Brunetti's idea, Kropp defined very precisely which calendrical parameters needed to be matched in order to have a consistent hypothesis that would explain with certainty the date hidden under the enigmatic *ʾənen* (እኔን ፡), which the preceding words presupposed. In doing so, however – and this is a key point – Kropp had to start from a firm basis rooted in some indis-putable evidence. This firm basis consisted in two points: the first is that the mention of an 'eve' before Christmas night made it necessary to read '27' in the first numerals (፳፯), since Christmas is 29 Taḥsās and the Christmas night

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commenting on the remarks by Zuurmond 1989, 37–38; and Lusini 1999, 414–415, suggests a dating to the tenth/eleventh and finally opts for the twelfth/thirteenth century.

10 In Brunetti's own words (Brunetti 1927, 81), 'La parola እኔን ፡ della linea 4, che, a prima vista, ci richiamerebbe all'amarico, deve essere intesa come l'errata trascrizione del numero ፮፻፺ ፡ fatta da chi non era molto pratico ancora delle nuove forme numerali. Anche a linea 2 il lapicida scrive ሸ^N invece di ፳፰ (28) riattaccandosi ai numeri dei monumenti più antichi'. Number ፮፻፺ ፡ corresponds to 690, while Brunetti gives '790' in his translation; he is in fact uncertain on this point, see Brunetti 1927, 80, 'La data 790 che leggo sull'iscrizione può anche non essere esatta, potendo alcuno leggere 690 od 890, ma credo sia la più verisimile, sia per il complesso di indizi che ci dà l'iscrizione, sia per la maggior affinità tra le lettere ፯ ed ሸ che vennero confuse dal lapicida, il quale ha commesso diversi altri errori di scrittura'.

(*gennā*) starts on 28. In leap years, however, Christmas is 28 Taḥsās, the Christmas night (*gennā*) starts on 27, and its eve is on the 26.[11] The second firm point was the identification of the letter *n* (𐌽) with the numeral '90' (𐌹), on the basis of an apparent similarity. However, the belief that the date had to end with '-90' led to a sort of inexorable line of reasoning, which, in my opinion, ended up overlooking the graphic and palaeographic evidence afforded by the inscription itself. Kropp thus supposed that *ne* (𐌻) had to be interpreted like a '100' (𐌵) turned upside down to express the hundreds, and looked for all possible combinations of '-90' years with a 27 Taḥsās on Wednesday. This led him to conclude that 590 of the Era of Diocletian (or Era of the Martyrs or Era of Mercy), which corresponds to 27 Taḥsās 866 of the Ethiopian calendar (= 23 December 873 CE), was the fitting solution to the problem and one that worked quite well.[12] In fact, the year 750 CE would also work, but such a date would be too early because at that point in time the first great cycle of 532 years has not yet ended and because the Era of Mercy, with this designation, is not yet attested.[13]

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11 Important in this regard is Drewes's (for whose hypothesis see below) explicit comment on line 2 (*RIÉ* IIIB, 328): '3: *gennā* veut dire "*nativitas* Christi", et "*parasceue festi natalitii*", "Noël", et "veille de Noël"', with references to Dillmann 1865, 1175, and Leslau 1987, 196; '*Maḫātəw*, pluriel de *māḫtot*, "lampe", signifie "*vigilia*", "la veille"', with references to Dillmann 1865, 604, and Leslau 1987, 258; 'Le passage ʾame maḫātəwihu lagennā est ambigu. Au lieu de "la vigile de Noël", C. Conti Rossini l'a traduit par "nel dì precedente la vigilia di Natale", ce qui correspond à la date du 27 Tāḥsās; nous l'avons suivi'. On *gennā* see also 'Lədät', *EAe*, III (2007), 538b–540a (Steven Kaplan, Emmanuel Fritsch, and Gianfranco Fiaccadori), where *gennā* is interpreted as the eve of Christmas (either on 28 or 27 Tāḥsās). An unclear comment by Sergew Hable Selassie 1972, 198, n. 94, refers to the same point: 'From the picture of the inscription it is not clear whether it is 𐌹 or 𐌵. Historically both are possible. The former indicates that it was a leap year and the latter that it was a normal year'. Concerning the leap year, one has to observe that the leap year in the Ethiopic calendar, with six days in the thirteenth month of Ṗāgʷmen, is year of Luke, that *precedes* the Julian and Gregorian leap year with a February of 29 days, which corresponds for the most part to year of John in the Ethiopic calendar; see very clearly on this point Cody 1991, 433b, 'in the Alexandrian system the extra day is intercalated at the very end of the Alexandrian year preceding the one in which the Julian calendar's 29 February will occur'.

12 A pioneer in the use of digital tools, Kropp was able to use digital devices which facilitated this search. Among other useful tools available at present, see the recently released Ḥassāba Zaman (<https://cal.ethiopicist.com/>, accessed on 11 Febr. 2021), developed by Augustine Dickinson, which I used for the preparation of this note.

13 The Era of Diocletian, introduced already in the first half of the fourth century in Egypt and probably also in Ethiopia, began to be called 'Era of the Martyrs' in Egypt from the end of the eighth century at the latest (785/786), see Luisier 2015, 306, who rightly stresses that the origin of the name of 'Era of Diocletian' has nothing to do with the role of Diocletian in persecution; cf. also Kropp 1999, 169, with n. 18. Concerning Luisier's remark on the occurrences of the Era

Consequently and without any doubt, the first two signs of ʾənen (እነን ፧) had to mean 500, and hence the equivalence እነ = ፭፻, that is 5 (×) 100, was necessarily established.

3 The open questions after Manfred Kropp's hypothesis

To suppose that the number 590 is hidden under ʾənen brings about a number of difficulties and does not consistently explain the way of rendering numerals in the inscription. Furthermore, other difficulties arise from the interpretation, required to support Kropp's hypothesis, of ṣarane ʾalla śahl as an expression that designates the Era of Diocletian (or Era of the Martyrs or Era of Mercy),[14] as Kropp translates lines 1–5 as follows:

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of Diocletian in the *Gadla Ṗanṭalewon* recorded by Brita 2010, 80, 105–106 and 'Ṗänṭälewon', *EAe*, IV (2010), 111a–113a (Antonella Brita) (noted by Luisier 2015, 302, nn. 22 and 23), in the first passage three manuscripts, attesting to the majority of the families, bear the date of 111 of the Era of Diocletian, while four (Paris, Bibliothèque nationale de France, Éthiopien, d'Abbadie 110, i.e. the one adopted by Conti Rossini, plus three manuscripts depending from the subarchetype ε) have 1001 (one manuscript cannot be read); for the second date, all manuscripts which have it (subarchetype ε omits the date and one manuscript cannot be read) have 236, including d'Abbadie 110: Conti Rossini's reading (246) is erroneous (see Conti Rossini 1904, text 43–44 and 60, transl. 40 and 56). Also note that Kropp's remark concerning an early occurrence of the Era of the Martyrs (inscription from Meroe dated to 613 = 897 of the Common Era), 'Dies ist wichtig für die Verwendung der Ära des Diokletian, aber mit der neuen Benennung "der Märtyrer" […]. Äthiopien scheint nach Ausweis der Inschrift von Ḥam diese Benennung später übernommen zu haben, ohne daß sich die vorherige, alternativ christliche "Jahre der Gnade oder Erbarmung" gänzlich verdrängen ließ, wie auch die Ambiguität der Bezeichnung (entweder auf Geburt Christi oder Diokletian bezogen) weiter bestand' (Kropp 1999, 164, n. 4), is not so clear: in fact, there is no non-Ethiopian evidence for the designation of the Era of Diocletian or Era of the Martyrs as 'Era of Mercy'. In view of this latter point it is also necessary to review some other statements (Kropp 1999, 171, 'Die Verbindung zum christlichen Nubien ist nun auch aufgrund der Datierung und der Kalenderbezeichnungen wie auch der Zahlzeichen klar geworden'). Still essential are the contributions by Bagnall and Worp 2004, and the earlier contribution by MacCoull and Worp 1990, with important *addenda et emendanda*, MacCoull and Worp 1995; see also the monograph on calendar and computus in Nubian evidence by Ochała 2011. Lastly, see the monograph by Hidding 2020, which mostly focuses on the perception of the 'Great Persecution'.

14 I already listed and commented upon some of these difficulties in a previous contribution, see Bausi 2019a, 85–89.

(1) Es starb Giḥo, Tochter des Mängäša, im |(2) Monat Tāḥsas am 27. des morgens am Vor-abend |(3) des Weihnachtsfestes, an einem |(4) Mittwoch und das (laufende) Jahr war das Jahr 590 'unseres Feindes' |(5) (= Diokletian) (d.h. aber auch) 'der Gnade'. ...

[(1) Giḥo, daughter of Mängäša, died in |(2) the month Tāḥsas on the 27th of the morning the eve before |(3) Christmas night, on a |(4) Wednesday and the (current) year was the year 590 'of our enemy' |(5) (= Diocletian) (but also) 'of Mercy'. ...]

This translation obscures a number of linguistic difficulties: on the syntactic level, the supposed genitive 'unseres Feindes' is not expressed, since there is no genitival construction in the text and one does not see how the noun phrase holds. Equally problematic is the value of ʾəlla, taken as the plural of the relative pronoun, of which the function and construction are also not clear. There are also serious lexical problems: Kropp maintains that the inscription of Ham contains a reference to the year of the Era of the Martyrs, indicated by the term śahl (also read by some editors as śāhl, but that is irrelevant here). This would be a manifestation of the well-known alignment of the Era of Mercy with the Era of Diocletian, from which it originally differs by 76 years, in turn renamed in time 'Era of the Martyrs'. However, while the phenomenon of the overlapping of the two systems and denominations is well known in Ethiopia, the term śāhl (or śahl, 'clemency'), although synonymous, is never attested in this function, because the technical term used exclusively is məḥrat ('grace, mercy'). Kropp, who was well aware of this issue, tried to solve it by suggesting a possible interference of a Greek Nubian model, that was literally followed, but without providing other elements.[15] Although the possibility of a change in technical and even administrative terminology between the ancient and more recent periods must always be taken into account, this is not a minor problem.[16] Another significant

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15 See Kropp 1999, 170, 'So ergibt sich die Gewißheit, daß im spätaksumitischen Reich nach Jahren "der Gnade" datiert wurde – wenn auch, als zusätzliche Information, bezeichnet in einer später aufgegebener Terminologie, die sich aber als direkte Übersetzung aus dem (altnu-bischen) Griechisch erweist: "unseres Feindes" = Diokletian; vgl. die ständigen Epitheta Diokletians in der äthiopischen Übersetzung des Synaxars), aber auch "der Gnade", statt später mit dem Quasi-Synonym "der Erbarmung"', that is məḥrat; yet Kropp himself translates məḥrat with 'Gnade' and not with 'Erbarmung', see for example Kropp 1988, 11. As is often the case, the authors are prodigal in explaining what is quite certain from the point of view of their hypothesis, much less so from the point of view of the arguments against it. Yet it would be unfair and ungenerous to place this responsibility on Kropp alone, who has the great merit of having proposed a complete explanation.

16 See for example, the *unicum* of the use of the verb ʾaksama 'to give as feud', for the oldest feudal acts of the Zāgʷe period, which never occurs at a later date, cf. lastly Derat 2018, 30–61, with extensive commentary; but on the other hand, consider also the surprising continuity of

issue is the occurrence of Diocletian, which would be related to the epithets attributed to him in the *Synaxarion*: the name of Diocletian is not in the inscription, and the emperor would be simply evoked by the epithet 'our enemy', that is, 'the enemy of the Christians *par excellence*'.[17] Yet, this reading is dubious, because both *RIÉ* I and Conti Rossini read this term as ṣarane or even ṣarāne, rather than ṣarrəna, which would be required for interpreting the passage as 'our enemy'.[18] Moreover, even if the reading ṣarrəna, 'our enemy', was accepted, the concerned etymological root ḍrr is well attested in the Aksumite epigraphy always with ḍ and not ṣ. Therefore, this would precisely be one of those cases where there has been a graphic confusion between ḍ (𝛉) and ṣ (ጸ) as is common in later manuscript tradition. However, Kropp himself quite rightly argues that, for what concerns the orthographic peculiarities of our inscription, the discrepancies from standard orthography are not of the kind of uncertainties otherwise found in manuscripts regarding the writing of laryngeals and ḍ as well.[19]

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some formulas that in medieval times seem to resume Aksumite 'protocols', cf. Bausi 2013, 173–175.

17 See Kropp 1999, 168, n. 17, 'Es genügt hier, auf die stehenden Epitheta bei der Nennung des Namens von Kaiser Diokletian im äthiopischen Synaxar hinzuweisen', but after a cursory analysis undertaken on the edition published in the *Patrologia Orientalis* I could not trace any occurrence of 'enemy' as an epithet used for Diocletian, see the index in Colin 1999, 35.

18 See Kropp 1999, 168, 'ṣärrä-nä əllä-śahl "unseres Feindes, der Gnade"', with footnote 16 ('Hier ist die für sprachliche Nachlässigkeit der ganzen Inschrift nicht unangemessene Konjektur C anstatt Ⴑ angenommen') takes into account only the conjecture rə instead of ra (rä in Kropp's transcription), while he has nothing on na (nä in Kropp's transcription) instead of ne, and states that the alternative forms in ll. 8 (ṣəḥuf) and 12 (ṣəḥəf), l. 6 (yətwälläda, instead of the expected yətwälläd), and l. 1 (wəlättä instead of the expected wälättä), 'lassen ṣärränä statt ṣärränä (Z. 4.) als ganz in der "Norm" dieser Inschrift erscheinen'. In fact, also in *RIÉ* IIIB, the only alternative reading discussed and rejected regards the possibility of reading ṣarani instead of ṣarane (see *RIÉ* IIIB, 333, 'Le mot ṣarane, lecture bien préférable à ṣarani'). Having said this, Kropp 1999, 165, in fact and with good reasons, criticizes the edition provided by *RIÉ* I, 'Im RIE No. 232 und pl. 165 ist nur die Bibliographie, eine materielle Beschreibung und eine neue Umschrift (die freilich in einzelnen Punkten zu verbessern ist) zu finden'. There is little doubt, however, that the inscription reads ṣarane (see Fig. 1), as clearly appears from the picture taken by Mordini and here reproduced with a better resolution than in the article by Conti Rossini 1939, a reading, of course, for which one might always invoke an error of the stonecutter.

19 See Kropp 1999, 167–168, 'Diese Abweichungen betreffen weniger die sonst in Handschriften anzutreffenden Unsicherheiten in Bezug auf die Schreibung von Pharyngalen und ḍ'. For the root ḍrr in Gəʿəz inscriptions, see *RIÉ* IIIB, 611–612. This is a serious point, since the etymological coherence of the orthography of the inscription is apparent; see Nosnitsin and Bulakh 2014 for an exemplary evaluation in this regard of an archaic manuscript fragment.

4 The interpretation of Abraham Johannes Drewes

Before coming to the crucial point of how it is possible to interpret the numerals of the inscription of Ham in a different way, it is worth considering the recently and posthumously published proposal by Drewes in *RIÉ* IIIB, who translates lines 1–5 as follows:

[(1)] Est morte Giḥo, fille de Mangaśā, le mois |[(2)] de Taḥsās, le 27 de ce mois, |[(3)] l'avant-veille de Noël, le jour de mer-|[(4)]credi; l'année <de sa mort> est l'an |[(5)] 807 (?).

Drewes thinks that the whole expression ʾənen ṣarane ʾəl(l)a śahl has no meaning, and that it is simply a way to express a number, in consideration of the fact that every letter would have a numerical value, as is also customary in Hebrew, Syriac, Arabic, and even in Greek, with the so-called isopsephic system. Thus, assuming that ʾ = 1, n = 50, $ṣ$ = 90, r = 200, l = 30, $ś$ = 300, and h = 5, one would get the sum of 807.[20] We can note, however, that 27 Taḥsās 807 (= 23 December 814 CE) would be a Saturday, while 27 Taḥsās 807 of the Era of the Diocletian (= 23 December 1083 of the Era of the Incarnation and Ethiopian Calendar, and 1090 CE) would be a Friday. Aside from this, the main problem with Drewes's hypothesis is the lack of parallels for this way of expressing numerals, and the apparent internal inconsistency: the inscription has other numerals (the '27' of the month of Taḥsās) that are not expressed according to the system he suggests was adopted for the year.[21] Drewes himself actually advanced this hypothesis as one among others, since he also proposed an alternative explanation according

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20 See *RIÉ* IIIB, 329, 'Il est donc vraisemblable que les mots énigmatiques ʾənen ṣarane ʾəla śahəl précisent l'année de la mort de Giḥo, comme C. Conti Rossini l'a vu, et que les lettres qui les composent ont une valeur numérique, d'autant plus que ces mots ne forment pas de phrase compréhensible. Malheureusement nous ignorons quelle était la valeur numérique des lettres éthiopiennes, mais si elle était identique à celle des alphabets hébreu, syriaque et arabe, ce qui est probable, l'inscription date de l'an 807. Dans ces alphabets la valeur numérique de l'*aleph* est 1, du n 50, du $ṣ$ 90, du r 200, du l 30, du $ś$ 300 et du h 5'. In fact, Drewes has completely misunderstood Conti Rossini, who argues the other way around precisely against Brunetti's hypothesis, praised by Drewes, that the letters represent numerals (see Conti Rossini 1939, 12, whereas Conti Rossini 1944–1945 has nothing on this).

21 On the possible use of a comparable, cryptographic way to express numerals in short inscriptions from the Coptic necropolis of Karanis, see the interesting considerations by Buzi 2004, 101.

to which, in keeping with Conti Rossini's suggestion, ʾənen ṣarane were personal or ethnic names.[22]

5 A fresh look at the numerical signs

Let's now turn to the major point in Kropp's hypothesis. Without listing all the possible minor observations, the crucially unsolved problem is the ratio underlying such unusual graphic and palaeographic correspondences, so that the first two of the three signs in ʾənen (ﻟﻟ) should represent 𝕏𝕏, that is 5 (×) 100 + 90 (𝟽) in order to get 590 (𝕏𝕏𝕏 ፡). Again, Kropp is obviously aware of the issue and hence he puts forth some explanations to justify the strange and acrobatic distortions suffered by the numerals that would be required for a passage from 𝕏 to ﻟ, and even from 𝕏 to ﻟ.[23] But, going by this argument, it is hard to see why the third numeral was also not distorted, at least to some extent; or why the other numerals (the '27' of Taḥsās) were not twisted as well. There is clearly a problem here. If the change 𝕏 > ﻟ is particularly astonishing, the representation of the 'hundred' (𝕏 > ﻟ) is no less problematic and cannot be easily explained by suggesting that the shape of the sign was simply turned. This latter sign, in fact, also has some wavering along its vertical axis, as well as on the head, besides an otherwise arbitrary vertical rotation; the sign seems to have a sinusoidal shape.

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22 See *RIÉ* IIIB, 333, 'Le mot ṣarane, lecture bien préférable à ṣarani, est probablement à identifier avec le nom d'un peuple, mentionné dans l'inscription 188, ligne 6. L'identification du premier mot est problématique, mais étant donné que les autres mots dans ce passage paraissent être des noms propres, de personne ou de peuple, on peut se demander si ʾənen n'en est pas un autre, hypothèse que C. Conti Rossini avait déjà avancée sous toutes réserves'. For the passage of *RIÉ* no. 188, l. 6, see *RIÉ* IIIB, 229–231. I wonder whether Drewes's two hypotheses in *RIÉ* IIIB are the reflex of a redactional stage of his work where this point was still undecided. The translation, however, presupposes undoubtedly the first hypothesis.
23 See Kropp 1999, 169 ('ﻟ ist als gedrehtes 𝕏 "100" zu deuten'), 169–170 ('Das erste Zeichen ﻟ ist somit als eine auch bei den anderen Zahlzeichen des Textes zu beobachtende Umdeutung der Standardform durch Achsendrehung in den formnächsten Buchstaben zu sehen (ﻟ→𝕏).'): but in fact, the rotation is along the vertical and horizontal axes in '5' (ﻟ → 𝕏), while it is along the horizontal axis in '100' (ﻟ → 𝕏); and in '27' (𝕏𝕏) one wonders whether there is any rotation at all.

Kropp himself, after wondering whether one shouldn't consider Nubian numerals, rules out such a hypothesis.[24] But what about Greek numerals? Well, if one takes into account how it might be possible to explain the enigmatic ʾ*ənen* (ⲁⲋⲏ ⁚) in terms of Greek numerals, by considering the forms attested at this point in time, one finds a very simple and apparent correspondence between: *ənen* (ⲁⲋⲏ ⁚) and ⲁ Ξ Z (non-capital ⲁ ξ ζ), that is ⲁ (900) + ξ (60) + ζ (7), which gives 27 Taḥsās 967 Era of the Incarnation (= 23 December 974 CE), which is a Wednesday. For the shapes of the *sampi* (*parakẏïsma*, as it should be called), ⲁ (non-capital ⲁ) representing '900', there are palaeographic parallels likely to have inspired a rendering by an archaic ⲗ (ʾ*ə*) of the particular archaic shape as attested in the inscription, with a prolonged horizontal stroke over the head.[25] Note in fact that in Nubian Greek inscriptions the *sampi* has a pointed top (↑), with a slightly more extended left arm and a tighter and shorter right arm, that could definitely resemble the peculiar archaic form of alef in the sixth order in the inscription (see ll. 5 (Fig. 3), 6, 7, 14).[26] The imitation of a cursive form, as

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24 See Kropp 1999, 170, n. 20, 'Eine erste Vermutung, es könne sich um nubische Zahlzeichen handeln, zunächst geboren aus einer falschen Identifizierung des Datums mit dem Jahr 690, scheidet nun aus'.

25 See the contribution by Soldati 2006, which focuses on papyrological evidence, but provides exhaustive references to date, and the further integrations in Soldati 2009 and Dobias-Lalou 2017, 187–190, exclusively on the attestation from the Hellenistic period on *sampi* used to express the thousands; note that p. 111 of manuscript St Gallen, Stiftsbibliothek, Cod. Sang. 459, ninth/tenth centuries, that is one of the several Latin manuscripts with a complete set of Greek numerals, is now accessible at <https://www.e-codices.unifr.ch/en/csg/0459/111/0/Sequence-562> (accessed on 12 Febr. 2021). For general contributions, that provide useful insights and corresponding palaeographic examples, see Wattenbach 1895, 92–93 (on Z), 97 (on Ξ), and 103 (on ⲁ); Foat 1905, 1906; see also Gardthausen 1913, 358–363 (on letters as numerals), and 368–370 (on ⲁ), for further details; and the examples in Canart 1980, 89; for epigraphic evidence in general, see Larfeld 1914, 225–226. The Wikipedia entry on *sampi* also provides rich and reliable information <https://en.wikipedia.org/wiki/Sampi> (accessed on 12 Febr. 2021). Essential evidence on *sampi* was collected in the dissertation by Woisin 1886, 38–40.

26 See Łajtar 2003, 9 (inscription no. 1, Khartoum, Sudan National Museum, inv. 23377, Epitaph of Kollouthos, Bishop of Faras, l. 6; see already Kubińska 1974, 32–34, no. 5, pl. 6 on p. 33), who notes that 'the form of the sign for 900 (↑) in the number of the year according to the era from the birth of Christ which, as far as Nubia is concerned, occurs only in the epitaphs of Faras bishops Kollouthos and Stephanos'. The same form is in fact attested in the inscription no. 107, Warsaw, National Museum, inv. 234646, Epitaph of Stephanos, Bishop of Faras, l. 7, see Łajtar and Twardecki 2003, 290–293, where the presence of the *sampi* for a typographical slip is not in the edition (p. 291), but its presence and its shape were kindly confirmed to me by Adam Łajtar (see already Kubińska 1974, 34–36, no. 6, pl. 7 on p. 35, where the *sampi* is particularly marked by a longer and more extended left arm and a tighter and shorter right arm).

from later attestations (from the ninth century), characterized by two straight parallel lines (⅌), would be even more likely, but is not necessary. Even though the hypothesis of a cursive model is not corroborated by any attestation in Nubia, where all Greek texts transmitted to us appear to be in uncial script, we cannot exclude, as we will see, that the minute from which the inscription of Ham was engraved also contained at least Greek cursive numerals.[27] This hypothesis has two advantages. First, it gives a coherent explanation for the enigmatic *ʾǝnen* ኣኌ፝ ፥ = ⅄ Ξ Z. Second, it also explains why in '27' (l. 2) the numeral is also so distorted, and why the two sevens '7' (in '27' and '967') are different from one another: the two forms could reflect two equally possible cursive forms, imitated by someone who did not have a clear idea of the letters to be represented.[28] The correspondence ኣ = ⅄ (but the same can be said for ኌ = Ξ and ፝ = Z, and in '27' for 20 = K as well) is a perfect manifestation of the phenomenon so well described by Brunetti: when the stonecutter was unable to catch the precise shape of the numeral, he represented it with the most resembling letter, without having to resort to any sort of upside rotation, since the adjustments and the rotation are minimal. Yet, the shapes of the Greek numerals are recognisable.[29]

6 Implications of a different interpretation of the numerical signs

The hypothesis I have presented is based on a series of presuppositions that make it clear that the inscription of Ham presents us with an extremely complex

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27 Numerical notes from Greek and Coptic documents from Egypt and more to the South along the Nile valley, generally always retain their uncial shape, and this is valid also for *sampi* (personal communication by Agostino Soldati). For new evidence, however, see below.
28 The alternative reading of the first '7' as a cursive '8' (η), interpreting 'on the 28, at dawn, on the eve of Christmas night', is palaeographically unlikely.
29 The Gǝʿǝz numerals are obviously also derived from Greek numerals, see Hallo 1926, 61–63; the article 'Script, Ethiopic', *EAe*, IV (2010), 580b–585a (Serguei Frantsouzoff), does not deal with numerals, which are also disregarded in the quite disappointing entry 'Numbers, numerals, numeric systems', *EAe*, III (2007), 1201b–1204a (Thomas Zitelmann), that, for what concerns this discussion, only has a cross-reference to Dillmann 1907, 33; Uhlig 1988 has several paragraphs on numerals in the different periods, but no special section, which would have been quite useful for a narrowly-meant palaeographic study, and no entry on numerals in the index.

body of evidence. These presuppositions are the following: the existence of an early dating system based on the Alexandrian Era of the Incarnation (corresponding to the Ethiopian Calendar) in the tenth century; the palaeographical plausibility of the misread Greek numerals; the knowledge and circulation of Greek numerals alongside or even within written documents in Gəʿəz at the time; the possible significance of a trace of Greek influence for the relationship between medieval Ethiopia and Nubia.

With regard to the Alexandrian Era of the Incarnation, which corresponds to the Ethiopian calendar still currently used, the perspective is exactly the same as required by the hypothesis that the inscription of Ham attests the earliest Ethiopian evidence for the Era of Diocletian, and the earliest dated document with a day, a month, and a year. The evidence offered by Nubian epigraphy is an important parallel. As noted by Adam Łajtar and Grzegorz Ochała,

> Apart from Egypt, the country of their origin, both the Alexandrian eras and the 532-year cycle were adopted in Ethiopia for computistic purposes. In such circumstances, it should not be surprising that they also found their way to Christian Nubia, which was, at least theoretically, part of the same Church. Unusual in the Nubian use of such dates is their funerary context, which is otherwise unattested in the eastern Christian world [...] It is interesting to observe that the Christian eras occur in Nubia only in Greek sources.[30]

It is difficult to say precisely which is the earliest attestation in Ethiopia of the Era of the Incarnation, since the references and research has been vague so far,

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30 See Ochała 2011, 185–186, 190, with lists of chronological and topographical distribution of designations (p. 191, table 29b), and attestations of the Era of the Incarnation (p. 203, table 30b). See also the useful observations by Łajtar 2003, xxv, and 8, 'It is difficult to say why in 8th-10th century Nubia the redactors of epitaphs made use of such a complicated system of indicating the year. Possibly they followed the orders of church or state authorities, otherwise unknown to us. One cannot exclude, however, that it is a show of pure erudition'. The Era of the Incarnation does not appear to have been used in Saidic manuscripts, whereas Bohairic manuscripts provide a few attestations: I thank Agostino Soldati for having provided the following evidence from manuscript Città del Vaticano, Biblioteca Apostolica Vaticana, Copt. 58, fol. 23ᵛ, with dating to 1025 Era of the Incarnation, 'Year of the World 6517, (of the) Crucified 1017, of the Martyrs 741, the 135th year of the 24th period (περίοδος)'; and manuscript Copt. 66, fol. 313ᵛ, with dating from the same year 1025, 'year of the Martyrs 741, (of) the Christ one thousand (and) 17, 134 of the 13th period (περιόδιον), the (year) of the Creation 6017th and 500th'. The only reference provided by Chaîne 1925, 13, n. 2, refers to a miracle from the Life of St Macarius, in manuscript Copt. 59, fol. 124ᵛ, 'And it was the day 25 of Pharmouthi that day, of the 82nd year of Diocletian, and it is 362 years from the Incarnation (οἰκονομία) of Christ, according to (κατά) the way the learned (σπουδαῖος) servants of God teach us'.

but it appears that this is definitely much later than the earliest attestation of the Era of Diocletian.[31] As far as Nubia is concerned, the earliest attestation comes from a Greek inscription of 29 April 799, while the latest attestation dates from the second half of the twelfth century, in a non-epigraphic context.[32]

It is however this Nubian connection, and, in particular, its use of Greek expressions, that we have to consider. A possible derivation from Nubian models in the inscription of Ham was first noted by Monneret de Villard, who compared the shape of the inscription with Meroitic inscribed offering tables.[33] A recently published thirteenth–fourteenth-century graffito from the Nubian church of Sonqi Tino seems to mention an archbishop of Aksum and thus adds an important element to the little-known medieval relationships between Nubia and Ethiopia, as well as provides evidence of the role held by the Greek language as a communicative medium in this relationship.[34] In this regard, the presence, on

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31 See 'Chronography', *EAe*, I (2003), 733a–737a (Siegbert Uhlig), without any precise references to the evidence, whereas 'Calendar: Christian Calendar', *EAe*, I (2003), 668a–672b (Emmanuel Fritsch and Ugo Zanetti), for the historical evidence exclusively relies on Cody 1991; Chaîne 1925, Mauro da Leonessa 1943, and even Neugebauer 1979, are also of little help in this regard. The earliest evidence in colophons based on the data in the Beta maṣāḥǝft corpus (<https://betamasaheft.eu/>) gives a date of the Era of the Incarnation for relatively late attestations, from the sixteenth century on. While this era is not used in the documents in the Golden Gospel of Dabra Libānos, an end-leaf in an archaic homiliary from Dabra Ḥayq ʾƎsṭifānos (Collegeville, MN, Hill Museum and Manuscript Library, and Addis Ababa, Ethiopian Manuscript Microfilm Library no. 1763, on which see Getatchew Haile and Macomber 1981, 218–231; Bausi 2019b, 74–75), fol. 280ra, has a document from the month of Gǝnbot of 1436 CE: 'In 6928 from the creation of the World, in 1428 from the birth of our Saviour, in 1152 Year of the Martyrs, in 12 Year of Grace', see text and translation in Taddesse Tamrat 1970, 106.
32 See Ochała 2011, 191, 203, tables 29b and 30b, with nine attestations from 29 April 799 to 17 September 1186, including the Epitaph of Kollouthos, Bishop of Faras, cf. Łajtar 2003, 9 (inscription no. 1), dated to 13 August 923.
33 See Monneret de Villard 1940; Conti Rossini 1944–1945, 29–30, who praises the proposal, albeit being in favour of a South-Arabian connection. But see Łajtar 2003, xv–xvii (inscription no. 1, pl. I) for comparable ruling in Greek Nubian inscription, and pp. 84–85 (inscription no. 18, Epitaph of Mariankouda, Tetrarch of Makouria, pl. XVII) for the reuse of offering trays in funerary inscriptions in Nubia (also previosuly noted by Kropp 1999, 166, 'Ebenso auffällig ist die Gestaltung der Zeilen mit oberer und unterer Begrenzungslinie und die Worttrenner, die alle direkt aus nubischem Vorbild übernommen scheinen'), and even before by Monneret de Villard 1940, 65–66. In fact, even in the inscription of Ham the 'Worttrenner' do not exactly consist of vertical lines, but of two vertically opposed wedge-like incised segments which touch one another in the middle of the line (see Figs 2 and 3).
34 See Łajtar and Ochała 2017, 259 (graffito DON51), '[---] ἀρχ(ι)επίσκ(οπος) Ἀξούμ(εος) [---] archbishop of Axum', or: '[---] ἀρχ(ι)επίσκ(οπος) Ἀξουμ(ειτῶν) [---] archbishop of the Axumites'). It is interesting to note that the letter ξ has two loops, as it is typical in Nubian

the façade of the church of Ham of a Greek inscription with what appears to be a peculiar arrangement of the two Greek letters Ω and A in the form of monograms, on the two sides of a cross, has to be put in connection with the inscription of Ham, with which, we could hypothesize, it shared at least the same context at some earlier point in time (Fig. 4).[35] We can take for granted that the inscription has the A and Ω which recur in epitaphs.[36] However, instead of reading the sign to the right as a ᴠ placed over an ⨅, I wonder whether the inscription might have been placed upside down in the façade of the old church of Ham where it was documented. It seems likely that originally the ∧ was placed under the ⨆, since the longer arm of the cross is usually the bottom one, while in our inscription, as it was placed, the longer arm is the top arm.[37] The collocation of the Ω to the left would be peculiar, but with parallels in one of the most praised Latin examples of the early Middle Ages, the early seventh-century *Codex Valerianus*.[38]

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inscriptions, cf. p. 260, 'There is, however, little doubt as to the *ksi,* read as a *sigma* by Laisney: it assumes a typical Nubian shape with the line forming a loop at the top and descending in two curves, first to the left and then to the right'; and for the Greek context, cf. p. 263, 'In this context it is important to observe that the text was apparently edited in Greek and was executed by someone using Nubian-type majuscules, a type of script characteristic of Christian Nubian literacy of the time. This suggests that the *abun* (or a member of his entourage) was only a commissioner of the inscription, the writer of which was a local, probably a cleric', the term *abun* here being used to indicate the archbishop.

35 See a picture of this Greek inscription in Conti Rossini 1939, 8 ('L'iscrizione è al fianco sinistro della porta della chiesa, entro il primo recinto. All'altro lato della porta è stata murata un'altra pietra quadrata che porta scolpita in rilievo una croce, fra le cui braccia superiori sono due monogrammi. Quello di destra porta un ᴠ sovrapposto a un ⨅; non dubito siano le lettere greche A e Ω, ben noti simboli su iscrizioni sepolcrali: la loro apparizione, per quanto sformata, in un monumento etiopico ci è indizio dell'antichità di questo'), with fig. 9. See also Bausi and Lusini 1992, pl. 6, fig. 11. This point was well present to Kropp 1999, 166, n. 12, who also stresses the similarity with Nubian parallels. For updates on Nubian funerary inscriptions, see Stroppa 2019.

36 See the commentary by Łajtar 2003, 5, on the epitaph of Kollouthos, Bishop of Faras quoted above. For Coptic examples, see the report on the necropolis of Karanis, by Buzi 2006, 121, which confirms the frequent use, even if of modest realization, of the '*ankh* con funzione di croce, dai cui bracci penzolano l'ⱥ e l'ω', with references to well-known more monumental examples.

37 One could read the two signs as the two consecutive numerals '800' (ω) and ∧ '900', the latter sign being an epigraphic variant of a *sampi* (↑ or ⱥ). And one wonders whether the ∧ was simply added to the ω, that paired the A, but I have no explanation why this should have been done.

38 See Garipzanov 2018, with rich documentation on the subject, and pp. 232–233 on the early seventh-century Latin *Codex Valerianus*, or Four gospels of St Corbinian (Munich, Bayerische

The unusual numerical notation of the inscription of Ham – for which I admit that there are points for which I still cannot provide satisfactory explanations – could only be explained by suggesting an attempt to imitate Greek script, which, in turn, requires us to postulate that Greek numerical signs circulated in medieval Ethiopia, possibly also in their different graphic variants, including cursive forms. This would have been pure speculation without any ground before the discovery of manuscripts which offer certain evidence of a knowledge of the Greek script at a time that is not too distant from that of the inscription of Ham, and that is, at the latest, *ante* thirteenth century and in all likelihood earlier. An archaic manuscript containing a Gǝʿǝz treatise on chronology and computus, recently brought to scholarly attention by a contribution of Denis Nosnitsin, definitely has, in the arch of the incipit folium, a series of signs that must be interpreted as a list of Greek numerical signs from 1 to 1000, with a few omissions and possibly one repetition (Fig. 5): units – A (1, ?), B (2), Γ (3), Δ (4), E (5), Ϛ (6), Z (7), | H (8), Θ (9) – tens – I (10), K (20), Λ (30), M (40), N (50), Ξ (60), | Ξ (60, i.e. one number is repeated), O (70), Π (80), Ϟ (90) – hundreds – P (100), Σ (200), T (300), Υ (400), Φ (500), <X (600), Ψ (700), Ω (800) missing, > ϡ (900) – and 1000 – ͵A (1000, ?).[39] Note that the form of the *sampi* corresponds to the cursive forms (ϡ, ϡ, more than to the so-called *as de pique* form, ↑) and provides an important evidence for the circulation of this variant and in general of Greek minuscule forms of numerical signs.

7 *Ṣarane* and *ʾǝlla śāhl*

Even more than *ʾǝlla śāhl*, the real *crux* in the following passage of the inscription of Ham is the word: *ṣarane*. Once established that the reading is certain,

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Staatsbibliothek, Clm. 6224), fol. 202ᵛ, with a 'jewelled cross with a suspended alpha and omega at the end of the Gospels'; a picture of the leaf is accessible at <https://app.digitale-sammlungen.de/bookshelf/bsb00006573>: in fact, the Ω is placed on the right and the A on the link. I owe this reference to Jacopo Gnisci. On the Coptic crosses in general, see Spalding-Stracey 2020, to which more could be added. For the evidence of Egyptian funerary stelae from the Byzantine and Arab period, see Tudor 2011, 90 and 96. It is really surprising that, while other inscribed crosses from the site of Ham are usually considered in the literature (see for example Hahn 1999, 451, fig. 19), there is no mention of this cross with Greek letters in the reference works on Ethiopian crosses, see Chojnacki and Gossage 2006 and Di Salvo 2006.

39 See Nosnitsin 2021. The fragmentary manuscript is only known through the uncatalogued pictures preserved in Addis Ababa, Casa Provinciale dei Padri Comboniani, Emilio Ceccarini collection, for which see Raineri 1993, who does not mention this specific item.

our first task is to see if there is a possible explanation for the reading as it is, without supposing any textual error or orthographic solecism by the stonecutter.[40] The first consideration is that ṣarane appears exactly in this form in an Aksumite inscription attributed to the fourth-century King ʿEzānā (*RIÉ* no. 188 = *DAE* no. 10, ll. 6–7): (6)*... ḍabʾu ṣarane mangəśtomu ʾa|*(7)*[fā]n*, translated by Drewes as: '(6)*... a fait la guerre aux Ṣarane, – leur royaume étant ʾA|*(7)*[fā]n'.*[41] The translation, however, is not certain, and other scholars have made Ṣarane the subject of the verb ('(6)... they waged war, the Ṣarāne, whose kingdom is ʾA-|(7)[fā]n').[42]

The two interpretations have a minor bearing for the interpretation of Ṣarane. There has been a consensus among all scholars in interpreting Ṣarane in the ʿEzānā inscription (*RIÉ* no. 188) as an ethnonym, which remains, however, an enigmatic name and without any parallel: no convincing identification has been suggested so far.[43] The syntagm *ṣarane mangəśtomu ʾa[fā]n* in the inscription is not less challenging:[44] the distinction of an ethnonym (Ṣarane), which in itself should be related to a minor polity, with a kingdom (ʾAfān) is something that only in the realm of Ethiopian epigraphy does not raise any

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40 Both these conditions – textual error (*-ne* instead of *-na*) and non-etymological orthography (*ṣar-* instead of *ḍar-*) – are presupposed in the hypothesis advanced by Kropp 1999.

41 See text in *RIÉ* I, 260; translation in *RIÉ* IIIB, 230, with a commentary on pp. 230–231.

42 See the different interpretation and translation by Marrassini 2014, 229, '(6)... Mossero guerra gli Ṣarāne, il cui regno è ʾA-|(7)[fā]n', who follows Enno Littmann, in *DAE*, 29, '(6) ... Es zogen zu Felde die Ṣaranē, deren Reich ʾA-|(7) fān ist'. Drewes justifies his interpretation of *ṣarane* as object, and not subject of the sentence, in consideration of the parallelism with other inscriptions ('E. Littmann tenait le mot *ṣarane* pour le sujet grammatical de la forme verbale précédente, *ḍabʾu*; à notre avis, c'est une erreur. Comme dans les autres grandes inscriptions royales axoumites, c'est le roi mentionné au début de l'inscription qui est le sujet de la première phrase principale du texte', *RIÉ* IIIB, 230–231). The verb *ḍabʾa* is constructed in most cases with the object or subject immediately after the verb (see *RIÉ* IIIB, 610–611), but not always; see for example *RIÉ* no. 191, l. 15 (*wʾnh ḍbʾk msl s[r]ẘt ḥgry wmsl ⸢dˌkn*), where a complementary expression immediately follows (*RIÉ* IIIB, 249, 'Et moi, j'ai fait la guerre avec les régiments de mon pays et avec le régiment Dāken').

43 See Marrassini 2014, 229, n. 2, who proposes, in the commentary, to identify this site with a river Ṣarāna, 'a circa 25 km a nord di ʾƎntiččo, sulla via da Aksum ad Adulis', as previously suggested by Huntingford 1989, 55. A place named Ṣaronā, 'a village in Akkele Guzay', is listed in Kane 2000, 2565a.

44 As honestly recognised by Littmann, in *DAE*, 30, 'Freilich ist die Konstruktion auf jeden Fall etwas prägnant und hätte klarer sein können'.

concern. ʾAfān, at least, reappears in the same inscription, but there is no further mention of Ṣarane.[45]

On the other hand, *mangəśtomu* is a common noun ('kingdom, royalty, government'). If we look at the morphological pattern of the word *ṣarane*, the only possible parallel is to think of an *-e* form of a noun of pattern *1a2a3-*, to be compared, for example, with *maṭan-* ('measure'), which is used as preposition and conjunction in the grammaticalised *status constructus maṭana*, widely attested also in the archaic *-e*-form *maṭane*.[46] This hypothesis requires a root *ṣrn from which the noun *ṣarane* is derived. Obviously, this root is not attested so far in Gəʿəz: which does not mean that this hypothesis must be immediately discarded. It is common knowledge that one of the most challenging aspects of Aksumite and generally Gəʿəz epigraphy is the obscurity of its lexicon.[47] The full exploration of this possibility requires more research.[48]

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45 See *RIÉ* IIIB, 229 (transl. of *RIÉ* no. 188, ll. 17–18), '[17] ... <Le nombre des> tués des hommes de ʾA[fā]n était |[18] 503, des femmes 202; c'était <au total> 705'. No light on this point comes from the modest contribution by Hoffmann 2014, 230–231 and 241, who does not note the inconsistency and makes the Ṣarane the main subject of the inscription, and even lists them under 'Hauptfeinde' (p. 230).

46 See Tropper 2002, 51–69, for an overview of nominal patterns in Gəʿəz. For *maṭan*, see Leslau 1987, 372b–373a, s.v. 'maṭana (construct state and the accusative used adverbially) "during, according to, about, at a distance (of), as long as, as large as, as often as, for the space of (a certain time), of the size of, as much as, as great as, so great, to such a degree"'. For the *-e* forms as an archaic feature of Gəʿəz, see Bausi 2005a, 2005b, and 2016, 76–77, n. 92; Bulakh 2009, 402, n. 19; summary in Villa 2019, 204–206; for the epigraphic evidence, see Bulakh 2013, 211. The form *maṭane*, which is not attested in Aksumite inscriptions, is widely attested in ancient manuscripts, as already observed by Dillmann 1865, 223, 'Denique nota, hoc መጠን ። in st. c. positum [...] in libris antiquioribus crebro መጠኔ ። sonare'. Abundant evidence is also provided now by the manuscript of the *Aksumite Collection* ('Urā Masqal, C₃-IV-71/C₃-IV-73 = Ethio-SPaRe UM-039), for which see Bausi, Brita, et al. 2020. Note that at least archaic *-e*-forms are attested in the inscription of Ham (ll. 2 and 3, *ʾame*), although standard forms are also present.

47 This goes well alongside the hypothesis suggested by Kapeliuk 1997, 494, that 'A possible explanation would be that the kind of Gəʿəz known to us from the Axumite inscriptions and from the early translations from Greek was only one, namely the written and standardized variant of the language, beside which there existed another variant or other variants from which the modern languages evolved'. Yet, for what we know at present, we can certainly say that at least some of the early translations from Greek were quite at variance with the standardized variant of the language. These assumptions, to which I have contributed in the past (see Bausi 2005b and 2016), seem to have become a recognized acquisition (see for example Butts 2019, 118: 'Research on the most ancient Ethiopic manuscripts, especially those that contain Axumite period texts, has shown that these preserve certain archaic linguistic features, some of which are also attested in Epigraphic Gəʿəz [...] These archaic features probably represent the

Quite different is the case for *ʾəlla śahl*: if we set aside the complex and extremely problematic reconstructions offered by Kropp and Fiaccadori, this is a well attested ruler name, present in the Ethiopian king lists as well as in literary sources, namely ʾƎlla Śāhl.[49] Without any absurd pretention at identifying the ruler, what matters here is that this is a plausible name built with an *ʾəlla* element (probably the plural relative pronoun) that can perform quite well in a phrase introduced by *ṣarane* the same grammatical role as the noun *mangəśtomu* in the aforementioned Aksumite inscription: in the latter inscription (*RIÉ* no. 188, l. 6) *ṣarane mangəśtomu* could mean 'by/in the sovereignty of their/his reign',[50] while in the inscription of Ham (*RIÉ* no. 232, ll. 4–5) *ṣarane ʾəlla śahl* would mean 'under the sovereignty of ʾƎlla Śahl', and would then offer a further chronological indication. I am well aware that we do not have any positive evidence for interpreting *ṣarane* as 'sovereignty' in this way – with 'sovereignty' I just gave an example of a possible meaning to highlight its possible grammatical function and to clearly indicate what the context needs, but even 'period, time,

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proverbial tip of the iceberg of an earlier variety (better: varieties) of Gəʕəz that has been mostly standardized in the Solomonic period'). For another example of interaction between epigraphy and philological manuscripts studies, see Bausi, Harrower, et al. 2020, 42–44, on the term *gəbgab/gəbgāb*, 'corvée'.

48 Within Ethiopian Semitic, the Gurage *ṭäränä*, 'strong, powerful, vigorous, hard (object)', and the related *ṭäräñä*, and the derived verb *ṭiräññe*, are obviously no possible comparison, since Leslau 1979, III, 631–632, reconstructs a root *ṭr* and the nasal consonant is part of the adjectival suffix (but the correspondence of Gurage *ṭ* for Gəʕəz *ṣ* is regular). Possible traces of nouns derived from a *ṣrn root in other Ethiopian Semitic languages do not convey any plausible meaning.

49 As we have seen and as clearly summarised in the informative entry 'Ǝllä Śahəl', *EAe*, II (2005), 263b (Stuart Munro-Hay), Kropp suggests to consider the words *ʾəlla śahəl* as a part of another – otherwise unknown – designation for the Era of Diocletian, while Fiaccadori considers them a genitive of abstraction ('those of mercy/compassion'). The development *sahl > śāhl* is the result of phonetic and orthographic developments: the names ʾƎlla Śahl, ʾƎlla Śāhl, or even ʾƎlla Śāhəl, are the same. For the king lists, see 'King lists', *EAe*, V (2014), 376b–379a (Alessandro Bausi), with consideration of ʾƎlla Śāhl on p. 378b; see also Derat 2019. A remarkable confirmation of the importance of the king lists as repositories of ancient, authentic materials have provided the recently discovered inscriptions of King Ḥafilā (ḤFL, previously known only in the Greek form ΑΦΙΛΑC from numismatic evidence), whose *ʾəlla*-name ʾL ʿYG (probably ʾƎlla ʿAygā) perfectly matches names attested in the king lists, see Bausi 2018, 289.

50 The expression could work in both syntactical interpretations of the sentence, either 'he waged war to the Ṣarāne', or 'they waged war, the Ṣarāne', and *mangəśtomu* could refer either to King ʿEzānā (with the plural suffix *–omu* with the value of third person respect form, see the detailed commentary by Marrassini 2014, 207–208, to the inscription *RIÉ* no. 186) or to the Ṣarāne (with the same *–omu* with the value of real plural).

jurisdiction', could work quite well – yet singling out *desiderata* on the basis of hypothesis is a legitimate and productive conjectural exercise: something like this is what would be required.

8 Conclusion

Despite its modest appearance, the Gəʿəz inscription of Ham is an extremely complex object. It was a stone shaped like a Meroitic offering table, reused to write a Gəʿəz funerary inscription which was probably copied from minutes containing Greek numerals expressing a date according to the Incarnation era. It was first placed at an undetermined location and only eventually incorporated in the façade of a church where it was first documented. It was subsequently moved to the inside of a new church, where it is still today. It is no wonder, then, that this object calls for complex explanations and that there are still *loci* and aspects of it that resist our interpretation. Material, palaeographic, and linguistic evidence, as well as the hypotheses advanced by our predecessors, to whose efforts we owe so much and to whose conclusions any alternative proposals are deeply indebted, need a profound re-examination.

Despite the many and obvious limits of this small and inadequate exercise in Gəʿəz epigraphy, I offer this contribution to Michael Friedrich as an attempt at having the same fresh mind and applying the same fundamental radicalism in research he always gave me an admirable and inspiring example of, in over a decade of fruitful cooperative work in the rewarding realm of Manuscript Cultures at Universität Hamburg.

ways. My thanks also go to Marco Guardo and Paola Cagiano de Azevedo, directors of the library and archive of the Accademia nazionale dei Lincei (Biblioteca della Accademia nazionale dei Lincei e Corsiniana), who generously granted a free reproduction of the pictures in Figs 1–3, and to Susanna Panetta, Pasquale Mastronardi, and the whole staff of the Accademia nazionale dei Lincei, for having kindly facilitated the access to the Carlo Conti Rossini fund. Last but not least, I want to thank Denis Nosnitsin for allowing me to access one of his contributions (Nosnitsin 2021), when it was still unpublished, which has provided some elements for this note. As always, the responsibility for any error and hypothesis remains exclusively with the author.

Abbreviations

DAE	Enno Littmann, *Deutsche Aksum-Expedition*, IV: *Sabäische, Griechische und Altabessinische Inschriften*, Berlin: Reimer, 1913.
EAe	Siegbert Uhlig and Alessandro Bausi (eds), *Encyclopaedia Aethiopica*, I: *A–C*; II: *D–Ha*; III: *He–N*; IV: *O–X*; V: *Y–Z: Supplementa, Addenda et Corrigenda, Maps, Index*, Wiesbaden: Harrassowitz, 2003–2014.
RIÉ	Étienne Bernand, Abraham Johannes Drewes, and Roger Schneider, *Recueil des inscriptions de l'Éthiopie des périodes pré-axoumite et axoumite*, I: *Les documents, Introduction par Francis Anfray*; II: *Les Planches*, Paris: de Boccard, 1991; Étienne Bernand, III: *Traductions et commentaires*, A: *Les inscriptions grecques*, Paris: de Boccard, 2000; Abraham Johannes Drewes, III: *Traductions et commentaires*, B: *Les inscriptions sémitiques, Introduction par Roger Schneider*, ed. Manfred Kropp and Harry Stroomer (Aethiopistische Forschungen, 85 / De Goeje Fund, 34), Wiesbaden: Harrassowitz, 2019.

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- Addis Ababa, Casa Provinciale dei Padri Comboniani, Emilio Ceccarini collection, Gəʿəz treatise on chronology and computus (no inventory)
- Città del Vaticano, Biblioteca Apostolica Vaticana, Copt. 58
- Città del Vaticano, Biblioteca Apostolica Vaticana, Copt. 59
- Città del Vaticano, Biblioteca Apostolica Vaticana, Copt. 66
- Dabra Ḥayq ʾƎsṭifānos, Homiliary (Collegeville, MN, Hill Museum and Manuscript Library, and Addis Ababa, Ethiopian Manuscript Microfilm Library no. 1763)
- Ham, Dabra Libānos, Golden Gospel (no inventory)
- Munich, Bayerische Staatsbibliothek, Clm. 6224 (*Codex Valerianus*, or Four gospels of St Corbinian)
- Paris, Bibliothèque nationale de France, Éthiopien, d'Abbadie 110
- St Gallen, Stiftsbibliothek, Cod. Sang. 459
- ʿUrā Masqal, C3-IV-71/C3-IV-73 = Ethio-SPaRe UM-039 (*Aksumite Collection*)

List of inscriptions

- Aksum (Ethiopia), Māryām Ṣəyon, *RIÉ* no. 188 = *DAE* no. 10
- Aksum (Ethiopia), Māryām Ṣəyon, *RIÉ* no. 191
- Aksum (Ethiopia), Museum of Aksum, *RIÉ* no. 186 = *DAE* no. 8
- Ham (Eritrea), Beta Māryām, *RIÉ* no. 232
- Khartoum (Sudan), Sudan National Museum, Greek inscription no. 1 (inv. 23377, Epitaph of Kollouthos, Bishop of Faras)
- Khartoum (Sudan), Sudan National Museum, Greek inscription no. 18 (inv. unknown, Epitaph of Mariankouda, Tetrarch of Makouria)
- Sonqi Tino (Sudan), Greek graffito DON51
- Warsaw (Poland), National Museum, Greek inscription no. 107 (inv. 234646, Epitaph of Stephanos, Bishop of Faras)
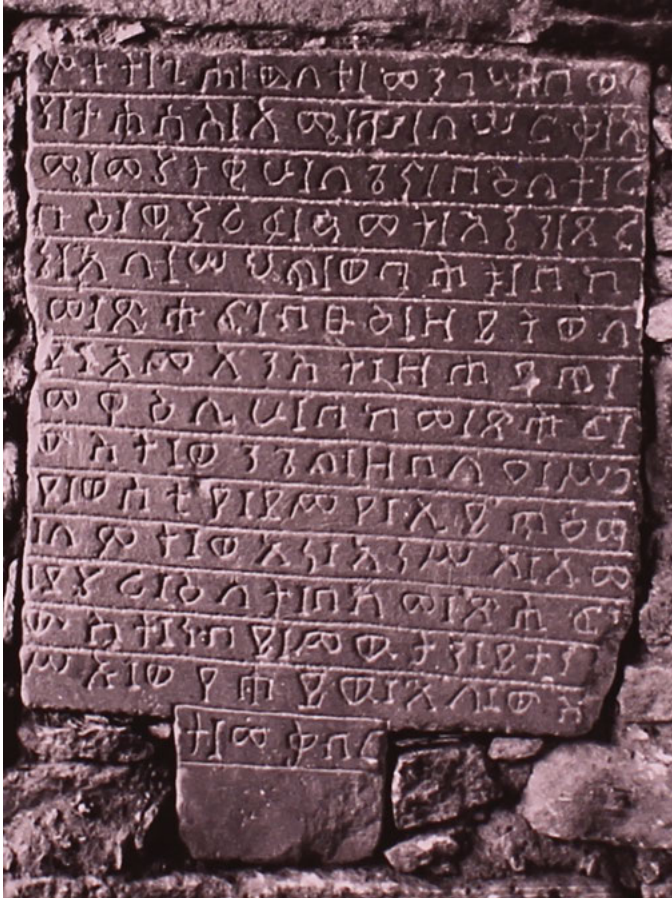
Fig. 1: The inscription of Ham (*RIÉ* no. 232). © Roma, Accademia nazionale dei Lincei, archivio Carlo Conti Rossini, busta 11, fasc. 93, 'Marazzani'. Already published in Conti Rossini 1939, 9 (fig. 10).

Fig. 2: Inscription of Ham: left, l. 2 (ኸ፝ / K Z).

Fig. 3: Inscription of Ham: right, l. 4 (እኽን / ፭ፕ፝ / ግ Ξ Z).

Figs 2 and 3 © Roma, Accademia nazionale dei Lincei, archivio Carlo Conti Rossini, busta 11, fasc. 93, 'Marazzani'.

Fig. 4: Inscription placed on the façade of the church of Ham, turned upside down from its presumable original orientation. The picture here printed is turned 180° in order to show the inscription as it presumably originally was. © Roma, Accademia nazionale dei Lincei, archivio Carlo Conti Rossini, busta 11, fasc. 93, 'Marazzani'. Already published in Conti Rossini 1939, 8 (fig. 9); cf. a colour picture in Bausi and Lusini 1992, pl. 6, fig. 11.
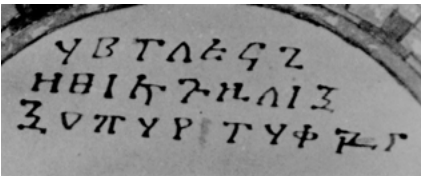
Fig. 5: Addis Ababa, Casa Provinciale dei Padri Comboniani, Emilio Ceccarini collection, Gəʿəz treatise on chronology and computus, fol. 4ʳ (title page). From Nosnitsin 2021.

Kaja Harter-Uibopuu

Multiple-Text Inscriptions in the Greco-Roman World

Abstract: The concept of multiple-text manuscripts will be tested for its applicability to the epigraphic evidence. On the basis of four specific examples from different cities of the Greco-Roman world, the advantages of this approach will be made clear, as will its limitations.

1 Introduction

Over the last years, the scholarly interest of manuscriptologists, not only in Hamburg, has been directed far beyond the analysis and commentary of individual handwritings or the study of specific manuscript cultures. A profound comparison of the use of manuscripts in different cultural environments and historical periods was always at the core of the work at the Centre for the Study of Manuscript Cultures. Consequently, the next stage was to move beyond the traditional material of manuscripts (bamboo, palm leaf, parchment, papyrus, etc.), which had been the original focus, and to include the epigraphic evidence: The foundation for joint research between manuscriptologists and epigraphists had been laid. It seemed quite natural to transfer the concepts from the field of manuscript studies to epigraphy. In this way, the two hitherto largely separate fields of research can be brought together and mutually benefit from each other. Manuscripts on the one hand and inscriptions on the other, the exact separation of which can only be defined with great difficulty anyway, thus become 'written artefacts', allowing a new perspective and starting point.

   In this contribution, the focus will be on 'written artefacts' that combine more than one text on a single medium. M. Friedrich placed such manuscripts at the centre of an international conference in 2010, the papers of which were united in the edited volume *One-volume libraries: Composite and Multiple Text Manuscripts* published in 2016. In the introduction, after a thorough examination of various scholarly traditions, M. Friedrich and C. Schwarke offered the following definition: 'multiple-text manuscripts' are codicological units worked in a single operation, whereas composite manuscripts contain formerly independent

units.[1] Can epigraphic evidence also be provided for this result? In the following, the practice of placing more than one text on an epigraphic medium will be presented on the basis of a few selected examples. It is rather difficult to find parallels to the composite manuscripts, since in many cases the material properties of the inscribed medium seem to prohibit the combination of various individual 'inscribed written artefacts' as initially separate 'codicological units' to form a new entity. However, if one considers – as in the case of the multiple text manuscripts – an inscribed object as a codicological unit that could unite different independent texts, the number of examples increases considerably. Adapting the concept slightly, we should thus consider cases in which the different texts were united at the same time and possibly even by one hand, as well as cases in which the medium was used over a longer period of time and the multiple text inscription developed piece by piece.

In order to select comparable pieces from the large number of inscriptions from the Greek poleis, epigraphic testimonies are to be examined that contain legal regulations in the broadest sense and were displayed in the public sphere.[2] Since the population of the city and the visitors to sanctuaries can be understood as the intended audience, the physical characteristics as well as the composition of these written artefacts can be studied and contrasted. The city-state (Greek: πόλις *polis*) as an urban social and political centre from the fifth century BCE to the third century CE was subject to constant changes in its constitution, its social composition and stratification and its political situation. Nevertheless, the relatively small dimension, the concentration on its own citizens and among them the landowners and rich craftsmen and traders, as well as the involvement of the rest of the people in the daily processes, form a stable framework. Inscriptions on stone served as a medium for the permanent transmission of information, and even more so for self-representation to the municipal administration, its individual committees and subdivisions, but also to supra-regional rulers such as the Hellenistic kings and Roman emperors. This raises the question not only of the content of the preserved texts, but also of the context of their placement and display. Were the texts inscribed on specially created writing supports (mostly stelae), were they part of elaborate monuments or were the

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1 Friedrich and Schwarke 2016, 15–16.

2 During the summer term 2016 M. Friedrich invited me to present new ideas on epigraphic sources from ancient Greece to the Graduate School at the SFB 950 and I chose the topic of this paper. This first attempt to reconsider well-known inscribed written artefacts has been followed by many more and has introduced me to a new way of approaching Greek and Latin inscriptions.

walls of public buildings or temples used for their publication? Who was responsible for the selection and composition of the texts as well as for their presentation and placement? Were the individual texts part of a larger collection of regulations or did they stand alone? Finally, from a legal historical perspective, it is important to clarify whether the publication on stone was in any way a prerequisite for the legal validity of the provisions.

2 The polygonal wall of the temple of Apollon in Delphi (Phocis): Records of manumitted slaves

The sanctuary of Apollo at Delphi was one of the greatest attractions for the inhabitants of the Greek poleis, not only on the mainland, but also on the islands, in Asia Minor and in Magna Graecia, i.e., Southern Italy. Consequently, it was a preferred site for buildings and monuments that were intended to portray the history of these states in as favourable a light as possible. In many cases, 'written artefacts' were created through the complex combination of architectural, statuary and textual elements, which were intended to leave a lasting impression on visitors. A special feature is a large group of smaller texts that were attached to the retaining wall of the temple terrace, the so-called polygonal wall, facing to the south (Fig. 1). More than a thousand inscriptions attest to the manumission of slaves by Delphians, but also by citizens of other *poleis*, from the beginning of the second century BCE until the beginning of the first century BCE. From this time onwards, other walls as well as individual writing supports were used for the same genre of texts, which continue into the first century CE.[3] The texts are records of the deed of manumission, which was performed as a sale involving the manumittor as vendor on the one side and the god Apollo as purchaser on the other, albeit on the condition of freeing the slave. They are dated by naming the priest of the sanctuary thus using the typical formula for Delphic inscriptions. Moreover, they bear the names of witnesses and often even refer to a subscription and therefore convey at least parts of the original contract which seems to have been mixed with formulae of entering it into the acts of the sanctuary's administration.[4] Since the new status of the

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3 An introduction to the system of manumission is to be found in Mulliez 1992, meanwhile the first part of his corpus of the inscriptions has appeared (CID V).

4 Harter-Uibopuu 2013, 281–294 on this compilation of two legally independent texts, which was then engraved on the polygonal wall.

former slave is mentioned as well as his duties towards the manumittor and the possible protection from re-enslavement, the texts have often been interpreted as safeguards against any offence. Still, the self-presentation of the manumittors within their own community and in the eyes of the visitors cannot be underestimated.[5]

Although there are clearly many texts in one 'codicological unit', i.e. the wall, the question remains whether this can be called a 'multiple-text inscription' or a 'composite inscription' in the sense of the definition used by Friedrich and Schwarke. Only a more precise description of the epigraphic qualities allows an answer here. The wall itself stems from the last quarter of the sixth century BCE and is thus more than 300 years older than the inscriptions. Its main purpose was not to be a medium for public inscriptions, but this possible quality due to its central place in the sanctuary seems to have been acknowledged and exploited later on. For this purpose, individual areas were smoothed time and again, which were then inscribed (Fig. 2). The texts appear quite uniform at first glance, since the letter-sizes are about the same. Nevertheless, they were not only created in different years, but above all they were also applied by different masons. The content of the inscriptions makes it very clear that the publication on stone was not necessary for the legal validity of the manumission act.[6] Even if in a certain way synchronous 'clusters' were created, there is yet no strict order in which the space had to be used. Repeatedly, inscriptions are added that do not contain manumissions but other public decrees concerning the city and the sanctuary. I would not apply the term 'multiple-text inscription' here, since the polygonal wall contains a collection of texts formed over *c.* 100 years. On the other hand, 'composite inscription' would not be appropriate either, because there are no formerly independent units bearing writing. Still, it is definitely one written artefact, a codicological unit binding the different acts together. What was its purpose? The wall was accessible to everybody and may have been a point of reference for the content. The former slaves and their families will have cherished the memory of their change of status, the manumittors were praised for their benevolence and could show this to their peers. Anybody wishing to rely on the help of the sanctuary in freeing their slaves could use the

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5 Lepke 2019 analyses the effect of the manumission inscriptions in the sanctuary of Apollo on the basis of the strangers who are recorded there as former owners of the slaves.
6 Harter-Uibopuu 2013, 293–294.

templates of the records. In this way the wall can be seen as an archive, public not in the sense of an institution, but of its display and accessibility.[7]

3 The 'archive wall' of Aphrodisias (Caria): self-presentation of a proud city

The identification of a group of texts at the theatre of Aphrodisias as an 'archive wall' by J. Reynolds in 1982 was rightly criticised subsequently, but the dossier is of great interest for the considerations at stake.[8] Dominated by the typical invocation ΑΓΑΘΗ ΤΥΧΗ ('To good luck') it comprises 21 documents from the period between the Roman general Lucius Cornelius Sulla and the Roman emperor Gordian III (243 CE), in which various privileges of the Carian city as a *civitas libera* within the Empire had been granted and confirmed by the Roman authorities. The wall on which they were publicly recorded dates from the late first century BCE and forms the northern end of the stage building. It was 11 metres long and between 2.5 and 5.5 metres high (Fig. 3).[9] In contrast to the inscriptions on the polygonal wall from Delphi, however, those from Aphrodisias show great uniformity in their lettering and in their placement. Reynolds already pointed out that the letter forms correspond to a good standard for public, but also fine private inscriptions of the second half of the second century CE and the third century CE. The use of 'guiding lines' as well as the careful structuring of the inscription by vertical balks, subtitles, segmentation marks and other visible elements testifies to purposeful planning of the 'visual organization'. Moreover, the texts, mostly letters of Roman emperors, were in some instances shortened

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7 A similar phenomenon can be seen in Bouthrotos, an ancient city in Epiros (today Butrint/ Albania), where the manumission records from *c.* 160–100 BCE are found on the parodos wall of the theatre as well as on architectural blocks later used to build a fortification, cf. I. Bouthrotos.
8 Chaniotis 2003, 251–-252 points to the fact that the documents have been carefully selected for presentation on the wall, and that probably many more public documents, which did not fit the story to be told, were deliberately left out. Although the term 'inscription dossier' is frequently used, it is slightly misleading. One might rather speak about an inscribed dossier, since the written artefact is a collection of texts rather than a collection of inscriptions. I will therefore use the simple term dossier.
9 Reynolds 1982, 33–37; Kokkinia 2015–2016, 12–14. The wall was not found intact but had to be reconstructed, using inscribed blocks found in the vicinity. The letters of the invocation are almost three times the size of the ones used for the texts (0.08 m. as compared to 0.015–0.025 m.), furthermore it is positioned right at the centre of the dossier.

deliberately by omitting certain standard formulas and concentrating on the central messages. In a careful study of the monument, C. Kokkinia explains the design and the genesis of the written artefact convincingly. She is able to differentiate between two phases of inscribing by criteria of palaeography and other external characteristics. Around the year 224 CE, during the reign of Septimius Severus, the first seventeen documents were assembled and incised above the orthostates' course. In 243 or a little later, another four documents were added below this first composition, this time using the orthostates.[10] While Reynolds sees the chronological order of the documents as a decisive criterion for their place on the 'carrier', and thus has interested visitors start at the top left in col. I and end at the right in col. VI, Kokkinia interprets the arrangement in a different way. The layout seems to be based on the centre of the texts, as the large heading on col. IV suggests. The most important texts were placed there, and individual passages were highlighted by being centred in a separate line. In the two columns on the left and right (III and V) on the other hand, the individual texts were marked by initial letters and more densely inscribed, which automatically drew attention to col. IV. In this way, the praise of Augustus, the first Roman emperor, who had elevated Aphrodisias as his city 'out of all Asia', was given a special position both in terms of content and visual appearance, followed by similar messages. 'Even a quick and half-distracted reader would get the message', Kokkinia asserts.[11]

To my view, this extensive dossier clearly constitutes a 'multiple-text inscription' according to the definition noted at the beginning. In a single operation (enlarged only twenty years later by another one) several texts are carefully chosen, put together and presented as a new unit, with special attention to its visual organization. The publication was authorized by the city herself, who thus chose a way of favourable self-presentation through a sophisticated monument. The wall of the stage building as a written artefact, however, is to be seen in the larger context of the entrance to the theatre. Tributes to outstanding citizens of the city virtually frame the documents inscribed on it. Thus, every visitor to the theatre would not only notice the inscriptions on his left, but also the heroon for Aristokles Molossos, a benefactor from the second century CE, and the statues of Artemidoros, son of Apollonios, and of C. Iulius Zoilos, both first century BCE. Their prominent families also stand out clearly in the documents

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10 Kokkinia 2015–2016, 15–20.
11 IAph2007, 8.32, ll. 3–4: μίαν πόλιν ταύτην | ἐξ ὅλης τῆς Ἀσίας ἐμαυτῷ εἴληπφα ('This one city I have taken for mine out of all Asia'). Kokkinia 2015–2016, 44–47. On the political background and the historical realities see Chaniotis 2003.

of the dossier.[12] Therefore, if one wants to compare the wall with a precisely planned and beautifully manufactured multiple-text manuscript, the archaeological and epigraphic context in the theatre entrance is the 'showroom' in which the magnificent gem was displayed.

4 A petition to Gordianus III from Skaptopara (Thrace): Villagers complaining to their emperor

Gordian III (225–244 CE), whose letter to the city of Aphrodisias forms the closing of the documents just presented, was also asked by the Thracian community of Skaptopara for help against the attacks of Roman soldiers. His reply to this petition was subsequently published as a bilingual inscription on a stele which was found in 1868 but then lost again only a few years later (Fig. 4). Even a squeeze that had gone to the Archaeological Institute in Athens can no longer be consulted. K. Hallof succeeded in finding a squeeze, sketches and letters in the archives of the *Inscriptiones Graecae* at the Berlin-Brandenburg Academy of Sciences as well as in Theodor Mommsen's documents left to the Berlin State Library after his death, which allow a critical reading of the lower half of the text and can thus correct and supplement Mommsen's edition in CIL III Suppl. 12336.[13] Still, for a visualization of the layout of the text on the stele measuring 1 metre in height and 0.7 metre in width one has to rely on Mommsen's description:

> Die Disposition der Inschrift ist auffallend und auch für die sachliche Behandlung zu berücksichtigen. Sie begann mit der lateinischen Vormerkung, deren Zeilen offenbar über die ganze Breite der Tafel liefen; dieser Theil ist verloren und die Zeilenabtheilung unbekannt. Darauf folgen die griechischen Texte, in drei schmalen Columnen geschrieben, welchen jetzt allen die Köpfe fehlen; die Columnen setzen einander fort und weder sonst noch am Schluss der dritten begegnen leer gelassene Räume. Unterhalb dieser drei den Mittelraum füllenden Columnen folgt in vier wieder über die ganze Fläche laufenden Zeilen das kaiserliche Rescript; die letzte ist nicht voll und hat den Anschein einer Endzeile.[14]

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12 Kokkinia 2015–2016, 14–15 and Reynolds 1982, 149–150 and 156–164.
13 Hallof 1994, 405–413, presenting the intriguing history of the inscription and its transcription, which can itself be gathered from various archived written artefacts in detail.
14 'The disposition of the inscription is striking and should also be taken into account for the purposes of its interpretation. It started with the Latin prescript, the lines of which apparently ran across the entire width of the panel; this part is lost, and the division of the lines is

There are several distinct elements brought together in the inscription pertaining to different stages of the complaint of the villagers and its treatment by the Roman authorities. As the dossier in Aphrodisias the document in Skaptopara starts with an invocation, this time it is the latinized version *bona fortuna* of the Greek ἀγαθὴ τύχη.[15] This heading is immediately succeeded by another part of the text, still in Latin, in one single column and probably set in larger letters than the petition itself: the authentication of the copy of the imperial rescript, which was presumably handed to the petitioner Aurelius Pyrrus (ll. 2–5).[16] The note of receipt from the imperial chancellery (ll. 6–7) serves on the one hand as a means of identifying the petition in response to which the rescript was made, but on the other hand also as an introduction to the Greek text that follows. The two next parts are in Greek and distributed quite evenly over three columns. Column I and two thirds of column II hold the *libellus* (the petition) of the inhabitants of Skaptopara (ll. 9–107). They complain to the emperor that soldiers would regularly forcefully exact quarter and lodging from them without adequate payment, even though the village was not actually obliged to provide it. Various orders and edicts from the governor in the past had not helped. They announce that – if there was no improvement – they would have to leave their properties and that this would, of course, be to the detriment of the imperial treasury.[17] In the lower third of column II and in column III follows the speech of Aurelius Pyrrus (ll. 108–164), who once again vividly describes the facts of the

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unknown. This is followed by the Greek texts, written in three narrow columns, all of which are now missing their headings; the columns continue each other, and no empty spaces are found either elsewhere or at the end of the third. Below these three columns filling the middle space, the imperial rescript follows in four lines again running across the entire surface; the last one is not full and has the appearance of an end line' (Mommsen 1892, 245, my translation). The description is the basis of the schematical layout in Hauken 1998, 84, Fig. 5, and his reconstruction of the written artefact, on p. 81.

15 Mommsen 1892, 249; Hauken 1998, 82. This Latin form is mainly used in the Greek provinces of the Roman empire, where the Greek invocation was a common sight to every reader. Since the illustration in this article is a drawing of the surviving squeeze, the first part is missing. It shows the lower half of the monument.

16 This introduction not only provides an exact date for the imperial rescript (16 Dec. 238 CE), but also hints to the practice of the imperial chancellery in Rome to put *rescripta* on display in the portico of the baths of Trajan (ll. 4–5). The procedure of the authentication of the copy is described by Hauken 1998, 98–105 with a detailed commentary and several comparable epigraphic and papyrological sources.

17 On the historical circumstances and the problems of civilians in the Eastern provinces of the Roman Empire throughout second and third century CE cf. Herrmann 1990, 37–48; Hauken 1998, 106–120.

case in the proceedings before the governor of Thrace and explains why the villagers had turned to the emperor. This part is not only set apart from the former text by a *vacat* of about three lines, but also introduced by the Latin *adlegent*, starting a little out of the left margin of the column. Thus, the visual organization underlines the structure of the composed document. The text concludes with the emperor's *rescriptio* (ll. 165–168) – again in Latin and using the full width of the stele and thus clearly set off in the layout – who, however, does not decide the case but instructs the governor to find out the truth. The last line shows also the words *rescripsi*, *reocognovi*, *signa VI*. The first word refers to Gordian III, the emperor, who ascertains that it was he himself who answered to the petition. The second word shows the acknowledgement of the office *a libellis*, in charge of the correspondence of the emperor. *Signa* refers to the witnesses attesting that the copy of the *rescriptum* was correct and hints to the fact that the original papyrus was actually bearing six seals.

Although the inscription would like to convey this impression, the legal record is far from complete nor chronologically narrated. I do not believe that the written artefact in the village reproduces the document on papyrus that was given to the petitioner in Rome, nor is it a faithful copy of the proceedings before the governor. Although the authenticating endorsement and the petition may well have formed the beginning, the imperial *rescriptio* would have had to have stood between the two Greek texts. It was issued after the petition and – as its content shows – precedes the proceedings before the governor, to whom the whole matter had been referred. On the other hand, its use at the end of the inscription forms the ideal frame for the Greek texts: Beginning with the authorization that what follows is in fact the voice of the emperor and ending with his assertion *rescripsi*, the written artefact gains importance and authority. An extract from the protocol from the governor's court is quoted verbatim (*adlegent* forms a typical note in the minutes), but this is only a small part of the proceedings.[18] It is particularly noticeable that the decision of the governor is missing. A positive outcome for the inhabitants of the village can only be inferred from the fact that the selection of texts was set and published as an inscription in the present form. Of course, this was not necessary for the legal validity of the governor's decision or indeed of the imperial *rescriptum*.

In this way, several different, deliberately chosen texts are well combined and inscribed in one instance on a carrier which probably has been manufactured especially for this occasion. This is a multiple-text inscription in the best sense. It remains to be asked who was in charge of its creation and who may

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18 Hauken 1998, 120.

have authorized it. One possible originator may have been the village of Skaptopara who had been maltreated and had – successfully – complained to the emperor. After a series of written announcements by the governor, which had not kept the soldiers away, the villagers may have hoped that the imperial authority would now frighten the military enough to leave them in peace. On the other hand, the role of Aurelius Pyrrus is stressed by the layout of the text. He is mentioned with a full description at the top as handing in the petition, and his name appears prominently at the centre at the beginning of the minutes. Thus, he seems to be honoured specifically and may well have been behind the setting up of the written artefact.[19]

5 The Potamoneion from Mytilene (Lesbos): honouring a rhetor and patriot

In the troubled times of the first century BCE with regard to the Greek East, the originally friendly relationship between Mytilene on Lesbos and Rome had deteriorated considerably after the Mytilenaeans had sided with Mithradates against Rome in the war (88–85 BCE). It was largely thanks to the personal and close relationship of Theophanes of Mytilene with Cn. Pompeius Magnus that the situation for Mytilene improved again from 62 BCE. The city regained its *libertas* and was granted further privileges successively. An inscription honours not only Pompeius and Theophanes, the latter as Zeus Eleutherios, but also the third benefactor of the city: Potamon, son of Lesbonax.[20] It is to his credit that the city was able to maintain its special status even after the discord between Pompey and Caesar. Potamon was a regular participant in diplomatic missions, at first to Caesar, then later to his successor Augustus. He, too, succeeded in gaining privileges such as exemption from taxes and in establishing a cult for

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19 Hauken 1998, 82, even presumes that the governor's verdict might not have been as positive as the villagers had hoped and that Aurelius Pyrrus took the initiative personally to have the inscription published even despite of this fact. Although his role may have been decisive, I do not believe that he would have put his failure (he was the representative) in such a way on display in a small community where everybody knew the context.
20 Pawlak 2020, 173–180 on the political circumstances and the vita of Theophanes (IG XII 2, 163) on the display of the texts on the monument.

Augustus in addition to the cult of Roma in his homeland.[21] For the present article, however, it is not so much these diplomatic successes that are of importance, but rather the special honours bestowed on Potamon. In addition to the usual honorary inscriptions, praising him as benefactor, saviour and founder (εὐεργέτης, σωτήρ, κτίστης) including one on a throne in the theatre of Mytilene, a large monument bearing the name Potamoneion was situated on the Acropolis.[22] The editor of the Lesbian inscriptions, William Paton, attempts to reconstruct the monument, which had been destroyed during an earthquake and whose stones had subsequently been reused in the walls of the fort on the Acropolis. He assumes a base consisting of at least three layers of blocks on which the texts were carefully inscribed in several columns with large and elegant letters. More than 60 fragments of inscriptions can be attributed to it on account of the very distinctive and elegant writing and the characteristics of the stone. They were all engraved at the same time and probably by the same mason, arranged in at least five columns. The ensemble is structured by headlines (in col. b l. 6; col. b l. 13; col. b l. 36) as well as by the phenomenon of hanging lines in column c.[23]

The monument probably bore all the decrees of the city, letters from Rome and other official documents that mentioned Potamon's name, provided information about his activities and attested to the corresponding honours by the city. The documents cover a period from the Battle of Pharsalos (48 BCE) to the reign of Augustus (27 BCE – 14 CE), when the honoured was the first imperial priest in Mytilene. The dossier of inscriptions also contains various *senatus consulta*: the first is referred to in a letter by Caesar, dating from 46–45 BCE. In it, the *dictator* reports to the Mytilenaeans on the success of their legation, which was able to obtain a senate resolution on the renewal of the status *amicus et socius*, but also transmitting his own *edictum* on taxation matters. The two

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21 Pawlak 2020, 180–187; Parker 1991 provides a concise portrait of Potamon and analyses the epigraphic evidence for his family and descendants. Several literary sources mention Potamon, collected in BNJ 147 (<dx.doi.org/10.1163/1873-5363_bnj_a147>, accessed on 27 Jan. 2021).

22 Parker 1991, 121 refers to the honours: IG XII 2, 272 (throne); 159–163 (honorary inscriptions). The name 'Potamoneion' is mentioned in IG XII 2, 51, l. 5, one of the fragments belonging to the structure.

23 IG XII 2, 23–57; IG XII suppl. 6–12 and 112; Cf. Mommsen 1895, 890–891; Parker 1991, 115 n. 2; and Dimopoulou-Piliouni 2010, 35 on the history of the epigraphical research. Hodot 1982, 187 describes the following characteristics: 'lettres élégantes avec apices de 15 à 20 mm de hauteur [...] interlignes spacieux [...] forme particulière de l'éta, avec barre médiane incurvée, [...] succession des documents sur la même pierre avec des intertitres détachés au milieu d'une ligne'.

senatus consulta, which are reproduced probably verbatim immediately below date to the year 25 BCE.

Even though the memorial and the texts it contained represent an important documentary source for the history of the island, the administration of the Roman Empire in the early Principate and, not least, for the transmission and publication of state acts from the capital to the provinces, this is not its original intention. Rather, the installation of such a monument of honour must be considered as the result of a form of negotiation between the two parties involved, the honoured person and his family on the one hand and the polis on the other. Potamon was arguably one of the most important citizens of the city and had dedicated his life and probably large parts of his assets to its service. He deserved the same honours as other benefactors in similar situations, not only in Lesbos but all around the Greek cities of the Roman Empire. Since the exact date of the placement of the monument is not known, it cannot be said with certainty whether he himself was still able to influence the design, or whether his descendants did so. In any case, the practice of arranging and setting up honorary monuments and inscriptions since Hellenistic times suggests communication. Still, not only the *honorands*, but also the city was presented in the most positive light possible. In the same way as in the case of the theatre wall in Aphrodisias, the elevated status of the Mytilene among the subjects of the new Roman Emperor Augustus was presented to the public, as the deliberate headlines clearly point out. Any visitor would perceive not only the fame of Potamon, son of Lesbonax, but also the glory of the *polis*.[24] The Potamoneion is an impressive multiple-text inscription, a written artefact combining different texts from different periods in one codicological unit. Its placement on the acropolis of Mytilene suggests the appropriate setting amongst shrines and other monuments.

6 Conclusion

Not every written artefact containing more than one inscription can be classified as a multiple-text inscription, thus corresponding to the concept of multiple-text manuscript. Still, once one starts to look at the characteristics that have been developed through manuscript research, new possibilities for analysing

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24 Eck 2014 compares the dossier to those of Iason of Kyaneiai in Lycia or T. Sennius Sollemnis in Aragenua in Gallia Lugdunensis and stresses that these inscriptions are not publications in any legal sense but presentations.

the so-called inscription dossiers and understanding them as elaborate creations open up. While the polygonal wall in the sanctuary of Delphi lacks the necessary unity of production, the theatre wall in Aphrodisias, the stele from Skaptopara in Thrace and the Potamoneion from Mytilene are close parallels to the concept presented by M. Friedrich and C. Schwarke in 2016. The search for a 'composite inscription' has up to now been unsuccessful and remains a research question to be solved.

Abbreviations

BNJ	Ian Worthington (gen. ed.), *Brill's New Jacoby*, Leiden: Brill, 2017 <referenceworks.brillonline.com/browse/brill-s-new-jacoby>.
CID V	Dominique Mulliez (ed.), *Corpus des Inscriptions de Delphes*, V: *Les actes d'affranchissement*, 1, Athens: École française d'Athènes, 2019.
IAph2007	Joyce Reynolds, Charlotte Roueché and Gabriel Bodard, *Inscriptions of Aphrodisias*, online-edition <http://insaph.kcl.ac.uk/iaph2007/index.html> (accessed on 19 April 2021).
I. Bouthrotos	Pierre Cabanes and Faik Drini (eds), *Corpus des Inscriptions grecques d'Illyrie méridionale et d'Épire*, II/2: *Inscriptions de Bouthrôtos*, Athens: École française d'Athènes, 2007.
IG XII 2	William R. Paton (ed.), *Inscriptiones Graecae*, XII: *Inscriptiones insularum maris Aegaei praeter Delum*, 2: *Inscriptiones Lesbi, Nesi, Tenedi*, Berlin: De Gruyter, 1899.
IGBulg IV	Georgi Mihailov (ed*.), Inscriptiones graecae in Bulgaria repertae*, IV: *Inscriptiones in territorio Serdicensi et in vallibus Strymonis Nestique repertae*, Sofia: Academia Litterarum Bulgarica, 1966.

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Fig. 1: Delphi, polygonal wall and the temple of Apollo; <https://commons.wikimedia.org/wiki/File:Supporting_polygonal_masonry_of_Temple_of_Apollo,_Delphi,_Dlfi301.jpg> (accessed on 19 April 2021). CC-BY-SA-4.0.

Fig. 2: Delphi, manumission inscriptions on the polygonal wall. © Julian G. Schneider.
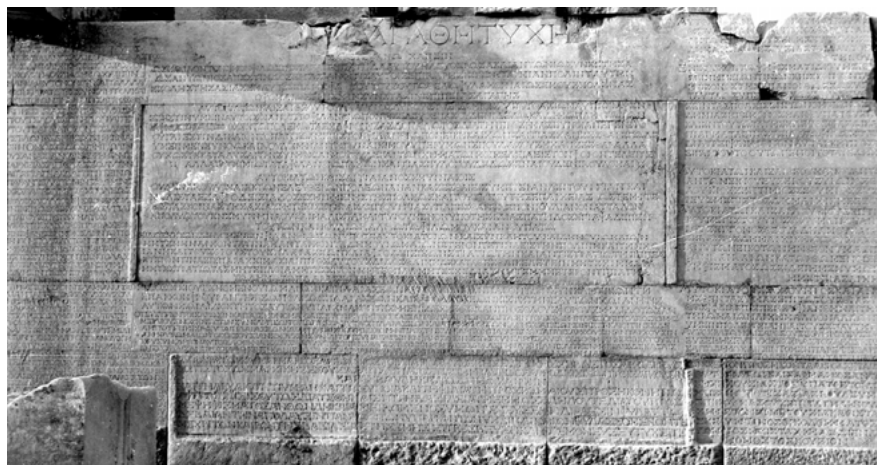
Fig. 3: Aphrodisias, theatre-wall, IAph2007 8.32. © Charlotte Roueche.

Fig. 4: The sketch of the inscription from Skaptopara. © Klaus Hallof.

Lothar Ledderose
Engrave on the Heart and Wash Away Care

Abstract: The *Diamond Sūtra* of the second half of the sixth century on Mount Tai ranks among the most powerful monuments of China. On an area of some 2,000 square meters are engraved more than 2,500 characters of the sacred text; and on the boulders and rock escarpment bordering the sūtra, more than 60 colophons were added over the centuries, allowing us to trace the history of the site in great detail. Two of these colophons by the same calligrapher – a poem and an epigraph dated 1603 – are the subject of this paper.

1 Introduction

The *Diamond Sūtra* on Mount Tai (Fig. 1) is one of the great monuments of China, and, indeed, the world. On an area of some two thousand square meters, 2,747 characters were engraved, of which 1,468 are still extant. Many of them are more than 50 cm high. In 45 columns they come cascading down over the rocky expanse. More than 60 colophons surround the sūtra. These individual manuscripts, engraved over the centuries, allow us to trace how the sūtra was judged and appreciated throughout history. Many of these colophons are intricate, full of biographical and historical detail. Their texts and their calligraphy are often quite beautiful, but not always easy to decipher. Two of them, an epigraph dated 1603 and the other a poem, overwritten by a third inscription, are the subject of this paper.

2 The epigraph

The epigraph is engraved on the flat top of a boulder that is hidden among the trees in the upper left (i.e., the north-western) corner of the sūtra field (Fig. 2). The inscription, in fine lines, is written in regular script that tends towards running script (*xingkai shu* 行楷書). The four main characters read:

銘心淘慮

Engrave on the Heart and Wash Away Care

There is no *locus classicus* for this phrase, but it is replete with both, Buddhist and Neo-Confucian notions.

About a century before the epigraph was written in Sūtra Stone Valley, the concept 'heart' or 'mind' (*xin* 心) had figured prominently in the thinking of the Ming Confucian philosopher Wang Yangming 王陽明 (1472–1529). He held that 'heart' and 'reason' (*li* 理) are not separate, and that the world is grounded in the heart. Here he concurred with long-held Buddhist convictions. The sixth patriarch of the Chan School, Huineng 慧能 (638–713), was enlightened when listening to a lecture on the *Diamond Sūtra*, whereupon he coined a saying that was transmitted through his disciple, Nanyue Huairang 南嶽懷讓 (677–744): 'All dharmas rise from the heart' 一切法皆從心生.[1]

The author of the epigraph may also have thought more generally of the 'sincere heart' (*zhen xin* 真心), which is the necessary requirement for sentient beings to attain Buddhahood; or he may have been thinking of the 'mind/heart of mental appropriation of cognitive objects' (*yuanlü xin* 緣慮心).

The two-character phrase *ming xin* 銘心 ('engrave on the heart') was also used by Buddhists and Confucian thinkers alike. When the renowned Tang dynasty exegete Chengguan 澄觀 (738–839) explained the term in his *Auto-commentary to the Exegesis of the Buddhāvataṃsaka Sūtra* (*Dafangguang Fo Huayanjing suishu yanyi chao* 大方廣佛華嚴經隨疏演義鈔), he emphasized the permanence of an engraving:

言銘心者，猶如刻銘，長記不滅.[2]

'Words engraved on the heart' are like a carved engraving that will be on record for a long time and will not vanish.

The eminent Neo-Confucian philosopher Zhu Xi 朱熹 (1130–1200) gave the word *ming* 銘 ('engrave') a moral dimension in his commentary to the Confucian classical text *The Great Learning* (*Daxue* 大學), which comprises a quote of an inscription on a bronze basin of antiquity inscribed by the alleged first Shang ruler Tang 湯:

湯之《盤銘》：'苟日新，日日新，又日新'.[3]

The engraving in Tang's basin reads: 'Sincerely renew yourself daily, ever newer from day to day, and new again with each passing day.'

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1 CBETA, X25, no. 471, p. 14, b16–19 // Z 1:39, p. 14, b13–16 // R39, p. 27, b13–16.

2 Takakusu and Watanabe (eds) (1922–1932), no. 1736, vol. 36: 256a21.

3 Ruan Yuan 2003, 1673b. Translation of the inscription in Plaks 2003, 7 (modified).

We know today that there never was a bronze basin inscribed by a ruler Tang; but what interests us here is Zhu Xi's explanation of the sentence:

銘，銘其器以自戒之辭也。苟，誠也。湯以為人之洗滌其心以去惡，如沐浴其身以去垢，故銘其盤.[4]

On the word 'engraving': He engraved his vessel with words of self-admonition. *Gou* 苟 is to be read as *cheng* 誠, sincerely. Tang believed that a person could rid himself of evil by purifying his mind, just as he could bathe his body to rid himself of a stain. Therefor he engraved his basin.

Just as ruler Tang of yore kept himself vigilant by looking daily at an uplifting inscription in his basin, the writer of the epigraph in Sūtra Stone Valley may have felt a purifying force exuding from the *Diamond Sūtra*, the most conspicuous engraving in sight.

The phrase 'engrave on the heart' in the epigraph of 1603 is thus a fine example of the doctrinal interaction between Confucianism and Buddhism in the late Ming period.[5]

For the second half of the epigraph, 'wash away care' (*tao lü* 淘慮), no classical source can be found. But there are similar phrases. Su Shi 蘇軾 (1037–1101) once wrote:

天下皆洗心滌濾，以聽朝廷之所為.[6]

All the people in the realm should wash their hearts and cleanse them, in order to submit to the actions of the court.

A century later, Ye Shi 葉適 (1150–1223) said:

方齋心滌慮，以俟陛下反復詰難，庶幾竭盡愚衷.[7]

Today I purified my heart and cleansed myself of care, to prepare for repeated interrogation from Your Majesty, hoping my abject self can show that my dedication is limitless.

Both writers describe the mind and attitude of the dedicated and attentive official.

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4 Okada 1977, I: 218a.

5 For this issue see e.g. Fang Litian 2000, 6.

6 Wu Yongzhe and Qiao Wanmin 2006, 143.

7 Zhuang Zhongfang 1998, 304.

Obviously, ridding oneself of care was a continual concern for officials. In the biography of Nalan Mingzhu 納蘭明珠 (1635–1708), whom the Kangxi Emperor esteemed highly, one reads:

原期得人，亦欲令被舉者警心滌慮.[8]

Originally in recruiting men, the expectation was that those who were recommended would keep their minds alerted and cleanse themselves of care.

These passages show that the epigraph in its entirety, 'engrave on the heart and wash away care', could refer specifically to those who wanted to embark on a career in the civil service.

For a long time it was not known who the writer of this epigraph was. The date in front of the four large characters was easy to read: 'On an auspicious day of the first month of winter [i.e., the tenth month] of the *guimao* year [1603]' 癸卯孟冬之吉. But the signature posed a problem (Fig. 3). Epigraphers had read it as 佛子無含/舍守訓 ('Disciple of the Buddha, Wuhan/Wushe Shouxun'). Yet no disciple of the Buddha with the names Wuhan or Wushe could be found.

3 The poem

The solution came in 2015, the year our research group embarked on a thorough study of all the colophons engraved in Sūtra Stone Valley. Eight were written, between 1572 and 1930, on the horizontal rock band north of the sūtra field (Fig. 4). In the middle is a colophon dated 1625 and signed by a metropolitan graduate of 1616 named Shuai Zhong 帥眾. It is principally composed of four large characters that read:

枕流漱石[9]

Pillowing on the Stream and Rinsing with Rocks

Shuai Zhong overwrote and largely destroyed an inscription in small characters that were part of an earlier engraving. A rubbing of the rock surface (Fig. 5)

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8 Zhao Erxun et al. 1976, 269: 9994.
9 Celia Carrington Riely has pointed out that Dong Qichang 董其昌 (1555–1636) once used the proper form of this deliberately unsettling expression as a frontispiece for a painting by one of his friends. See Ledderose (ed.), forthcoming.

revealed some of the damaged characters in this palimpsest (Fig. 6). The earlier engraving turned out to be a poem of regulated verse (*lüshi* 律詩) of eight lines with seven characters each. The following can be read (numbers indicate the columns on the rock):

/1/□□□□□□ /2/ □，行□□□能 /3/ □□。
□□流水 /4/ □纓□，□□乎 /5/ 開法藏臺。
貝葉□風 /6/ 時呈逸，□□□雨□□ /7/ 哀。
西遊□□□□□， /8/ 箕踞雄□□□□。
/9/ 鳳池野史程守訓。

/1/ …
/2/ … this excursion … able … /3/ …
… flowing water /4/ … tassel . . .,
… alas! /5/ Platform for preaching the canon of the Law.
Palm leaves … wind /6/ appears untrammeled.
… rain … /7/ mourning.
Journeying to the West …
/8/ sitting at ease,[10] a hero …
/9/ Unappointed Scribe of the Phoenix Pond, Cheng Shouxun.

From the vantage point of the colophon northwest of the sūtra field, the entire *Diamond Sūtra* can be seen at a glance, and this is what the author obviously had in mind. 'Platform for the canon of the Law' (*fazang tai* 法藏臺) is Sūtra Stone Valley; 'palm leaves' (*beiye* 貝葉) refers to the sūtra text; and 'opening the canon of the Law' (*kai fazang* 開法藏) means the propagation of Buddhist teaching. In addition, the character pair *xiyou* 西遊 may refer to the story of how Monk Xuanzang 玄奘 (*c.* 602–664) dried his soaked sūtras on the flat surface of a cliff, as recounted in the famous novel *Journey to the West* (*Xiyou ji* 西遊記). Another epigraph, *Sūtra-Sunning Rock* (*pujing shi* 暴經石) of 1572, alludes to this story and likens Sūtra Stone Valley to Xuanzang's cliff. The earliest printed version of the *Journey to the West* dates from 1592, only a few years before the poem was engraved.[11]

The signature of the poem reads: 'Unappointed Scribe of the Phoenix Pond, Cheng Shouxun' 鳳池野史程守訓. The last character is not clear. Yet we know there existed a personage with the family name Cheng 程 whose personal name begins with the character *shou* 守. It was the eunuch Cheng Shouxun 程守訓

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10 The term *jiju* 箕踞 ('sitting on the floor with legs outstretched') refers to a hermit's unrestrained way of life.
11 Zhou Ying 2010, 332–344.

(died 1606), and, indeed, looking at the signature with this in mind, it appears that the last character is almost certainly *xun* 訓 (Fig. 6).

4 The writer

Cheng Shouxun was married to the niece 姪婿 of the notorious eunuch Chen Zeng 陳增 (died 1604), who procured for him a sinecure as 'Specially Appointed Drafter of the Central Drafting Office, assigned to the Hall of Military Glory' 特授中書舍人，直武英殿. The Hall of Military Glory in the Forbidden City, where the Central Drafting Office was located, had a garden with a pond named the Phoenix Pond. When using Phoenix Pond in his signature to his poem, Cheng Shouxun was thus poetically referring to the prestigious Central Drafting Office, with which he was connected. Because he was not a regular scribe, he calls himself 'unappointed scribe'.

A similar signature is seen on the *Tomb Stele for the Master of Alchemy Zan Yunshan* (*Zan Yunshan lianshi beiji* 昝雲山煉師碑記) of 1602 in the Daoist temple Sanyang Guan 三陽觀 on Mount Tai: 'Composed by the Drafter of the Central Drafting Office in the Hall of Military Glory, Disciple of the Buddha, Wunian Shouxun' 武英殿中書舍人佛弟子無念程守訓撰. Figure 7 shows the second half of the signature, where the name 'Cheng Shouxun' is clearly readable. He calls himself Disciple of the Buddha 佛弟子, and uses the sobriquet Wunian 無念 ('Without Thought'), a term with Buddhist overtones. The writer of the epigraph in Sūtra Stone Valley also calls himself 'Disciple of the Buddha' 佛子, and his sobriquet begins with the character *wu* 無. If both were signatures of the same man, as we believe they are, then the character following *wu* 無 in the signature of the epigraph should not be read *han* 含 nor *she* 舍, but *nian* 念, albeit in an unusual orthography (Fig. 3).

The conclusion that both inscriptions were written by the same hand is supported by the stylistic similarity in the thin lines of the calligraphy. Cheng Shouxun was respected as a calligrapher. In 1603 he wrote the main text on a stele in Huizhou 徽州 (now preserved in Lianyungang City 連雲港市) which praises Chen Zeng for having constructed a Buddhist monastery.[12]

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12 Wang Meiding and Tang Zhongmian 1811, 494a.

5 Politics

Cheng Shouxun's two inscriptions in Sūtra Stone Valley also invite a glimpse into the convoluted and acrimonious politics of the time. Chen Zeng was one of a large number of tax eunuchs 稅璫 whom the Wanli Emperor dispatched in 1596 to levy mining taxes. Chen was sent to Shandong, where he nominated Cheng Shouxun as his local delegate and made him Superintendent of Mining Tax 總理山東礦稅.[13]

Although Cheng Shouxun calls himself a disciple of the Buddha, and although – almost ironically – his name Shouxun 守訓 means 'abiding by the rules', the *History of the Ming Dynasty* (*Mingshi* 明史) portrays him as brutal and utterly arrogant. When extorting money, 'he encouraged people to give secret information against others, and had even women and children flogged and tortured' 許人告密，刑拷及婦孺,[14] and 'nobody dared to ask how many people he killed' 殺人莫敢問.[15] Several powerful officials, including the Grand Secretary Shen Yiguan 沈一貫 (1531–1617), memorialised the emperor accusing Cheng Shouxun, but each time Cheng evaded punishment because Chen Zeng protected him.

The official who most vehemently opposed the eunuchs, and Chen Zeng in particular, was Li Sancai 李三才 (1554–1623). He presented a number of memorials to the throne that received no response, but nevertheless managed to have several members of Chen's clique executed.[16] Chen Zeng, seeing the danger, betrayed Cheng Shouxun, revealing the wealth which Cheng had amassed. Thereupon the Emperor ordered Li Sancai to arrest Cheng and bring him to Beijing. In 1606 Cheng was tried and executed,[17] causing 'great happiness far and wide' 遠近大快.[18] Chen Zeng had already met a bitter end two years earlier: when he heard that soldiers had been sent to arrest him, he hanged himself.[19]

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13 Zhao Lianwen 1991; Tsai 1996, 180; Fang Xing 2013, 128–130.

14 Zhang Tingyu 1974, 223: 6064.

15 Zhang Tingyu 1974, 305: 7806.

16 Zhang Tingyu 1974, 223: 6062; Goodrich and Fang 1976, 848; Fang Xing 2013, 130. In 1588 Li Sancai engraved a stele with a poem in Sūtra Stone Valley.

17 Zhao Jishi and Ding Tingjian 1975, 1:34b.

18 Zhang Tingyu 1974, 223: 6064.

19 Shen Defu 1997, 6:176. Zhang Tingyu 1974, 305: 7806 gives 1605 as the year of his death. But according to the *Ming Shenzong shilu* (Huang Zhangjian 1984, 403: 12089a) and Goodrich and Fang 1976, 848, he died in 1604.

Shuai Zhong, who two decades later overwrote Cheng Shouxun's poem, is portrayed in the sources as another upright official. He was a censor and a sworn enemy of all eunuchs, and is said to have been

清惠自持，以治行擢．⋯ 屢屢上疏諫言，針砭時弊，彈劾宦臣汙吏.[20]

incorrupt and benevolent, as well as self-restrained, and, being good at governing, was promoted [...]. Time and again he memorialized the emperor remonstrating about the ills of the day, impeaching eunuchs at court and corrupt officials.

According to the History of the Ming Dynasty,

禦史帥眾指斥宮禁，閹人請帝出之外．以向高救免.[21]

the censor Shuai Zhong denounced the [situation in the] palace, whereupon the eunuchs begged the emperor to oust him. But being protected by [the Grand Secretary Ye] Xianggao 葉向高 [1559–1627], he was saved from dismissal.

When censor Shuai Zhong destroyed Cheng Shouxun's poem in Sūtra Stone Valley, he meted out punishment with his own hand.

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20 Lü Maoxian 2006, 8: 23a–b.
21 Zhang Tingyu 1974, 240: 6237.

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Fig. 1: The *Diamond Sūtra*, Sūtra Stone Valley on Mount Tai, Shandong, China, second half of the sixth century. © Heidelberger Akademie der Wissenschaften.

Fig. 2: 'Engrave on the Heart and Wash away Care', Epigraph, Sūtra Stone Valley on Mount Tai, 1603. © Heidelberger Akademie der Wissenschaften.

Fig. 3: Signature of Cheng Shouxun (detail of Fig. 2), Sūtra Stone Valley on Mount Tai. © Heidelberger Akademie der Wissenschaften.

Fig. 4: Engraved epigraphs on the rock band north of the sūtra field, Sūtra Stone Valley on Mount Tai. © Heidelberger Akademie der Wissenschaften.

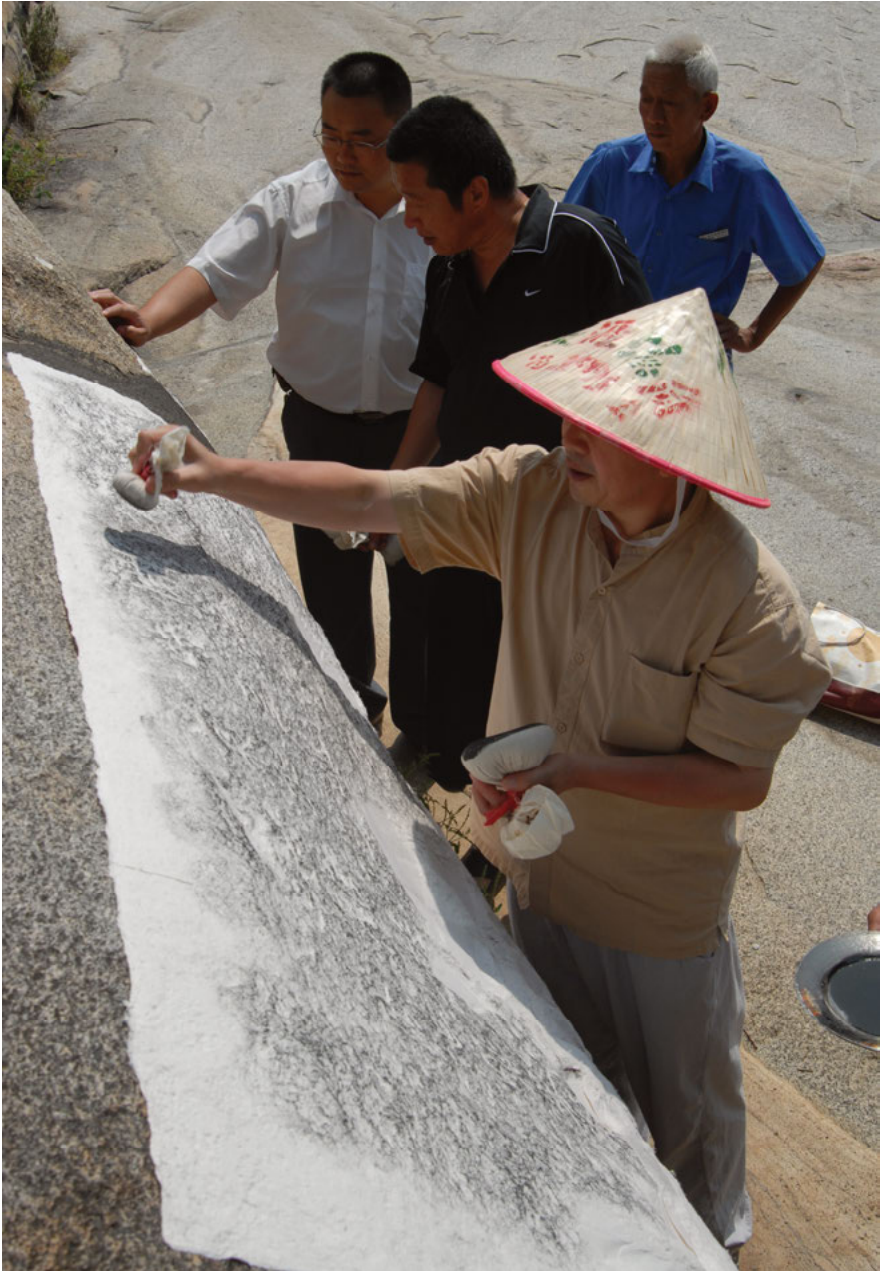**Fig. 5:** Making a rubbing of the damaged poem by Cheng Shouxun in Sūtra Stone Valley on Mount Tai, 2015. © Heidelberger Akademie der Wissenschaften.

Fig. 6: Rubbing of the damaged poem by Cheng Shouxun, taken in 2015. © Heidelberger Akademie der Wissenschaften.

Fig. 7: Signature of Cheng Shouxun on a stele in the Daoist temple Sanyang Guan on Mount Tai, 1602. © Heidelberger Akademie der Wissenschaften.

Piotr Michalowski

They Wrote on Clay, Wax, and Stone: Some Thoughts on Early Mesopotamian Writing

Abstract: The ancient Mesopotamian cuneiform writing system was used for almost three and a half millennia until other scriptural traditions eclipsed it at some time in the first or second century CE. The ubiquitous use of clay as a medium of writing has defined Mesopotamian manuscript cultures, but here we focus selectively on other media, including various kinds of stone and perishable wax covered wooden boards, as well as other fragile media. Stone, however, was often reused or relocated by natives and by plundering armies and while clay is quite durable, because of vagaries of ancient archive preservation and modern looting we must work with documentation that is fragmentary and incomplete in its own idiosyncratic manner.

1 Introduction

The virtuoso musician Eric Dolphy famously mused 'when you hear music, after it's over, it's gone in the air. You can never capture it again'. For tens of thousands of years, perhaps as long as a million or more, this has been true of those most human of all abilities, language as well as making music. The first known attempts at capturing in some form the kind of communication associated with natural language were relatively recent, going back approximately 5,500 years ago. A more precise dating is not possible: humans expressed themselves symbolically for millennia, but at what point such articulations intersected with language and to what extent, it is impossible to say.

True writing, defined as a formalized autonomous sign system that seeks to represent natural language, was independently invented only four times, in Mesopotamia, Egypt, China, and Mesoamerica. Most such systems that have spread and developed throughout the globe had their roots in Egypt (the roots of most alphabetic systems) or China. Before the Chinese invention of paper some time before 179 BCE and its spread west, most writing was done on other plant-based materials such as papyrus, birch bark, silk, or palm leaves, on waxed surfaces, on pottery shards, stone, or on processed animal bones and skins (parchment). Many of these were awkward, heavy, or expensive to make, limiting their use. To make matters worse, nature, blind to history, is an efficient

recycler so that organic materials have little chance of long-term survival under normal circumstances. As a result, manuscripts often persist by accident in dry caves or graves, in oxygen-deprived bogs or waterlogged deposits, and under other unusual circumstances.

Eschewing clumsy organic resources, the residents of southern Mesopotamia chose clay as their vehicle for material communication and here, as in other cases, we must be grateful for mud.[1] Building on various forms of pre-writing, by the last quarter of the fourth millennium BCE, they had developed a complex writing system exploiting two ubiquitous elements of their environment: clay for the writing surface and reeds as the inscribing tool: a stylus cut at an angle to create a point that was used to impress sequences of wedges,[2] as described in detail by Cécile Michel in her contribution to this volume. From today's vantage point, the choice of clay was felicitous, indeed: objects made from dried or fired clay can survive over the millennia in the earth and sands of Western Asia. The cuneiform writing system, first applied to write the isolate Sumerian and then the Semitic Akkadian (Babylonian and Assyrian) in Mesopotamia, was then adapted by neighbouring cultures to write other languages such as the Indo-European Hittite in Anatolia, the isolate Elamite in Iran, and the related but otherwise unconnected with any other known language Hurrian and Urartaen tongues. The beginnings of cuneiform can be dated to the middle if the fourth millennium and it is last documented in small numbers of tablets that may be as late as the second century CE.

In terms of sheer numbers of documents and a time span of roughly three and a half millennia, the durable clay medium has proven to be more lasting than anyone could have imagined; the only other ancient manuscript culture that one can compare with greater Mesopotamia in terms of longevity and volume of writings is early China. But numbers by themselves do not tell the whole story. As is the case in all manuscript cultures, the cuneiform record is uneven vertically and horizontally, both in time and in space.

For example, the century or so when the Third Dynasty of Ur (*c.* 2110–2003 BCE) ruled southern and central Babylonia is extremely well documented, with almost 100,000 published records documenting accounts from a select small number of archives, most dated by day, month, and year, covering six decades or so of economic activity. During its last years, while the Ur III polity was slowly

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1 See Balke et al. 2015. Simon Franklin, writing on the preservation of letters on birch bark found in north-western Russian city of (Great) Novgorod, declared explicitly that 'we should be thankful for mud' (Franklin 2019, 1).

2 Cammarosano 2014.

collapsing, a new dynasty emerged further north in the city of Isin and eventually took over some degree of hegemony over central and southern Babylonia, but its beginnings are sparsely represented in the currently available documentation. Aside from a few literary compositions attested in later copies, the reign of its first king, Išbi-Erra (*c.* 2019–1987 BCE), and the first three, perhaps four years of his son's time on the throne are only known from remains of a craft archive, mainly involving leatherworking, currently consisting of nearly a thousand documents, illegally excavated, possibly in the city of Isin, and scattered over several modern collections, not all of yet published. After that, the documentation is even sparser, eventually picking up in the later years of the dynasty, but never remotely approaching the abundance of the Ur III accounts. Similar patterns are encountered throughout the three and a half millennia of cuneiform documentation: some periods of time are well-documented, others less so or not at all; some are known from large numbers of tablets from a few archives, others from fewer tablets from a broader spread of places of origin. Moreover, while clay tablets can persist for millennia, many examples in modern collections are broken and incomplete, having suffered in antiquity but also more often than is supposed at the hands of modern looters, excavators and transporters.

The availability of new cuneiform texts is very much dictated by the vagaries of contemporary geopolitics. Thus, the recent history of Iraq has resulted not only in the surfacing of large new archives from looting, but also in limited resumption of archaeological activity that has provided some epigraphic surprises.

It is impossible to estimate the full extent of what was written in different times and places in cuneiform to any degree of accuracy. What we do have is very much dependent on the manner in which archives were treated in antiquity and in the circumstances of their modern recovery. The vast majority of cuneiform tablets are accounts of various sorts and as such were not intended to be kept indefinitely but were periodically sorted and discarded. As such, they are often found in secondary contexts, in trash deposits, used as fill in walls, floors, and even in clay benches and other domestic furniture. Often, they have been discovered in destruction layers of houses, palaces, or temple complexes, scattered by the victors or systematically sorted and selectively removed.

2 Other writing media

The ubiquitous use of clay as a medium of writing has defined Mesopotamian manuscript cultures for us moderns, and in such contexts, it is customary to

exemplify this by citing the first half of the title of one of the best semi-popular books on the subject written by a scholar, Edward Chiera's *They Wrote on Clay*.[3] But as abundant as they were, we well know that clay tablets were not the sole medium for Mesopotamian writings. Materials such as papyrus, parchment, or potsherds (ostraca) were used for writing Aramaic and possibly other languages in the first millennium, but these are different habits that will not be of concern to us here. Rather, our focus will be on cuneiform writing media made of other materials, often limited to specific inscriptional types. Thus, for example, tablets made of precious materials such as various stones such as alabaster and lapis lazuli, copper, lead, silver, and gold were used in various periods in foundation deposits, mostly inscribed with short royal dedicatory inscriptions, although anepigraphic ones were utilized on occasion.[4] During the first millennium amulets with short incantations or excerpts from a poem about the god of plague were fashioned from stone or clay,[5] perforated to be worn around the neck or suspended at a gate to ward off evil, although there were occasional examples that are earlier.[6] Some amulets with incantations, however, were made of clay because this made it easier to make holes and slits in the sides to accommodate medicinal herbs.[7] Stone was also used for other amulets such as those that carried with incantations to ward of Lamaštu, a disease-causing demon, while inscribed clay cylinders were hung around children's necks to ward off fevers.[8]

2.1 Stelae, statues, and monuments in stone

Such special usage aside, the two main writing media used in the cuneiform tradition aside from clay were stone and wooden or ivory boards covered with wax mixed with yellow ochre (or possibly written in ink).[9] The fragmentary nature of the record that has come down to us is particularly acute in the matter of large, inscribed stone monuments. As noted by Moorey, southern Mesopotamia

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3 Chiera 1956. On the problematical issue of defining Mesopotamia as a manuscript culture, see Cécile Michel's contribution to this volume.

4 Pearce 2010.

5 Reiner 1960.

6 Wasserman 1994, 55.

7 Panayotov 2018.

8 Finkel 2018; for more various types of amulets see Heeßel 2012.

9 On Akkadian *kalû* as yellow ochre see most recently Thavapalan 2019, 187 n. 43, with earlier literature.

was devoid of stone, save gypsum, limestone, and sandstone, although the annual flooding of the Tigris and Euphrates rivers bore with them boulders of other stones as well, while the north had ready access to limestone, sandstone, basalt, and marble.[10] The surrounding regions, however, provided an abundance of more durable and attractive materials and these were acquired through barter, trade, and plunder. Some materials were obtained through indirect contact from as far away as Afghanistan, as was the case with lapis lazuli, which could be transported in manageable portions, by land, although traffic by sea cannot be ruled out. The procurement of larger stone pieces that could be used for life-sized statuary and other big monuments was a more complicated matter. The hard lustrous black olivine gabbro stone, much prized for such purposes, could be found in south-western Iran and in Oman, and the transport of large blocks was a logistically complex issue. As such, it was best suited for royal concern, best exemplified by the example of the late third millennium king Maništusu (*c.* 2334–2154 BCE), who led an expedition to Oman where he procured large amounts of olivine gabbro, and ordered the fashioning of numerous statues of himself in standing and seated position as well as possibly other types of monuments that were set up in temples throughout his realm as well as elsewhere, thus playing out, to human as well as divine audiences, the heralding of his imperial reach.[11]

Other kings erected inscribed and illustrated stelae, statues of goddesses and gods as well as of their own likenesses, and yet few such large monuments survive from the earlier period of Mesopotamia history, because the scarcity of the required materials made them much sought after for reworking by later generations, although clay tablets with copies of such inscriptions provide ample evidence of their existence. The ones that were not smashed by conquerors, broken down for reuse in later times, or stolen by latter-day robbers, survived either by chance, in places that were abandoned and not built upon in antiquity, or in the collections of ancient plunders. Here, I refer only to three emblematic examples.

Gudea, a twenty second BCE king of the southern Babylonian Lagaš polity in southern Babylonia, undertook many building and rebuilding activities during his reign, most prominently the complete renewal of the temple complex of Ningirsu, the titulary deity of Gudea's capitol city of Girsu.[12] In the process, he also installed his own stone life-size representations, standing and seated, in

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10 Moorey 1994, 21–22.
11 Eppihimer 2010.
12 Winter 1992.

the major shrines of the city. Soon after his death, the city lost its independence and was incorporated into the larger territory ruled by the kings of the Third Dynasty of Ur; its further fates are largely unknown at present, but eventually during the eighteenth century BCE, at the latest, it was abandoned until the third century BCE when a Seleucid governor by the name of Adad-nadin-ahhe built a palace on the site, had his people dig up ancient Sumerian antiquities and came across Gudea's statues. These were brought out of their original locations and set up together with glazed bricks of the new master of the site, who had them inscribed in Greek and Aramaic, albeit in a manner imitating Gudea's original captions.[13] We know nothing of Adad-nadin-ahhe and even less of his motivations: was his native language Aramaic or Greek; was he well enough educated to read cuneiform and to be able to appreciate the two-thousand-year-old Sumerian texts or was his interest purely antiquarian and/or aesthetic? Sébastien Rey (2020), has argued, on the basis of new information gleaned from recent excavations at Girsu that this was an element of an ancestral cult honoring ancient Sumerian rulers. Whatever impulses led him to seek out, preserve but also appropriate these ancient statues, he gave them new life in an arrangement that can be seen reproduced in the Louvre Museum today. Here the combination of lack of rebuilding on the site that may have led to the destruction, removal, or simple reuse of the statuary, combined with some form of much later antiquarianism and appropriation resulted in the survival of a unique set of Mesopotamian statuary.

The second case briefly invoked here concerns a hoard of Mesopotamia stone monuments discovered during the French excavations in the city of Susa, the seat of power of a series of Iranian polities that had a complex, often contentious relationship with Sumer, Babylonia, and Assyria.[14] The collection included royal and elite monuments, but no divine statues. It has often been anachronistically described as a museum, but that misses the mark, as Potts has observed.[15] Several major pieces in the display had new Elamite labels inscribed, making them as plunder from Babylonia, asserting Elamite royal power and dedicating the objects to the main god of the city. Such markers of hegemony and might can be superficially viewed as a semantic link with the European colonial concept of the museum, but that is not enough to define it in such an anachronistic manner. There is no ancient narrative describing the motivation or the process of acquisition of these artefacts. Moreover, the manner in which

13 Parrot 1948, 152–156.
14 Harper, Aruz and Tallon 1993.
15 Potts 2018, 620.

they were excavated and documented would never meet current standards and therefore one cannot establish with any precision how they were arranged, if indeed they were all accumulated under orders of the same monarch, and if they were in fact all on exhibit in the same place.

The Susa collection was created at the command of the Elamite monarch Šutruk-Nahhunte (1184–1155 BCE)[16] although some of his successors may have added artifacts as well, and in addition to objects of Mesopotamian origin it numbered Elamite monuments among the holdings.[17] We know that this ruler invaded Mesopotamia and put his own son briefly on the throne of Babylon, and that it was this military expedition that resulted in the plunder of Babylonian monuments from several cities and their removal to Susa.[18] Although Elamites had invaded Mesopotamia before, the preceding decades show no hostility between the two polities, as noted by Potts;[19] indeed, the royal houses of both were linked by a steady pattern of intermarriage over more than a century, culminating with the marriage of the oldest daughter of the Babylonian monarch Melišihu (1186–1172 BCE)[20] to Šutruk-Nahhunte sometime around 1190 BCE.[21] The details of this series of royal marriages became apparent to historians with the publication in 1986 of a much later copy of a letter, found in Babylon and written in Babylonian, in which a king of Elam describes the history of these marriages and his claim to the throne of Babylon.[22] The name of the sender is not preserved, but it is now generally accepted that it was none other than Šutruk-Nahhunte.[23] The authenticity of the letter is open to doubt, but that is of no concern to us here, as the general pattern of the relationships between the two royal houses only serve as the background to the events that led to the Elamite invasion. Apparently, the royal line in Babylon that was allied with the kings of Susa was interrupted by the one-year reign of one Zababa-šuma-iddina (*c.* 1158 BCE), who was not of the same lineage. As stated succinctly by Potts, 'Shutruk-Nahhunte's resentment at not sitting on the Babylonian throne himself [...], coupled with Zababa-shuma-iddina's arrival on the scene and his own (i.e., Shutruk-Nahhunte's) father-in-law's overthrow (by whatever means) would

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16 Henkelman 2012.

17 See the list in Potts 1999, 235.

18 Potts 1999, 233–236; Devecchi and Lippolis 2020.

19 Potts 2006, 117–118.

20 Harper, Aruz and Tallon 1993, 178–179.

21 A black limestone monument inscribed with a land grant to Melišihu's son was also included in the Susa plunder; Harper, Aruz and Tallon 179–180.

22 Van Dijk 1986.

23 Henkelman 2012, 370, with references to earlier discussions.

certainly have given the Elamite king ample justification for launching an assault on Babylonia'.[24]

Judging by the inscriptions on the pillaged objects found in Susa, the Elamite army came into Mesopotamian down the Diyala valley and then down to the Tigris River, plundering the cities of Ešnunna, nearby Agade, then moving on south-west to Sippar and Babylon and possibly other towns as well. It is impossible to know if these targets were opportunistic, located on the march towards Babylon, or if Šutruk-Nahhunte and his officers had specific objectives in mind. Certainly, Agade and Ešnunna were of no strategic or military value. The former had been the capitol of a large territorial state a millennium earlier, one that had acquired legendary status by this time, but had since been of little importance and its precise location remains unknown to us today.[25] Ešnunna, modern Tell al-Asmar,[26] had a long history going back at least as far as the latter part of the fourth millennium BCE, both as an independent polity and as part of larger territorial states, but was conquered by the Babylonian king Hammurabi in 1763 BCE, after two and a half centuries of independence, never to rise again. Thus, in approaching Ešnunna, either on the way to Babylon or on the return journey, Šutruk-Nahhunte's agents encountered a long-abandoned city; the fact that they remained there rummaging in the ruins suggests a premeditation and agency behind the search for precious artefacts destined for removal to Susa. The major source for much of this plunder may have been the Ebabbar temple in the city of Sippar.[27]

Among the hundred or so objects exhibited in the temple complex of Inšushinak in Susa, three stand out for sheer size, authority, and unique status in modern views of ancient art and philology. The earliest is a grand four-sided block of black olivine gabro with a long inscription that details the acquisition of *c.* 3400 ha of lands by the Old Akkadian Crown – in this case in the name of the already mentioned king Maništusu – from elites that had come under the control of the central government in Agade.[28] While formulated as a purchase, the sellers likely had no say in this, and it provides vivid evidence of the consolidation of power by the Akkadian polity and the side-lining of old elites in favour of followers of the royal family during the time of Maništusu. There are

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24 Potts 2006, 118.

25 Ziegler and Cancik-Kirchenbaum 2017, 147–228, including Paulus 2017 for the period under discussion here.

26 Reichel 2013.

27 Gelb, Steinkeller and Whiting 1991, 22.

28 Gelb, Steinkeller and Whiting 1991, 116–140.

other scraps of evidence for this policy, but nothing compares with the detailed information contained in this 'obelisk'. Other such monuments undoubtedly existed and provided vivid public demonstration of the scope and range of this centralization of power, but none of them have survived and we can only speculate about the full range of this policy and its long-term consequences.

Another monument that was part of this collection was a stone relief with a martial representation of the next king of Agade, Naram-Sin (*c*. 2253–2198 BCE),[29] wearing a horned crown that signalled his elevation to divine status, charging up a mountain leading his troops against his enemies, who are seen falling down from the slopes in battle. The Elamite king was justly proud of his acquisition and had his own inscription added, flowing sideways on the mountain, similar to what he had written on other procurements from his raid on Babylonia:

> I am Šutruk-Nahhunte, son of Hallutush-Inšushinak, beloved servant of the god Inšushinak, king of Anshan and Susa, who has enlarged the kingdom, who takes care of the lands of Elam, the lord of the land of Elam. When the god Inšushinak gave me the order, I defeated [the city of] Sippar. I took the stele of Naram-Sin and carried it off, bringing it to the land of Elam. For Inšushinak, my god, I set it as an offering.[30]

The compositional acuity and the vivid plasticity of the carving, especially of the dominating idealized figure of the young king, is generally considered as one of the great masterpieces of Mesopotamian art and has justly been the subject of numerous studies.[31] It is hard to question such appreciation, as anyone who has stood before the actual monument now standing against the wall in the Louvre can well attest. In the present context, however, there are certain questions that one cannot avoid raising: was the Naram-Sin stela unique, or was it just one of many, was it truly a chef d'oeuvre of Akkadian art as it seems to us today because of its uniqueness, or was it just ordinary by the standards of its time? These are necessary, if somewhat futile interrogations, for they will never be answered, unless some fortunate archaeologists stumble upon the hitherto unidentified city of Agade, capitol of the Akkadian polity, and unearth a plethora of preserved stone monuments that may provide a useful overview of the artistic production of the time of Naram-Sin.

The Akkadian monuments found in Susa are not the only ones that have acquired special status because of their uniqueness. Undoubtedly, the most famous among them is the stela with the so-called Laws of Hammurabi, a tall

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29 Harper, Aruz and Tallon 1993, 166–168.

30 König 1977, 76; Van De Mieroop 2007, 188.

31 See for example Feldman 2009; Winter 1996 and 2002.

black olivine gabro stele with a long inscription in monumental script topped by a representation of the king standing before the seated sun god Šamaš, master of justice, that is one of the most famous of all Mesopotamian objects, celebrated, quite incorrectly, in popular and political lore as the oldest law code on the planet. This particular exemplar most likely stood in the temple of the Šamaš in the city of Sippar, and by default it is often treated as unique, but there are reasons to believe that Hammurabi's administration had similar stele erected in the major cities of his realm. While tablet versions of the text that was engraved on the stele circulated in Mesopotamia down to the latter part of the first millennium, used for schooling but also deposited in library collections,[32] no such other monument has been ever found in Mesopotamia.[33] And yet the excavators of Susa did recover stone fragments that must have belonged to two or perhaps more stone objects that were undoubtedly similar to the one reportedly plundered from Sippar,[34] suggesting that they had been taken from other cities as well. It is difficult to know exactly what they might have looked like because there is reason to believe that the one complete exemplar known to us, the famous stele standing today in the Louvre, had been partially altered by Elamite stoneworkers.[35]

One early ancient collection that is entirely missing was distributed around the courtyard of the Ekur, great temple complex of the god Enlil in the city of Nippur. There are good reasons to believe that over centuries Mesopotamian rulers with larger economic, territorial, and political ambitions would commission the erection of elaborate stone monuments in this abode of the god who controlled politics and hegemony in the universe, but they also left inscribed stone objects in other temples throughout their realm. These are known to us today because of eighteenth century BCE copies, mostly from the city of Nippur, although there are also similar copies made from objects dedicated in the central temple complex in Ur and elsewhere.[36] The inscriptions from some of these monuments were copied by a few literati and their students, but the circumstances of these labours are unrecoverable at the present time, although it is possible that they were created when Nippur and Ur took part in a rebellion against the Babylonian Crown. Perhaps this was part of a preservation project as

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32 Maul 2012, Greco 2019.

33 A fragmentary document from the Nineveh libraries may record the acquisition on a version inscribed on a wooden writing board, although this is far from certain, see Lambert 1989, 96.

34 Nougayrol 1958, 150.

35 Ornan 2019.

36 Michalowski 2020, 694–696.

citizens in both cities awaited the armies of King Samsu-iluna (1749–1712 BCE), which did indeed retake both, exacting vengeance, as documented in the archaeological record.[37]

Just about the only clue as to the precise original location of such inscribed objects in Nippur is found on a fragmentary copy of an inscription in the name the Akkadian ruler Rimuš (*c*. 2276+ BCE) that ends with the annotation 'from the courtyard of Ekur', similar to another such tablet that ends with 'in Ekur, as many as there are',[38] although some may have stood in nearby areas of the complex. None of the originals have survived, undoubtedly cleared out in later times, some of them recycled in the service of other monarchs, because no such monuments were found during modern excavations of that Enlil's temple. Other than this and other Nippur copies of third millennium inscriptions that were likely of similar origin, the Ekur accumulation, which must have constituted a veritable chronicle of the power aspirations and self-representative strategies of late third and early second millennium polity leaders, is simply unrecoverable, erased from memory by latter-day Mesopotamians.[39]

2.2 Wooden writing boards

The other writing vehicle used in Mesopotamia, besides the ubiquitous clay, was the wooden board covered with wax that was mixed with yellow ochre, in the first millennium at least. While there is sporadic evidence that may possibly suggest their occasional use of such as early as 2200 BCE, the systematic exploitation of this medium is only documented during the middle of the second millennium.[40] The signs of early utilization are somewhat elusive. The Sumerian word most often used to designate such boards, *le-um* (most likely a copy from Akkadian *lē'ûm*) is rare before the middle of the second millennium. As far as one can determine, there is no direct evidence currently available about the topic before Ur III times at the very end of the third millennium. A poem that celebrated the rebuilding by King Gudea of the grand temple complex of Ningirsu, the main god of his capitol city Girsu, mentions the appearance of Nisaba, the goddess of writing, accounting, surveying, and agricultural plenty holding such a *le-um* that is qualified as *za-gin₃*, the Sumerian word for lapis-

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37 Michalowski 2020, 695–696.

38 Michalowski 1980, 239.

39 On these monuments and for an attempt at a reconstruction of one of these, see Buccellati 1993.

40 Cammarosano et al. 2019, 129–131.

lazuli, but which could also be used in metaphorical adjectival use as 'shining, sparkling'. This is unique: in other contexts, she held a lapis starry tablet that figuratively designated the night-time sky with stars as cuneiform signs. References in the abundant Ur III administrative record are conspicuously meagre, as noted by Volk and Steinkeller, who provides a full documentation, while also calling attention that there is hardly any evidence for the use of wax during this period in Southern Babylonia,[41] and we learn from Volk's detailed study of beekeeping in Mesopotamia that it is unlikely that bees were kept in the south in early times;[42] further references from newer publications are provided by Derksen.[43]

An early specific literary reference comes to us from the Sumerian poem *The Curse of Agade (Saŋki Gida Enlilake),* in which it is reported that the goddess Inana strove to raise the city to hegemonic status so that '(even the Iranian land of) Marhaši be re-entered on the (tribute) rolls (*le-um-ma*)',[44] a line plagiarized in a later forgery of an inscription of an imaginary earlier ruler named Lugalanemundu.[45] The *Curse* was composed during the Ur III period or just before it, and this would suggest that at the time foreign tribute was registered on such materials, whatever they have been at the time. The matter is complicated by the fact that the Sumerian word *le-um* was also used in a technical sense for a part of a plow,[46] and it is not always easy to discern which meaning is in play in an account text.[47] In a somewhat later royal poem composed for didactic use, written in the name of King Lipit-Ištar (*c.* 1936–1926 BCE) the aforementioned goddess of writing and accounting Nisaba, confers upon him the cubit measure and writing board that 'provide discernment'.[48] This suggests that in these times writing boards were specifically used in the field as a portable writing device and this also explains the Gudea passage cited above, in which the goddess appears in a dream with a metaphorical surveying note taking board as she instructs the king to build a temple. The small number of references in such early texts in Babylonia throughout the first half of the second

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41 Volk 1999, 284–285; Steinkeller 2004, 75–76.
42 Volk 1999.
43 Derksen 2017, 109–112.
44 Cooper 1983, 50–51, l. 20.
45 Güterbock 1934, 40, l. 5.
46 Civil 1994, 81.
47 A similar term ^{ĝeš}da, which in later times was used as a Sumerogram for Akkadian *lē'ûm* in Ur III times designated boards of various kinds, but was never, as far as I am able to discern, used with the meaning 'writing board'.
48 Vanstiphout 1978, 36 –37, l. 24, 24a.

millennium may be indicative of rare usage or it may simply indicate that they were most often utilized outside of the standard archival contexts. But there are some indications that they might have been more common further north in what would later become Assyria and the further easy in Anatolia.

Excavations at the ancient Kaneš in Anatolia, where merchants from the city of Assur lived and traded among the local population, have unearthed more than 22,700 tablets,[49] many of them letters that provide abundant testimony concerning their affairs and their dealings with family members back home who were associates in business during the late twentieth and nineteenth centuries BCE.[50] Two tablets found there mention an object designated in Akkadian as a *ṭuppum ša iskurim*, 'a wax tablet'.[51] These have now been discussed anew by Veenhof: one is in a letter written in Assur, while the second is an entry in an inventory of what appears to have been a private chapel, listed together with various cultic objects, including tools, so he suggests that these tablets 'were symbols of the god who would see to it that in his presence accounts were settled in a honest and fair way'.[52] The locals, however, were native speakers of the closely related Indo-European Luwian and Hittite languages, even if they occasionally used Akkadian inscribed on clay with cuneiform characters for written communication.

Some of their accounts were in the form of texts referred to in Akkadian as *iṣurtum*, literally 'drawing' that were apparently documents provided by the local palace or by local businessmen to Assyrian merchants, but as far as one can ascertain, not a single text of this type has been found. Waal has proposed that they were in fact wooden boards or tablets that were painted or inscribed with an early form of an indigenous writing system that is known today as the Anatolian hieroglyphic script, later used only for the Luwian language.[53] The earliest recovered examples of this writing system date from the thirteenth, possibly fourteenth century BCE (some would say earlier), but Waal has persuasively argued that its roots go back to the end of the third or beginning of the second millennium BCE.[54] Veenhof, while sympathetic to Waal's thesis, has raised some important questions that still need to be answered if we are to fully accept it.[55] Wooden boards, some covered with wax, were used in later times in

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49 22,627 as of 2015, including those from early illicit digs, see Michel 2015, 525.

50 Larsen 2015; Michel 2020, 1–38.

51 Veenhof 2010, 100–101; Barjamovic and Larsen 2008, 153, 1. 2; Derksen 2017.

52 Veenhof 2020, 242–243; see also Derksen 2017 for two references from Kaneš to wax itself.

53 Waal 2012, 292–296.

54 Waal 2011 and 2012.

55 Veenhof 2020, 243.

the administration of the Hittite polity and in throughout the Levant, but this must remain of no concern to us here.[56]

The scarcity of references to wax in third and early second millennium Mesopotamia is puzzling, since we know that it was used in various forms of manufacturing, most prominently in casting metal objects with the lost wax technique and, of course, the scattered mentions of wax tablets suggest regular use. It is possible that this is a reflection of utilization outside of the purview of the accounting systems. Many questions about bees and their products remain unanswered: indeed, the Sumerian and Akkadian names for these wonderful insects remain unknown,[57] there is not a shred of evidence for beekeeping in southern Babylonia (although the matter is different further north), the ancient words for 'honey' are contested, with good reasons to question its use in early times,[58] and there are lexicographical uncertainties about words for 'wax'.[59] These are complex matters that require complex technical study that belongs elsewhere.

The earliest evidence for more systemic use of wooden boards comes from the middle of the second millennium from further north in Assyria where the climate was more conducive for beekeeping. As noted by Postgate in an essay on bureaucratic documentation, in reference to Middle Assyrian management,

> unfortunately one significant part of the record is missing, and that is what was written on wooden writing boards. We know, from references in the clay tablets, that these were used within the administration, probably only as unilateral documents, listing both people and commodities. It always raises the question in my mind, to what extent the clay tablets of the Mediterranean constitute the complete written record.[60]

This, and other circumstantial matters prompted another scholar to suggest that gaps in the written record somewhat earlier, in mid-second millennium Babylonia, may be explained by a switch from clay to perishable materials such as wooden boards or palm frond ribs, but such an explanation must remain hypothetical at best.[61]

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56 Symington 1991.

57 Volk 1999, 280.

58 Powell 1996, 107; see now in general Maiocchi 2012.

59 The Sumerian term *lal₃-hur*, used after Ur III only in literary texts, otherwise replaced by *tuh-lal₃*, was discussed by Civil 1964, 74–75, with some clarifications by Sallaberger 2012, 301; see also Maiocchi 2012, 12, n. 7.

60 Postgate 2001, 193.

61 Dalley 2020, 18–19.

Writing boards became more much more common in the first millennium, when they were apparently made of sissoo, walnut, tamarisk, or cypress, but also of ivory.[62] All but a few, mostly fragments, have perished in the Mesopotamian earth, but the occasional illustration of scribes at work and a few surviving pieces of walnut and luxury ivory boards from Assyrian palaces in Nimrud and Assur can be reconstructed to provide a general idea as to how these looked and functioned: usually, they seem to have had two, three, or four leaves, connected with hinges.[63] Textual references likewise document their extensive use in first millennium Babylonia and Assyria.

A full study of the use of writing boards is yet to be written, but there is much scattered information on their use in various libraries and archives; a few examples will suffice here. The libraries of Assurbanipal in Nineveh, already referenced above, offer the best example of the extensive use of such boards for writing scholarly and literary texts.[64] Moreover, it is evident that they were used widely beyond the library settings, as observed a quarter of a century ago by Parpola

> it is necessary to keep in mind that under the Sargonid kings a large part of all official documents and records were drawn up on materials other than clay: wax-covered writing boards, papyrus and leather. There is every probability that exactly the kind of documents that were liable to be stored in state archives (international treaties and correspondence, war diaries and sketches made during military campaigns, architectural and engineering plans and other documents relating to military, administrative and economic planning etc.) were largely written on such materials, which of course means that much if not most of the contents of these archives is now irretrievably lost.[65]

Writing boards continued to be used in the subsequent Neo-Babylonian period (626–539 BCE), perhaps best exemplified by Michael Jursa's detailed discussion of their use in accounting in the administrative records of the complex holdings of the Ebabbar temple estate in the city of Sippar.[66] Wooden boards, as well as parchment and papyrus that may have been painted or incised with Aramaic alphabetic script, were used for various types of accounts and were apparently kept for some time, so that not all of them contained ephemeral data that was eventually copied onto clay tablets or discarded, with the boards erased and

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62 Frame and George 2005, 82, n. 5.

63 Jendritzki, Streckfuß and Cammarosano 2019.

64 Parpola 1983.

65 Parpola 1986, 225–226.

66 Jursa 2004, 170–178.

reused another day. Some daily ledgers and transactions were apparently only registered in this manner and will therefore never be recovered.

The almost exclusive use of boards for specific types of information extends beyond accounting. Illustrative is the example of a Late Babylonian clay tablet with mathematical problem texts from Uruk that was copied, according to its colophon, from a wooden writing board. As observed by its editors Friberg, Hunger and al-Rawi,

> since no mathematical texts inscribed on wax tablets have been preserved, it is welcome to have here firm evidence that mathematical texts were not exclusively confined to the medium of (cuneiform script on) clay tablets. The deplorable fact that relatively few mathematical cuneiform texts from the first millennium BC are preserved can perhaps be explained in this way. Cf. the mentioned observation that the organization of metrological tables suggests that scribes during the NB/LB period were used to write Aramaic, for which the medium was not clay tablets but wax-covered tablets, leather scrolls and papyri.[67]

Because Aramaic was invoked here, a brief follow-up may prove to be illustrative as well. From the eighteenth century BCE onwards, alphabetic writing in Aramaic become used more and more in Assyria and then in Babylonia alongside cuneiform writing in the Akkadian language. Eventually, Aramaic would be written on clay tablets, incised with a metal stylus, but much of it was brushed with paint on papyrus, leather scrolls, and on wooden tablets, none of which survive in the Assyrian ground, but also occasionally on pottery sherds, otherwise known as ostraca. The sole Neo-Assyrian letter in Aramaic was found in the city of Assur and is likely to be dated to the time of Assurbanipal in the seventh century. It was painted in red ink on an ostracon; Fales[68], who has presented the most complete interpretation to date, suggested that the letter was in fact a draft of a message that was intended to be copied out on a scroll, presumably made of leather or papyrus, that would have then been sent to the addressee, and this explains its unique status. To once again exemplify how lack of data leaves matters open to various interpretations, it is instructive that Radner[69] viewed these matters differently, suggesting that Neo-Assyrian Aramaic letters on ostraca might have easily been missed during archaeological excavations or erased by mistake during their cleaning in the field.

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67 Friberg, Hunger and al-Rawi 1990, 546.
68 Fales 2010, 198.
69 Radner 2014, 85–86.

3 Final thoughts

All these selective cases were chosen to illustrate the use of materials other than clay for written communication in ancient Mesopotamia, with a focus on the concomitant loss of information that limits our reconstructions of the past as an important corollary to the ever-increasing masses of clay tablets available for study. This abundance is nevertheless fragmentary, but not unlike the poet and classicist Anne Carson we confront and embrace the fragment and adjust our narratives accordingly.

But not all written traces of the past are as fragmentary as others. Just recently Robson and Stevens have made a case that first millennium Babylonian scholarship was characterized by what they term the 'distributed library' that encompassed tablets and writing boards kept in various contemporary loci, often moving between them as needed.[70] In other words, seemingly incomplete tablet collections must be considered in aggregate, rather than as fragmentary assemblages, and as a result we have a much more complete picture of the scholarship and literature of the time than assumed until now.

In this sense, the Assurbanipal library was unique in that it was intended to be complete in itself, a summary of existing written knowledge. Ever prescient, Irving Finkel, writing in the same essay volume as Robson and Stevens, gave this an additional twist in concluding his essay on Assurbanipal's library with words that inspire the imagination. Commenting on the precision and all-encompassing labors of the king's scribes and scholars, he drew attention to the conservative, backward-looking nature of the results:

> [...] it is possible that there was a general reluctance to use cuneiform on clay for innovation or speculation or non-conformist writing. Perhaps, if such writings ever saw the light of day at Nineveh, it was in ink on parchment, or scratched in the wax among the uncounted thousands of wooden tablets that have perished forever. This we will probably never know.[71]

Eric Dolphy would have liked that.

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70 Robson and Stevens 2019, 339, building on Maul 2010.
71 Finkel 2019, 386–387.

Acknowledgements

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Cécile Michel

What about 3D Manuscripts? The Case of the Cuneiform Clay Tablets

Abstract: Cuneiform writing has been used for more than three millennia in a vast area from the Mediterranean Sea to Iran, and from the Black Sea to Egypt (El Amarna). There, different cuneiform writing systems have been used by various populations speaking different languages. Cuneiform signs were imprinted on clay, on wood or ivory tablets covered with wax, or engraved on stone and metal. But the great majority of the recovered texts were written on unfired clay tablets. Up to now, ancient Near Eastern archaeologists have unearthed more than a million of original cuneiform texts which are deciphered and studied since the middle of the nineteenth century by Assyriologists. Traditionally, these scholars use to call themselves epigraphists, but when mentioning their source material, they usually speak about manuscripts. In order to understand this paradox, this contribution analyses the various characteristics of clay as a writing medium.

1 Introduction

The distinction between manuscripts and epigraphy traditionally comes from historians of the classical world who study writing on soft, perishable media, which have often been lost, except when repeatedly copied or when copied onto hard and durable media that could survive the vagaries of time. Thus, according to Louis Robert, the Greek word epigraphy (ἐπιγραφή) means literally 'on-writing, inscription' and refers to the study of ancient epigraphs or inscriptions, usually short, and engraved, incised, or painted on durable media: stone, metal, wood, clay, etc.[1] The person who studies inscriptions is called an 'epigrapher'.

The website of the CNRS National Centre of Textual and Lexical Resources[2] provides the following definition of the word 'epigraphy', which applies to the Greek and Latin worlds, and thus to classical Antiquity: 'An auxiliary historical

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1 Robert 1961.

2 'The purpose of the lexical portal is to federate, enhance and share, as a priority with the scientific community, a set of data resulting from research work on lexicons' <https://www.cnrtl.fr/> (accessed on 12 Sept. 2020).

science that studies inscriptions (including epigraphs), which are usually ancient and engraved or sometimes painted on durable media'.[3] On the same website, the word 'manuscript', which comes from the Latin *manu scriptus* and literally means 'written by hand', is defined as follows: 'A work written or copied by hand [...] The original version of a work written by hand [...] A manuscript on paper, papyrus, parchment, vellum; a manuscript with illuminations, with miniatures.'[4] A manuscript, then, can exist in various formats (e.g. scrolls, codex), and can be illustrated with pictures or marginal decorations (illuminated manuscripts). Because it is produced by hand, a manuscript is a unique object. Even if two manuscripts contain a similar text, they will never be identical: there might be differences in their format, ink colour, media, number of lines per page, annotations, or style of writing. The person who studies the text and writing of manuscripts is called a 'palaeographer'; the person who studies the book manuscript as a material object works in the field of codicology.

How can one apply such definitions to cuneiform artefacts?[5] Cuneiform writing was used in the Near East and the Middle East for more than three millennia (3400 BCE – 75 CE); there were three different systems, which used classifiers and logograms, syllabograms, or letters, to express a dozen different languages. Cuneiform signs, made of wedges, were shaped in the negative, in three dimensions, with a stylus impressed into fresh clay, or onto wooden tablets covered with wax, or they were engraved on stone or metal. Of the more than

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3 <https://www.cnrtl.fr/definition/%C3%A9pigraphie> (accessed on 12 Sept. 2020): 'Science auxiliaire de l'histoire ayant pour objet l'étude des inscriptions (parmi lesquelles les épigraphes), généralement anciennes, gravées ou parfois peintes sur des supports durables'.

4 <https://www.cnrtl.fr/definition/manuscrit> (accessed on 12 Sept. 2020): 'Ouvrage écrit ou copié à la main [...] Version originale d'une œuvre, écrite à la main [...] Manuscrit sur papier, sur papyrus, sur parchemin, sur vélin; manuscrit à enluminures, à miniatures.'

5 This contribution originated as a keynote introductory paper delivered at the conference 'Manuscripts and Epigraphy', organized by the Centre for the Study of Manuscript Cultures (CSMC) in November 2013. The idea of the conference was to consider whether there is a significant differentiation between manuscripts and epigraphy and to determine what exactly these differences are. Michael Friedrich, director of the Centre, therefore invited me to explain how the material I was studying – clay tablets covered with cuneiform signs – combined elements from both categories. This exciting conference was the beginning of my Hamburg adventure. I fell, quite willingly, into the 'trap' set by Michael, which sealed our unfailing friendship. I am particularly happy to dedicate this article as a token of friendship to Michael Friedrich, a great and wonderful scholar who has built a community of researchers united around written artefacts of the world, past and present. He had been asking for this contribution for several years because the inclusion of 3D cuneiform clay tablets in the manuscript category led the researchers of the CSMC to propose a new definition for the word 'manuscript' (Lorusso et al. 2015). I hope that this modest contribution will meet his expectations.

one million cuneiform texts discovered to date, the great majority were written on unbaked clay tablets.

Because of this medium, the cuneiform tablets are difficult to fit into the traditional categories of written artefacts. The tablets have been, and still are, regularly classified as epigraphic study material, but they exhibit many of the characteristics of manuscripts, and palaeographic studies have increased in recent years. The present contribution discusses the nature of cuneiform arte-facts, and more specifically clay tablets, with a view to ascertaining whether they fit into this traditional classification. First we shall consider the character-istics of clay as a medium for writing, then the interaction between the medium and its content, i.e. text and eventually images, and finally the organisation of cuneiform clay tablets in archives and libraries.

2 The use of clay as a material support for writing cuneiform

Clay, abundant in Mesopotamia, was used for multiple purposes, such as bricks for various constructions, pottery for daily life, and as a material support for writing cuneiform. The use of clay for writing purposes has many advantages, including its durability, the potential for recycling tablets for subsequent use, ease of transport, and the possibility of reproducing short text on bricks and other objects by stamping.

2.1 Writing cuneiform on clay tablets

If we consider the mass of cuneiform artefacts unearthed to date, perhaps be-tween 80 and 90 per cent of them consist of unbaked clay artefacts, predomi-nantly tablets. It is impossible to evaluate the quantity of texts written on perishable media. The shape of the cuneiform clay tablet depends on the text it carries; it may be lenticular, square, or rectangular. Tablets have various sizes, from very small texts with very few lines to large ones with several columns and many lines or boxes containing words or sentences (Fig. 1).[6] The choice of the format depended on the nature of the text, the period, and the language used.[7]

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6 Lion and Michel 2016, 30–31; Frahm and Wagensonner 2019.

7 André-Leicknam and Ziegler 1982, 73–116, 171–262; Walker 1987; Finkel and Taylor 2015.

Fig. 1: Two tablets from Ur III (twenty-first century BCE). Musée du Louvre, AO 2681, Girsu, and the small AO 19735, Umma. Photo: Cécile Michel.

First the scribe had to prepare the tablet, shaping its size according to the text that would be written upon it. The clay may or may not have been specially prepared. Levigation produces a fine, pure clay; the scribe prepared a core of clay and covered it with a thin layer of this pure clay. The presence of shell

fragments or plant remains in some tablets shows that tablets could also be made from unprocessed clay.[8] In some instances, tablets are shaped in one block, without any additional layer.[9] The text was written in lines from left to right, often parallel to the smallest side, and in one column (Fig. 2). Ruling may separate the lines of text, and the signs would be written as if hanging from these lines. The scribe wrote with a reed cut at an angle, having a square cross-section, and used one angle to imprint fresh clay; the result was a wedge-shaped impression that appeared in the negative. Depending on the pressure he gave to the stylus, the impression was more or less long and deep.

Fig. 2: The author writing cuneiform on fresh clay. Photo: Vanessa Tubiana-Brun.

Appearing on various materials, cuneiform was almost always written in three dimensions. There are few exceptions with two dimensional cuneiform signs, such as short texts found on painted and glazed wall plaques that decorated the temple of the goddess Ištar at Nimrud (ancient Kalhu).[10] Since the decipherment of cuneiform writing in the nineteenth century, modern-day Assyriologists draw cuneiform signs on a soft medium – paper – and in two dimensions, trying to

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8 Cartright and Taylor 2011.

9 This is, for example, the case with Old Assyrian tablets, which do not reveal a core when broken.

10 Albenda 1991, 46.

reproduce the ancient texts.[11] The cuneiform script, however, does not adapt well to two dimensions: it takes much more time to draw a cuneiform sign on paper than to imprint it on fresh clay with a reed stylus. A single stroke is sufficient to form a wedge in clay; drawing a wedge with ink on paper takes three strokes, the three sides of the triangular head of the wedge.

Tablets were written in a specific order: obverse, lower edge, reverse, upper edge, and even sometimes left edge, thus rotating along a horizontal axis, contrary to our piece of paper, which we flip along the vertical axis. The right edge of a tablet is occupied by the last signs of long lines, continued onto the edge. The scribe had to write the text in one go because clay dries out. It is possible, however, to keep a tablet fresh for some hours by wrapping it in a wet tissue.[12]

2.2 Durability of the medium

Clay was used daily to shape tablets for the administration of large institutions or for private purposes. In a diplomatic letter found at Mari (Middle Euphrates, eighteenth century BCE), the king of the city of Ašnakkum wrote to the king of Mari: 'I have exhausted all the clay of Ašnakkum for the letters that I repeatedly send!'[13] The same figurative image can be found in a letter sent by a private merchant of Kaneš (Central Anatolia, nineteenth century BCE) to a colleague: 'How is it (...) that I have exhausted all the clay of this town by repeatedly sending you letters, and that you, you do not send me silver, and that I never hear anything from you?'[14]

Clay exhibits plasticity when mixed with water; when dry, it becomes firm, and when fired in a kiln, permanent physical and chemical changes convert it into a ceramic material.[15] The durability of clay is then real. Most of the time, however, cuneiform clay tablets in antiquity were not fired but only dried in the

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11 See, for example, the series published by the Louvre, Textes Cunéiformes Musée du Louvre, or by the British Museum, Cuneiform Texts from Babylonian Tablets in the British Museum.
12 For the inauguration of the Maison d'Initiation et Sensibilisation aux Sciences (Paris-Saclay) in 2017, I wrote on a large (20 cm in length) foundation tablet which I had prepared early in the morning. I kept it in a wet tissue for four hours so that the officials could add a sign to complete their name, which they did on the still-fresh clay. For a photo of the tablet: <http://hebergement.u-psud.fr/miss/miss_dir/wp-content/uploads/2018/07/P_20180712_112825 bis.jpg> (accessed on 10 Sept. 2020).
13 Kupper 1998, no. 105:10.
14 Kt 89/k 232, Michel 2018, 52, n. 8.
15 Faivre 1995.

sun.[16] This means that tablets vanished from places that were flooded. Julian Reade also notes the damages inflicted by salt:

> An unfired tablet usually becomes damp in the soil; it may be permeated by soluble salts from the groundwater, and salts may crystallise on its surface as a more or less solid layer. After excavation a tablet again dries and the clay hardens. If the tablet is made of high-quality clay and is not badly affected by salt or a damp atmosphere, it may remain solid; otherwise residual salts in the clay may migrate to the surface and cause fresh damage.[17]

In general, unbaked clay tablets have survived until today, as opposed to other writing media made of organic materials. The fire that destroyed many sites baked some of the tablets, thus aiding their preservation. This is the case, for example, with Aššurbanipal's palace at Nineveh, which included his huge libraries; when fire devastated the royal palace in 612 BCE, many clay tablets were completely or partially baked.[18] But wooden tablets covered with wax,[19] papyri, and texts on leather all disappeared.

The durability of clay is therefore also relative; unfired clay is durable compared to soft writing materials, but less durable than fired clay. The ancient Mesopotamians were aware of these characteristics and intentionally baked tablets that they intended to preserve. Among these baked tablets are some literary and mythological pieces kept in first-millennium palace and temple libraries, or important royal inscriptions. For example, the Tiglath-pileser III (745–727) foundation tablet or the report of the eighth campaign of the Assyrian king Sargon II (721–705) were both fired in a kiln after being dried.[20] This was also the case with some title-deeds recording purchases and found in a private Neo-Babylonian archive at Uruk. Such documents were used as proof of ownership and were thus transmitted from buyers to buyers over several generations.[21]

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16 This was already noted by Chiera 1938, 17.

17 Reade 2017, 73–74.

18 Cartright and Taylor 2011, 68.

19 Wooden tablets are attested at least from the third millennium on. We know that following the request of Assurbanipal to gather all important texts for his palace library, people from Borsippa sent many writing boards inscribed with literary texts; see Fincke 2004, 126–129, among others.

20 Tiglath-pileser III foundation tablet K 3751 (Tadmor and Yamada 2011, 117); Sargon II 8th campaign (Thureau-Dangin 1912). Both tablets exhibit 'drying/firing holes' which could have been made to facilitate the evaporation of the water from the core of the tablet. However, because they appear on the edges of the first tablet and are distributed regularly on the obverse and reverse of the second tablet, the holes might not have the same use; see Reade 2017, 178–179. There is a debate concerning the purpose of these small holes.

21 Hunger 1970, 197.

2.3 A material easy to recycle

Cuneiform clay tablets could be recycled in different ways or erased.[22] School exercises produced by apprentice scribes, for instance, were not intended for archiving. At the beginning of the curriculum, the student learned how to write signs and copied lists of words, as well as metrological and numerical tables; then he or she wrote small texts in Sumerian and solved computing exercises. These exercises were written on quadrangular or lenticular tablets. Once an exercise was finished, and corrected by the master, the clay of the tablet could be moistened and shaped again into a new tablet.[23] It is not impossible that some administrative drafts underwent the same treatment. In the Mari palace, one or two administrative tablets were found destroyed, squeezed in someone's hand, presumably shortly after being written.[24] The text of a letter found at Tell Bi'a, ancient Tuttul, was erased by applying an additional layer of clay.[25]

Tablets were not always recycled as media for new texts: some groups of school texts were reused as fill in buildings and inserted into mud brick walls. Nippur, a cultural centre of Lower Mesopotamia, has provided one of the best examples of this phenomenon: more than 1400 school texts were found in 'House F', recycled as building material in the floor of some rooms as well as in a large clay chest built in the courtyard.[26]

2.4 A transportable medium

When not recycled, clay tablets were small enough to be easily moved and transported; this is especially true for the texts that had an immediate utilitarian purpose, those traditionally referred to by Assyriologists as 'practical texts' or 'texts of practice'.[27] This modern category includes among others, legal texts and letters.

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22 See below, Section 3.4, and Faivre 1995.

23 Taylor and Cartwright 2011, 318, suggest that the extent of recycling has been over-estimated by Assyriologists, given that raw clay was abundant in Mesopotamia and usable as a writing medium even without preparation.

24 Villard 1984, 585, no. 627 has been smashed, and only a personal name is still visible; Charpin 2008, 102, Fig. 17, shows a photo of such an administrative tablet, which could have been in the process of being recycled.

25 Krebernik 2001, no. 378, photo pl. 63.

26 Robson 2001, 40–45.

27 See below, Section 3.1.

Such letters are varied in nature; they can be private, administrative, or diplomatic, and they facilitate communication between people that cannot communicate orally. Depending on place and time, some sites of the ancient Near East have yielded many letters written on clay.[28] In the archives of Assyrian merchants that were discovered in Central Anatolia and date to the nineteenth century BCE, letters form the most representative genre of texts. Such an important number of letters may be explained by the geographical dispersion of the merchant family members: men left their wives and young children in Aššur (on the Tigris, modern Iraq) to trade a thousand kilometres away from home and settled there in different towns. These Assyrians and their relatives exchanged hundreds of letters each year, many of which have been and continue to be found in the houses of their recipients in Anatolia.[29] As they are written to be sent, clay letters are usually rather small, not exceeding the size of the palm, which makes them easily transportable. Indeed, large tablets are more fragile and may break during transport.

The size of the tablet varies a great deal, depending of the length of the message that the writer wanted to send to the addressee. Some tablets are very small, containing only four lines, while others may bear up to sixty, or even a hundred lines. Although their size is usually adapted to the length of the text, that is not always the case. Thus some letters from the chancellery of King Rîm-Sîn of Larsa (1822–1763) are oversized, perhaps because they were dictated to a scribe who did not know in advance the length of the text.[30] Neo-Assyrian letters often present a fixed size.[31] By contrast, some Old Assyrian letters (nineteenth century BCE) were not big enough, so a small, flat second 'page' was added to the first tablet. The Assyrian merchants referred to this *post scriptum* as a *ṣibat ṭuppim* ('additional tablet'); it was banded together with the main tablet inside the envelope (Fig. 3).

Letters, as well as contracts, were enclosed inside clay envelopes (Fig. 3).[32] The oldest envelopes discovered are contract envelopes; envelopes for letters appear only at the end of the third millennium and were sometimes used for letter-orders. Once the tablet was dried in the sun, it was covered by a thin layer of clay, which formed the envelope. This envelope protected the confidential character of the letter, but also protected its integrity during transport. The

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28 Michalowski 2011.

29 Michel 2001, 2008.

30 Charpin 2002, 489.

31 Radner 1995, 72.

32 Bérenger 2018; Michel 2020a.

sender rolled a personal cylinder seal on the envelope of the letter and wrote his or her own name and the name of the recipient. Letters in their envelopes were then carefully wrapped in textiles, reeds, or leather and carried by special messengers, or they were loaded on pack donkeys with other goods. When the letter reached its destination, the recipient broke the envelope to read the letter.

Fig. 3: A letter written on a tablet, with a small 'second page' covered by its partly broken envelope (Kt 93/k 211). Kültepe, nineteenth century BCE. Photo: Cécile Michel. © Kültepe Archaeological Mission.

Envelopes of contracts bear an abstract or the complete text of the contract as well as the seal imprints of the parties involved, including the witnesses; this gave legal value to the contract. When the sealed envelope was broken, the document was no longer valid.

2.5 Hand copied tablets and stamped bricks

Copying texts was a very common practice in Ancient Mesopotamia.[33] During the first years of the curriculum in the early second millennium, students had to copy various types of texts and memorize their content: lists of signs, syllabaries, lexical lists, proverbs, contract models, but also metrological lists and tables, as well as several numerical lists. Further in the curriculum, they copied long literary texts that might occupy several tablets.[34] The palace scribes sometimes made several copies of royal inscriptions: for example, a large number of clay cones and nails were inscribed under Gudea of Lagaš in celebration of a religious action of the king; many of these commemorate the construction of a temple for the god Ningirsu.[35] Scribes could also be asked to make several copies of a royal letter to be sent to provincial governors.

Copies of tablets are also found in private archives, as we learn from clay labels attached to various tablet containers.[36] Legal texts were usually certified by witnesses; each of the parties and even some of the witnesses could receive a copy of the contract, which they then kept in their own archives. Some official letters were sent in multiple copies to the different persons concerned.[37] Likewise, private letters could be sent simultaneously to several addressees who would each receive a copy, and some senders could decide to make copies of some of their own letters for their personal archives.[38]

All these duplicates were made by hand, but copies of short texts could also be made by stamping. The king could, for example, order the stamping of a text on bricks to commemorate the construction of temples, palaces, or city walls. Inscribed bricks exist throughout the three millennia of cuneiform writing. The short written text contains the name and titulature of the king along with an indication of the construction work. The inscribed clay matrix, written in mirror reverse and in relief, was prepared with a mould. The bricks were thus inscribed before drying and were incorporated into the building, the inscription being visible or not.[39]

Stamp seals and cylinder seals were also imprinted on clay. The cylinder seals could bear a few lines of cuneiform signs, with, for example, the name of

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33 Michel 2020b.
34 Veldhuis 1997, Proust 2007, Robson 2009.
35 Edzard 1997, 109–166, lists more than 2,000 such objects.
36 Özgüç and Tunca 2001, 275 (Kt c/k 834), 300 (94/k 878); Michel 2008.
37 Veenhof 2003, 434–435.
38 Michel 2018, 53, n. 10.
39 Sauvage 1998, 38–40.

the owner of the seal. Rolling a cylinder seal on clay was the quick, standard way to 'sign' a document.[40]

3 The text and its medium

There are many aspects of the interaction between text and medium. Here we will be concerned only with those aspects that may bring some light on the qualification of clay tablets as either manuscripts or inscriptions, aspects such as the relationship between text and image, the possibility of deleting or adding text, and series of tablets considered as 'books'.

Beside clay, cuneiform signs could also be written on stone, metal, or wooden tablets covered with wax. The choice of medium depended not only on the nature, content, and purpose of the text, but also on its author and addressee. For example, royal inscriptions and dedicatory texts for the gods were inscribed on precious and durable supports such as obsidian, semi-precious stones, gold, and silver, while administrative and school texts, which were not intended to be preserved in the long term, were written on unfired clay.[41] The same phenomenon may be observed in ancient Egypt, where fragments of pots, called ostraca, were used to write letters, daily accounts, or administrative texts in demotic from the seventh century BCE on, while papyrus was used for religious or scholarly works.

3.1 What medium for what text?

Assyriologists often classify cuneiform sources according to various categories. The wiki of the Cuneiform Digital Library Initiative proposes four main categories, which are modern and not based on how those who produced the texts could possibly have viewed them.[42] Three of these categories almost exclusively concern texts written on clay or wooden tablets (or later on flexible media), while the last category includes texts written on various media.

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40 Gibson and Biggs 1977.

41 Practical, scholarly, and literary cuneiform texts were also regularly written on wood. See above, n. 19 and below, Section 3.1.

42 CDLI wiki: <http://cdli.ox.ac.uk/wiki/doku.php?id=text_typologies> (accessed on 13 Sept. 2020); proposed and used by today's scholars, this classification of cuneiform texts is modern and artificial.

The first three categories are practical, scholarly, and literary texts. The practical texts, the most numerous, were written for immediate, utilitarian purposes and document economic and daily activities (letters, legal texts, receipts, accounts, etc.). The scholarly sources include materials written in an educational context: lists of signs, lexical, metrological, or numerical lists, as well as texts concerning mathematics, medicine, astronomy, divination, etc. The literary texts include narrative, mythological, and historical compositions, praise poetry, literary letters, and wisdom literature.

In contrast to the aforementioned written sources, there are also official and display texts, which include royal inscriptions, law collections and treaties, and votive texts; such texts were written on a wide variety of surfaces, materials, and shapes. Produced mainly at the initiative of the ruler and linked to the exercise of royal power, it was important that these texts survive over a long period of time. Triumphal inscriptions were written on stele, statues, reliefs, or clay prisms; they were intended to be visible and read by literate people, while foundation inscriptions, often written on precious materials, stone, or metal, were hidden in the masonry of temples dedicated to gods and were in theory readable only by the gods themselves and perhaps by later kings.

3.2 Clay and leather during the first millennium BCE

During the first millennium BCE, Aramaic became the most common language throughout the ancient Near East, and the use of soft and flexible media increased. Several Neo-Assyrian reliefs and paintings show a pair of scribes, one writing cuneiform with a stylus on a tablet or a writing board covered with wax, the second using the Aramaic alphabet to write with ink on a flexible medium, such as a papyrus or leather scroll.[43] These texts have disappeared: their existence is known from surviving clay sealings that contain a few words describing their content.

During the Hellenistic period (331–141 BCE) in the temples of Uruk and Babylon, scribes used different types of media for writing: clay tablets for cuneiform, wooden tablets covered with wax for Sumerian and Akkadian written with cuneiform signs, as well as alphabetic Aramaic, and Greek; leather and papyri were also used for Aramaic and Greek. The bulk of the documentation was written in Aramaic or Greek on perishable organic media, wooden tablets, or leather. Cuneiform tablets, however, are the only written artefacts that have survived

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43 Lion and Michel 2016, 35–36.

to this day; they were written by the *ṭupšarrū*, that is, by scribes belonging to the old urban notability of Babylonia, called Chaldeans by the Greeks.[44] They were scholars, priests, and temple administrators, all guardians of cuneiform culture in Hellenistic Uruk.

The cuneiform texts document another type of scribes, the *sepīrū*, known from the seventh century onwards, who wrote in Aramaic on leather scrolls. They wrote some of the legal texts that needed to be understood by the local authorities, but clay was also still used for legal purposes. In some cuneiform legal texts, the scribe specified that these were copies made from an original written on leather.[45] Clay tablets suited administrative practices; they were sealed on the edges, and the text could be very easily checked. And in fact, a significant portion of temple administration is documented by cuneiform tablets.

3.3 Text and image

The combination of cuneiform text and images primarily occurs in stone media. During the Neo-Assyrian Empire, large iconographic programmes were executed on palace walls; over hundreds of meters, these programmes show the great achievements of the king, with a substantial amount of detail.[46] Clay, however, could also bear drawings.[47]

Drawings on clay could be produced with the help of a matrix, such as cylinder seals engraved with miniature figurative scenes that were rolled onto the clay, leaving the imprint of their drawings, which were often accompanied by a few lines of cuneiform signs.[48]

Some clay tablets from the fourth millennium on also show plans and maps. Field surveyors provided schematic representations of rural parcels on clay tablets.[49] The shape of a field may also be found with other geometrical shapes

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44 Oelsner 2003, Jursa 2005, Clancier 2011.

45 Clancier 2005.

46 This is, for example, the case with the iconographic programmes on the walls of Aššurnaṣirpal II's (883–859) palace at Kalhu; see Winter 1983, and on Aššurbanipal's (668–627) palace at Nineveh, Barnett 1976.

47 Clay, as medium for cuneiform, could also take a great variety of shapes. It could be fashioned into the form of an object, such as a sheep liver, which was an organ of thought and feeling, and thus of interest to the diviner. Deformities or anomalies of the liver were reproduced on a clay model, on which was also written a corresponding omen. Such liver models were used as aide-mémoires for priests, or for teaching (Koch-Westenholz 2000).

48 See above, Section 2.6.

49 Liverani 1996.

as part of a mathematical problem.[50] Scribes left plans of buildings, some of them showing tiny details such as the brick pavement of an open court or the variation of the thickness of some walls.[51] There are also maps of cities and geographical areas drawn on clay for religious or military purposes. One of the earliest representations comes from the area of Nuzi, east of the Tigris, and is dated to around 2300 BCE.[52] The *Mappa mundi* or Babylonian map of the world, presumably made around the ninth century BCE, is known from a copy of the seventh century. It represents the earth as a disc surrounded by an ocean; Babylon lies in the centre, crossed by the Euphrates. Text on the reverse of the tablet comments on the map.[53]

All these examples demonstrate that, even if it is more awkward to draw curved lines than straight wedges on fresh clay (see Fig. 4), the difficulty did not prevent scribes from drawing on clay tablets, and the drawing was usually accompanied by some cuneiform writing.

3.4 Erasing and annotating texts on clay

When carving an inscription in stone, error is irreparable, unless the carver starts anew. When writing a text on fresh clay, it is always possible to erase signs or a line by running a finger across it to smooth out the clay and by writing there once again.[54] But when clay tablets have been dried in the sun, they become as hard as stone. It is still possible, however, to erase signs or a sentence by watering the clay in order to obtain a flexible surface for rewriting. This possibility, rarely implemented, is documented by a letter that an Assyrian merchant addressed to his representative, ordering him to erase few lines on a document preserved in his archives:

> There is a tablet mentioning that the anonymous creditor has loaned 21 minas and 10 shekels of silver to Šalim-Aššur, Ikūnum, and Sabazia, and that concerning this silver, we are jointly responsible. Take out this tablet, read it carefully and where it is written: 'The

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50 Friberg 2007, 189–229.

51 Heinrich and Seidl 1967, 41.

52 Meek 1935, no. 1, for a photo <https://cdli.ucla.edu/dl/photo/P213268.jpg> (accessed on 25 Sept. 2020).

53 Horowitz 1988.

54 See, for example, the photo of a partly erased tablet in Robson 2001, 46, Fig. 9.

silver has been taken in the name of Iliš-tikal' moisten it with water (and erase it) and show to the son of Šalim-Aššur what is important for you.[55]

The addition of annotations, glosses, or marginal numbers to cuneiform tablets is also attested (Fig. 4). Religious, literary, or divinatory texts could be the subject of commentary by scholars who interpreted them via plays on words, by noting meanings on different levels, or by multiplying the possible readings of a text. These commentaries were written on separate tablets referring to the relevant composition. But they could also be inserted as glosses between the lines on copies of the text; they were then written at the same time that the copy was made.[56] In small characters, between the lines, we find such glosses on astrological series used by scholars working for Aššurbanipal, who was an educated king; these glosses were addressed to the king, who was then able to discuss these matters with his astrologers.[57]

Fig. 4: Aramaic text on the left edge of a tablet with a Neo-Babylonian cuneiform text, from Still and Sonnevelt 2020, 105. Text from the Royal Ontario Museum, Toronto, 521 BCE.

There are other types of annotations, such as *he-pi* ('broken'), which occurs on a scribe's copy when a portion of the original text was damaged and illegible. Annotations are quite ancient; they go back to the second half of the third millennium BCE in the administrative documentation, where we sometimes find

55 Michel 1995, 25–26.
56 Frahm 2011, 16–17.
57 Villard 1997. Such annotations concern, for example, the translation into Akkadian of a Sumerian logogram, or an indication of how to pronounce it.

marginal numbers that were supposed to help the scribes in their computations.[58] All these annotations were written on fresh clay at the same time as the main text, presumably by the scribe who wrote the tablet. There are also a few cases where signs have been scratched onto a dry tablet.[59]

3.5 Series of tablets, precursors of books

Literary, divinatory, or mathematical texts could be quite long and needed to be written over several tablets. Each of these contained a colophon that indicated its place in the series.[60] This colophon was written in a specific space that was left blank on purpose at the end of the tablet. The colophon included various items of information such as the title of the series – corresponding to the incipit of the first tablet – the number of the tablet within the series, or (for literary tablets) the first line of the next tablet within the series, sometimes the date when the copy was made, and rarely the place where it was copied or the origin of the original. First-millennium scribes could even specify the material on which the original was written, such as a clay tablet, a wooden tablet, or a flexible medium.

As an example, the series *Enūma Anu Enlil* ('When [the gods] Anu and Enlil') contained at least seventy tablets gathering seven thousand astrological omens that referred to the king and the land, and that derived from observation of the moon, the sun, eclipses, Venus, and atmospheric phenomena.[61] The series was compiled by Esagil-kîn-apla during the eleventh century BCE, and we have several copies from later periods.

Some long literary texts could also be written over several tablets forming a series. The most famous example is the Gilgameš Epic.[62] Construed from Sumerian tales and new compositions, the Akkadian version of the Gilgameš Epic, already well-known from the beginning of the second millennium BCE, was

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58 Ouyang and Proust, forthcoming.

59 For the third millennium, see, for example, the text ARET XX, 25, reverse 11, 9, a photo of which is accessible online <http://ebda.cnr.it/tablet/view/3115> (accessed on 13 Oct. 2020). Such textual additions may also be found in some first-millennium colophons. Or, occasionally, signs were added as the tablet was in the process of drying; see, for example, King 1914, 9, tablet 48 [Ki. 1904-10-9, 11]: 'After the tablet had partly dried, five lines were added by the scribe on a blank space on the Reverse above the colophon.' A photo of this tablet (which joins two other pieces) is visible at <https://cdli.ucla.edu/dl/photo/P394724.jpg> (accessed on 8 Sept. 2020).

60 Leichty 1964, Hunger 1968.

61 Weidner 1944.

62 George 2003.

standardized in later times. The most complete version comes from the library of Aššurbanipal's palace (seventh century BCE) and runs over twelve tablets arranged in a specific order. The colophons of each tablet indicate the number of the tablet in the series, and thus clay tablets could be arranged in a series like pages in a book.

4 Clay tablets in archives and libraries

Clay cuneiform tablets were usually kept in archives and libraries that were located in official buildings and private houses. Official archives were located in large organizations, palaces, and temples, which could also contain private archives. Private archives belonged to individuals and have usually been excavated in their houses; they often concern several generations of a family. Most of these archives were sorted though and weeded out from time to time in antiquity.[63]

In these archives, tablets were arranged on shelves or kept in baskets and coffers made of perishable materials that have not survived, though tablets were also kept in clay jars (Fig. 5).

Fig. 5: Archive from a family of merchants, kept in a perishable container, Kültepe, nineteenth century BCE. © Kültepe Archaeological Mission, Archives.

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63 Veenhof 1986, for example.

Such containers, kept in specific rooms, were identified by a clay label. Archives could be arranged by owner, in dossiers dealing with the same affairs, or by text genre such as letters, legal texts, etc.[64]

Beside archives, other collections of texts have been found; these collections form real libraries that are mainly dedicated to sources produced in scholarly contexts. The libraries include texts dealing with divination, medicine, religion, technical matters, 'science', literature, and pedagogy, including, for example, lexical lists. Such libraries are attested from the second half of the second millennium, a period when most of the literary texts were canonized. The libraries have been unearthed in the houses of priests, diviners, or other scholars, but in later times more often in palaces and temples.[65] King Aššurbanipal (668–627) gathered in his palace at Nineveh one of the most important collections of cuneiform scholarly texts, more than 20,000 in number, which are now housed in the British Museum. In temples and palaces, tablets were stored in niches in the walls of specific rooms, near a courtyard giving enough light to read, or they were positioned on shelves along the walls. Cuneiform texts kept in archives and libraries have characteristics that are relevant to manuscripts.

5 Conclusion

The great majority of the cuneiform texts discovered so far were written on clay; the number of texts written on stone and metal is quite limited, and the number of texts written on other media (wood, leather, papyrus) is unknown since such organic materials have not survived. Clay is traditionally considered one of the media for epigraphical studies. Yet if we consider cuneiform tablets, they share many characteristics with manuscripts: they were written by hand and are thus unique; they were transportable; they could be enclosed in an envelope; they could bear annotations or drawings and be erased or recycled; they could also be grouped into books of a sort and arranged in archives and libraries.

In 2015, characteristics such as these led scholars at the Centre for the Study of Manuscript Cultures in Hamburg to propose a new and expanded definition of the word 'manuscript': 'a manuscript is an artefact planned and realised to provide surfaces on which visible signs are applied by hand; it is portable, self-

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64 Archi 2015 or Michel 2018, among many others.
65 Clancier 2009.

contained, and unique'.[66] In fact, many written artefacts do not fit into the traditional categories that contrast manuscripts with epigraphy, with the result that such artefacts occupy a vast grey zone between these two categories.

Within the community of scholars who decipher cuneiform texts written on clay tablets, some scholars refer to their sources as manuscripts, and studies in cuneiform palaeography have flourished in recent decades.[67] Such scholars, however, also often call themselves epigraphists. The name of the discipline itself, Assyriology, is built on 'Assyria', suggesting a very limited topic, but it actually refers to all texts written in cuneiform, embracing a great variety of languages such as Sumerian, Hurrian, and Hattic (three languages that do not belong to any known linguistic family), the Semitic language Akkadian and its dialects, Assyrian and Babylonian, as well as the Indo-European Hittite language. The word 'Assyriology' corresponds more generally 'to the study of ancient Mesopotamia and neighbouring regions through textual, archaeological and art historical approaches'.[68]

A biography of François Thureau-Dangin (1872–1944) presents him as a 'French archaeologist, Assyriologist and epigrapher. He played a major role in the deciphering of Sumerian and Akkadian languages'.[69] In 2013, the Oriental Institute at the University of Chicago advertised a professorship in Assyriology as follows: 'Applications are welcome from scholars with a research focus in any period or subfield of Assyriology. The successful candidate should be able to teach a wide range of courses in Akkadian grammar, texts, and epigraphy and courses on Mesopotamian civilization and history.' Such terminology harks back to the early days of the discipline.[70]

How can we explain this double paradox, which consists of using the term 'epigraphist' for scholars working on cuneiform clay manuscripts, and the word

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66 Lorusso et al. 2015.

67 Biggs 1973, 40, regrets the absence of studies dealing with cuneiform handwriting: 'in my opinion, the greatest problem in cuneiform palaeography is our lack of knowledge about the particular handwritings of the various scribal centers.' Among recent studies on this topic, see, for example, Devecchi et al. (eds) 2015.

68 Definition given by the International Association for Assyriology, <https://iaassyriology.com/assyriology/> (accessed on 3 June 2020). In 1928, as part of his efforts to distance Turkey from the Arab world, Mustafa Kemal Atatürk replaced the Arabic-script Turkish alphabet with a Latin-script alphabet. In the same spirit, Assyriology is referred to as *Sümeroloji* in Turkey, because of attempts to claim an affiliation between Turkish and Sumerian.

69 <http://en.wikipedia.org/wiki/Fran%C3%A7ois_Thureau-Dangin> (accessed on 4 June 2013).

70 Thureau-Dangin 1896, 360, concerning tablets from Tello, mentions, for example, 'des documents épigraphiquement antérieurs'.

'Assyriology' to depict a discipline partly linked to the decipherment of a great variety of languages?

The first archaeological explorations in Mesopotamia were carried out in the middle of the nineteenth century by French and British diplomats on the ruins of the Assyrian capitals: Nineveh, Khorsabad (ancient Dûr-Šarrukēn), and Nimrud (ancient Kalhu). These early excavators unearthed the remains of huge palaces built by the Assyrian kings of the first millennium BCE that were decorated with large reliefs on stone slabs, sometimes covered with cuneiform inscriptions.[71] The first contact of European scholars with ancient cuneiform texts thus concerned royal inscriptions written in the Assyrian language and engraved on stone, hence the double designation of specialists of cuneiform texts as 'Assyriologists' and 'epigraphists', despite the fact that they mainly work on manuscripts as palaeographers do.

Acknowledgements

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71 Larsen 1996.

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Ondřej Škrabal
How Were Bronze Inscriptions Cast in Ancient China? New Answers to Old Questions

Abstract: After many decades of scholarly consensus on how bronze inscriptions were cast in Chinese antiquity, over the past twenty years, archaeological discoveries as well as research on inscriptions' specific features have undermined the long-established interpretation. In contrast to the traditional stance – that inscription moulds were prepared by impressions from a master pattern – the new interpretation argues that inscriptions were modelled from additional clay directly on the moulds. This article offers an overview of the genesis and main advantages of the new interpretation together with a detailed reconstruction of the technical procedure.

1 Introduction

The last two decades have fundamentally changed our understanding of how ancient Chinese bronze inscriptions were produced. New material evidence yielded by archaeological excavations, together with scholarship focusing on the special features of cast inscriptions, have challenged the long-standing consensus on the main technique for producing ceramic moulds in which inscriptions were cast during the 'golden age' of Chinese bronze epigraphy, i.e. between the eleventh and fifth centuries BCE. This has further prompted reassessment of the techniques employed in even earlier times. While the traditional view has been reiterated in all literature on the subject since at least the 1960s, the advantages of the novel interpretation have hitherto not been comprehensively presented in a Western language.[1]

There are manifold reasons why these details should interest a student of ancient Chinese bronzes and ancient Chinese history in general. The most apparent is the authentication of inscriptions on unprovenanced objects, as it is

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1 For a fairly comprehensive treatment in Chinese, see Zhang Changping 2010; Guan Shuqiang 2016; Shi Anrui 2020a; for a discussion in English, see Nickel 2006, 36–38; Zhang 2012; Škrabal 2019, 314–331.

commonplace that inscriptions were forged onto authentic bronzes. It goes without saying that without a thorough knowledge of ancient inscription techniques, it is almost impossible to assess the genuineness of unprovenanced inscriptions reliably. Furthermore, such knowledge can aid textual scholarship by elucidating how certain mistakes came into being during the production process; this can provide information about the content and form of an inscription's master copy. From a palaeographic perspective, it can indicate how well and how directly an inscription represents the handwriting of its time, and how certain misspellings or variants may be products of casting infelicities rather than of the scribal hand. Furthermore, it can make research on calligraphy more complex by clarifying the technology by which the artistic features of inscriptions were produced, the extent to which they were determined or limited by inscription techniques and the relation between an epigraphic style and inscription technique. Historians of technology will also be interested in the level of achievement of early Chinese craftsmen, the variety of techniques they employed, the dynamics of the emergence of these techniques or their place in the global context of the ancient world.

2 Preliminaries: Piece-mould technique, simple inscriptions and the inscription block

Until the fourth century BCE, due to the late advent of iron carving tools, bronze inscriptions were typically cast.[2] Cast inscriptions could be produced in a variety of ways. In particular, bronzes from the Late Shang period (thirteenth to eleventh century BCE), when bronze epigraphy was still in its infancy, indicate that various simple techniques were used to produce short inscriptions several graphs in length. As the bronzes were cast from ceramic moulds,[3] a negative version of an inscription had to be prepared in the mould to yield a positive

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2 While the earliest inscriptions carved in bronze come from the first half of the eleventh century BCE (Yue Zhanwei, Yue Hongbin and Liu Yu 2012, 66–67; Liu Yu 2019, 106–109; Yang Huan and Yang Jian 2020), only from the ninth century BCE on was carving occasionally used to produce longer inscriptions, typically on reused objects. From the fourth century BCE on, with the emergence of iron tools, carved inscriptions gradually dominated the epigraphic landscape of ancient China. For carved inscriptions from those times, see Zhang 2012, 267–268; for chiseled inscriptions, see Li et al. 2011, 494–496. For iron metallurgy in ancient China, see Wagner 1993.

3 For details, see Bagley 1990.

inscription upon casting. Thus, it is the ceramic stage of inscription-making that is of main interest here. Between the thirteenth and eighth century BCE, inscriptions were typically cast on the interior walls of objects, except for some liquor cups (*jia* 斝, *jue* 爵) and bells, which commonly featured inscriptions on the outside walls. This was also the case for weapons, tools, chariot fittings and decorative pieces.[4] The former type of inscription was prepared on the core (inner mould), while the latter was prepared on the outer mould(s). However, the technique did not differ.

The easiest way to prepare an inscription was to engrave a mirror-reversed text directly into the leather-hard clay core (or mould). The intaglio lines of such an engraving became positive relievo graphs on the cast object. Relievo inscriptions are seen only occasionally in Late Shang and Early Western Zhou (late eleventh to early tenth centuries BCE) bronzes, mainly inside the foot of *gu* 觚 beakers and inside alcohol containers.[5] While relievo inscriptions were easy to produce, they were also more susceptible to mechanical damage during post-casting finishing and regular cleaning after the vessels were used in a sacrificial ritual.

It was also possible to engrave the mirror-reversed outlines of a graph into the core and to pare down the clay outside of this sketch. The sketched graph would thus rise above the surface of the core, and a positive intaglio inscription was produced after casting. To spare the efforts of scraping a layer of clay off the entire surface of the core, the graph could be sculpted on a separate clay slab (a so-called 'inscription block'), which could then be embedded in a niche gouged out of the core for this purpose. Even with the use of the inscription block, this technique was too laborious to produce inscriptions with more than just a few graphs.[6]

However, the edges of the inscription block are still discernible in many inscriptions, and it is generally believed that inscriptions were indeed commonly

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4 From the eighth century BCE on, inscriptions were placed on the outside walls of the vessels increasingly often. For more on this shift, see Huang Tingqi 2018, 46–62.

5 Zhang 2012: 268; for examples, see Barnard and Wan 1976, 50–53. By Zhang's count, of the 792 *gu* beakers recorded in Zhongguo shehui kexueyuan Kaogu yanjiusuo 2007, 98 have relievo inscriptions. My own count shows that, of the 825 *you* containers recorded in Wu Zhenfeng 2012, at least 24 have relievo inscription (some cases are difficult to determine). There are also cases in which the lid of a *you* has a relievo inscription and an intaglio inscription is cast in the bottom of the container (and vice versa).

6 For examples of inscriptions that are believed to have been produced by this technique, see Barnard and Cheung 1996, 226–239. Note that Guan Shuqiang 2017, 69–71, offered an alternative explanation of how some of them were produced.

prepared on such blocks but using a different technique than described above. Several scholars have nevertheless justly pointed out that some of the longest inscriptions cast on the hemispherical interiors of *ding* 鼎 cauldrons would be difficult to produce using a flat inscription block.[7] There is, however, little reason to believe that a different inscription technique was used in those cases. Rather, the use of inscription blocks should be understood as a convenient technique that was applied where possible, such as on straight or slightly curved walls. When the complexity of the surface did not allow for the use of inscription blocks, the inscription had to be sculpted directly on the core,[8] which was admittedly less convenient for craftsmen.

3 Special features of cast inscriptions in ancient China

Before looking in detail at the most consequential of inscription techniques, it might prove useful to summarise the features of a typical bronze inscription cast in ancient China. To prevent any confusion, I use the term 'typical' to refer to an inscription with more than three graphs in length that was cast during the Middle and Late Western Zhou periods (mid-tenth to early eighth centuries BCE), when most of the famous inscriptions were produced. These features include:

1. Intaglio (sunken) lines. For the reasons described above, intaglio inscriptions were largely preferred.[9]
2. No mechanical reproduction. Mechanical reproduction was only introduced into inscription-making during the late eighth century BCE. This first involved repeated impressions of the master pattern block with the entire text

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7 Chang 1974–1975, 472; Hayashi 1979, 12–13; for further problematical surfaces, see Li Feng 2015b: 144–146.

8 Consider, for example, the set of the twelve Qiu *ding* 逨鼎 cauldrons. Most of their inscriptions were prepared on inscription blocks (as confirmed by discernible boundaries of the blocks and in one case even by blocks inserted in wrong order). However, as Li Feng 2015b, 149 suggests, for several cauldrons of this set, the inscription was most likely prepared directly on the core.

9 The décor on the exterior of ritual bronzes was sometimes filled with a black or colourful substance to enhance the visual effect, see Gettens 1969, 197–204; Su Rongyu 2020. Sunken inscriptions allowed for the same treatment, but I am aware of only one such case; this is the Xiaochen Bu *ding* 小臣逋鼎 in the collection of the Tsinghua University Library 清華大學圖書館, Beijing.

of an inscription.[10] From the seventh century BCE on, stamps with individual graphs were also used.[11]

3. Undercut. The sidewalls of the grooves of intaglio graphs are typically inclined so that the grooves are somewhat wider at their bottom than at their opening (Fig. 1:3).[12]

4. Wavy lines. Under magnification, the lines of individual strokes (i.e. the edges of the grooves) often show uneven width and their edge lines appear wavy, not straight (Fig. 1:3).[13]

5. Thickened cross-strokes. The grooves are sometimes remarkably thicker at the intersections of two or more strokes (Fig. 1:4).[14]

6. Raised-edge effect. Sometimes, the edges of the stroke grooves are slightly higher than the surrounding surface of the inscription.[15]

7. Relievo grid lines. Some inscriptions are written into a regular relievo grid that allots one space for each graph (Fig. 1:2).[16] More inscriptions show faint traces of grid lines that have been removed during the post-casting polishing procedure.[17]

8. Intaglio graphs with partial relievo strokes. Occasionally, intaglio graphs occur with a part of their strokes in relievo (Fig. 1:7);[18] in rare instances, the entire graph is registered in relievo.[19] This situation can only be preserved in inscriptions to which abrasive polishing was not applied.

9. Missing strokes. Sometimes the intaglio graphs miss a part or the whole of a stroke (Fig. 1:5), and occasionally, the entire graph is not registered in the inscription. This feature is not uncommon and occurs in inscriptions that were polished.

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10 Sakikawa 2017.

11 Yoshikai 1996; Barnard and Cheung 1996, 248–252; Sakikawa 2017.

12 Chen Jieqi and Chen Jingdi 1919, 6; Pope et al. 1967, 96 and *passim*; Gettens 1969, 141–147; Tan Derui 1999, 243; Zhang Yuyao and Zhang Tian'en 2018, 66.

13 Pope et al. 1967: 96 and *passim*; Gettens 1969, 141–147; Dong Yawei 2006, 110–112.

14 Barnard and Cheung 1996: 10–18; You Guoqing 2012, 349; Guan Shuqiang 2016, 185–186; Guan Shuqiang 2017, 72.

15 Gettens 1969, 141–143; Hayashi 1979, 33–36; Barnard and Cheung 1996, 92, 218–220, 226–236, 264–267; You Guoqing 2012, 349.

16 See Barnard and Wan, 1976 for examples.

17 Zhang 2012, 276–277.

18 Li Feng 2015b, 150; Zhou Ya 2017, 318; Shi Anrui 2020a, 153–155.

19 Zhang 2012, 273–276; Li Feng 2015b, 150.

10. Displaced strokes. At times, an intaglio stroke of a graph appears broken or displaced from its original position (Fig. 1:8).[20]
11. Ghost characters. This is a rare feature where residues of a relievo graph are visible in the area immediately surrounding an intaglio graph (Fig. 1:6).[21]

Note that some of these features remained unnoticed until fairly recently (nos 8, 9, 11) while others were considered signs of forgery (especially nos 3, 4, 5).[22] These suspicions were, however, dispelled over the last 50 years by abundant evidence from archaeologically recovered inscribed bronzes. A model of inscription-making in the Middle and Late Western Zhou periods should convincingly explain the presence of all 11 features.
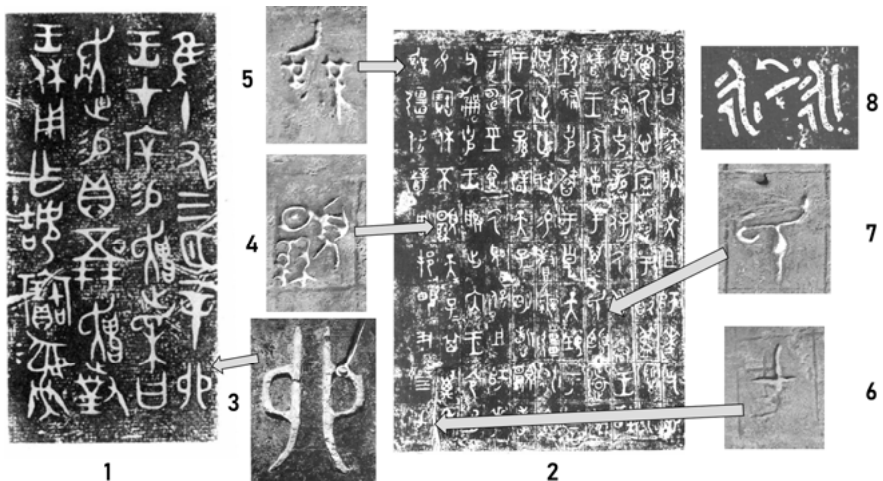
Fig. 1: Various features of ancient Chinese bronze inscriptions. Rubbings reproduced from Zhongguo shehui kexueyuan Kaogu yanjiusuo 2007, nos 5402.1 (1: first half of the tenth century BCE), 2836 (2: late ninth century BCE) and 10322 (8: first half of the ninth century BCE). Photographs after Gettens 1969, 145 Fig. 187 (3) and courtesy of the Shanghai Museum (4–7).

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20 Hayashi 1979, 42–45; Chen Chusheng 1998, 120; Chen Yingjie 2006, 220; Shi Anrui 2020a, 160–161.
21 Barnard and Cheung 1996: 261–267 ('skeleton line graphs'); Li Feng 2015b, 150–151; Škrabal 2019, 318–323; Shi Anrui 2020a, 159–160.
22 Barnard and Cheung 1996, 9–18.

4 The traditional master pattern technique: a critique

To explain how inscriptions were made in ancient China, a variety of interpretations have been proposed during the last two centuries. One of the earliest interpretations – and surely the most influential – was formulated by Ruan Yuan 阮元 (1764–1849):

> 余所見鐘鼎文字，揣其制作之法，蓋有四焉。一則刻字于木范為陰文，以泥抑之成陽文，然後以銅鑄之成陰文矣。一則調極細泥以筆書于土范之上，一次書之不高，則俟其燥而再加書之以成陽文，以銅鑄之成陰文矣。三則刻土范為陰文，以銅鑄之成陽文矣。四則鑄銅成後鑿為篆銘。漢時銅印有鑿刻者，用此法亦陰文也。

> Regarding the inscriptions on bronze vessels and bells that I have seen, should I assess their production technique, they would be roughly of four kinds. One is carving the text into a wooden mould to produce an intaglio inscription; impressing clay on it will then produce a relief inscription; subsequently, casting a bronze in it will produce an intaglio inscription. Another [technique] is mixing a very fine clay and applying it with a brush on the surface of the clay mould. A single application would not produce a high enough [relief], so upon hardening, more layers were added to obtain a relief inscription; upon casting, this produced an intaglio inscription. The third [technique] is carving [a text] into the clay mould to produce an intaglio inscription, which, upon casting, produced an inscription in relief. The fourth [technique] is such that after the casting was completed, a carved-style inscription was chiselled [into the surface]; among the bronze seals of the Han period, there are [also] instances of carved [inscriptions]. This technique also produced an intaglio inscription.[23]

Ruan further asserted that the Late Western Zhou San Shi *pan* 散氏盤 inscription, which was executed in a style that is representative of this period, was cast from ceramic moulds prepared using the first technique: impression from a positive inscription carved into a wooden block. Writing around 1823, Ruan laid the grounds for a conventional interpretation that has been widely accepted for nearly 200 years with only minor touch-up: Scholars agreed that the inscription was not initially incised in a wooden board, but in a clay slab, of which an imprint was then taken to create an inscription block with mirror-reversed relievo text. Then, the block was fired and inserted into the core (or mould) of the piece-mould casting assembly, into which the object was cast, producing an intaglio

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23 Ruan Yuan 1823, 17.

inscription.[24] This is the traditional explanation, the so-called master pattern technique.

However, already in the 1940s Rong Geng 容庚 (1894–1983) highlighted a major problem with this interpretation: If the inscription block was produced by an impression from a master pattern, then it must have been possible to create several identical inscriptions through repeated impressions from one master pattern.[25] Yet, as pointed out by Rong and corroborated by all the bronzes discovered since his work was published, even though the same text may be copied a dozen times on the vessels cast in a set, there is no evidence of mechanically reproduced inscriptions in the Western Zhou period.

Moreover, this interpretation fails to account for most of the remaining features listed above. Attempts at explaining the coexistence of the relievo grid lines and intaglio inscription illustrate the problems with the traditional model: To produce such inscriptions using this model, the relievo grid had to be sculpted on the master pattern block, which means additional time and material were required beyond the default procedure; note that this complication would be introduced only to cast a relievo grid that was, however, typically polished away after casting.[26] This is counter-intuitive. Moreover, when considering the occasional relievo strokes or ghost characters, proponents of the traditional explanation have obvious difficulties: Barnard candidly admitted being baffled by this feature,[27] while Li Feng 李峰 submitted a convoluted proposal that remains uncompelling due to the same fallacy – it enormously complicates the production scenario solely to explain the presence of ghost characters.[28] The ghost characters were, however, undesired and only occasionally and only by chance did they fail to be polished away. Other features, such as the undercutting, wavy lines and thickened cross-strokes, also remain unexplained by the traditional model.

Due to some of the above shortcomings, scholars sought alternative explanations. Rong Geng himself proposed that the text was first written in ink on the surface of the inscription block and then the surrounding clay was pared down to produce a relievo inscription, a technique already mentioned above. Chang

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24 The *loci classici* are Chen Mengjia 1954, 41; Shi Zhangru 1955, 121; Barnard 1961, 157–161; Barnard and Cheung 1996, 239–248.

25 Rong Geng 1941, 158–159.

26 For such studies, see, for instance, Barnard and Wan 1976; note that Barnard here committed the same fallacy that he himself criticised later with regards to Hayashi's proposal concerning the raised-edge effect, see Barnard and Cheung 1996, 220.

27 Barnard and Cheung 1996, 261–267.

28 Li Feng 2015a; an English translation of it was published as Li Feng 2015b.

Kuang-yüan 張光遠 later elaborated on this, arguing that even the longest inscriptions, such as that of the Mao Gong *ding* 毛公鼎, were produced in this manner,[29] but his proposition has been convincingly debunked.[30] Hayashi Minao 林巳奈夫, Matsumaru Michio 松丸道雄, Li Feng and Zhou Ya 周亞 also submitted imaginative proposals, each of which, however, suffered from serious shortcomings, mostly because they rendered the process much too complicated.[31] As a result, for all its drawbacks, the general literature on ancient Chinese bronzes embraced and perpetuated the default master pattern model.

5 The modelling technique: a genesis

Of the many proposals in the prior literature, the only one that explains all eleven features listed above is the so-called 'modelling technique' (*duisu fa* 堆塑法). In essence, this technique is similar to Ruan's second proposal. In fact, Chen Jieqi 陳介祺 (1813–1884), the most famous connoisseur and collector of ancient Chinese bronzes, who was renowned for not having a single forgery among the several thousand pieces in his collection, was convinced that the ancient inscriptions were produced by the modelling technique:

> 古人模範之精，今多不能思議。以土為範，範土以刀畫之成格，格上漆書字，字上再以土堆成陽字，鑄成即成陰款。[32]

> The ingenuity of the moulds [produced by] the ancients cannot, for the most part, be even imagined today. [They would] make a mould from clay, [and then] make incisions in the mould using a knife to create a grid. In the grid, they would [first] write the [desired] graphs using paint, and on these [painted] graphs, they would then model relief graphs from clay. Upon casting, this produced an intaglio inscription.

Among subsequent scholars, only Shang Chengzuo 商承祚 (1902–1991)[33] endorsed Chen's proposal, such that his suggestion remained neglected or even forgotten. It was not until the late 1990s that Chen Chusheng 陳初生, Shang's

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29 Chang 1974–1975, 470–473.

30 Barnard and Cheung 1996, 243 n. 93; Barnard however admitted that this technique was probably used in the case of very short inscriptions, see Barnard and Cheung 1996, 226–239.

31 Hayashi 1979; Matsumaru 1991; Li Feng 2015b; Zhou Ya 2017. The recurring fallacy in these interpretations is that that they enormously complicate the default process only to achieve a by-product feature.

32 Chen Jieqi and Chen Jingdi 1919, 6.

33 Shang Chengzuo 1933, 243–244.

former student, inspired by the phenomenon of displaced strokes, revived Chen Jieqi's idea with some modifications.[34] Soon afterwards, in 1999, Tan Derui 譚德睿, the foremost expert on ancient Chinese bronze casting, published an important paper on the piece-mould casting technique. In this paper, he acknowledged the traditional explanation, but proposed that inscriptions with the undercut feature, such as the Liangqi *zhong* 梁其鐘 and Larger Ke *ding* 大克鼎, were produced by the modelling technique.[35]

That very year, the Zhouyuan Archaeology Team launched a large-scale survey of the Zhouyuan site, which led to the discovery and excavation of an ancient bronze foundry site west of Lijia 李家 village, Fufeng, Shaanxi. Remains of ceramic moulds recovered from the site exhibited an interesting feature: the raised lines of the décor were modelled from clay and attached to the mould. Moreover, at places where the décor lines dropped from the mould, shallow intaglio sketch lines were exposed.[36] These materials were analysed by Chen Yang 陳陽, who suggested two ways in which the relief décor lines might have been produced: the clay lines were either modelled separately and inserted into grooves that were previously sketched on the surface of the mould, or they were directly squeezed into the grooves using the slip trailing method (also known as tube lining).[37] The sketched grooves served a double purpose: they constituted a guideline for the execution of décor lines, and they provided a base on which clay lines could be securely anchored on the surface of the mould.

News of this discovery began to circulate in academic circles soon after the excavations and had far-reaching influence. In 2006, Lukas Nickel authored a thorough study on ceramic moulds in which he traced the use of the modelling technique to the Late Shang period, arguing that inscriptions were also produced in this manner. In his view, the lines of both the décor and the inscriptions were produced by slip trailing, and he showed how this technique elegantly resolves the problem of undercutting.[38] The same year, in his book on ancient Chinese bronze casting, Dong Yawei 董亞巍 argued that modelling was used already in the Middle Shang period (fourteenth to thirteenth century BCE) to create decorated moulds, and he maintained that the majority of Shang and Zhou inscriptions were produced with this technique. Apart from the undercutting, he

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34 Chen Chusheng 1998.

35 Tan Derui 1999, 242–243. In his view, this was achieved either by the method proposed by Ruan Yuan, or by applying strips of clay of the size of an individual character or of the whole column and cutting them into shape of desired graphs.

36 Zhouyuan kaogudui 2004: 447.

37 Chen Yang 2005, 27.

38 Nickel 2006, 36–37; for a response defending the traditional view, see Bagley 2009.

identified the wavy lines as an accompanying feature of the modelling technique, and proposed that for some inscriptions, especially those from the Late Shang and Early Western Zhou periods, the clay lines applied on the inscription block were carefully trimmed, while for other inscriptions, they were left untrimmed, producing the wavy effect.[39] The idea caught on, but it was not until 2010 that Zhang Changping 張昌平 provided a reconstruction of the entire procedure of inscribing bronzes using the modelling technique.[40] Zhang's paper marked a breakthrough, not only because he presented solid epigraphic evidence for his argument but also because he highlighted the importance of the sketching and polishing procedures that were disregarded by some earlier authors. In the last decade, other scholars have also subscribed to the modelling interpretation, offering further evidence of how this technique successfully explains puzzling features of Western Zhou inscriptions, including the presence of ghost characters.[41]

At the same time, excavations of several bronze foundry sites have yielded hard evidence corroborating the use of the modelling technique. In 2006, excavations of the bronze foundry site at Kongtougou 孔頭溝, Qishan County, Shaanxi, brought to light a small shard of an inscription block 3.9 cm high, 4.1 cm wide, and about 3.8 cm thick (Figs 2–3).[42] Dated roughly to the second half of the ninth century BCE, the shard bears shallow intaglio grid lines, intaglio sketches of two complete graphs and a part of one additional graph.

A decade later, several more inscription block shards were discovered during the excavations of another bronze foundry site at Guanzhuang 官莊, Xinyang County, Henan.[43] Similar to the Kongtougou find, these shards, dating to the first half of the eighth century BCE, feature shallow intaglio sketches of individual graphs, but in some places, residue of clay lines modelled in the sketched grooves is preserved, either in full relief or partially broken.[44]

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39 Dong Yawei 2006, 93–95; 110–113.

40 Zhang Changping 2010; for an English translation, see Zhang 2012.

41 See below for the individual arguments and references.

42 Guo Shijia, Chong Jianrong and Lei Xingshan 2020, 107–109. I am grateful to Guo Shijia 郭士嘉 and Lei Xingshan 雷興山 for providing photographs of the shard and for the permission to reproduce them here.

43 Hui Xiping 2017.

44 Observations made during a personal study, 29 October 2017. Zhengzhou daxue Lishi xueyuan et al. 2020 published only the décor moulds unearthed from this site; these were also decorated using the modelling technique and show the very same feature. I am indebted to Gao Xiangping 郜向平 for sharing this report while still in press. In fact, two similar shards were reported from the excavations of a bronze foundry site at the Beiyao 北窯 District in Luoyang,

Fig. 2: Inscription block shard unearthed from the Kongtougou bronze foundry site (H48:6). Late ninth century BCE. © School of Archaeology and Museology, Peking University.

6 The modelling technique: a reconstruction

While the archaeological evidence is compelling in its own right, it is still necessary to explain how the modelling technique can explain the long list of features presented above. This section offers a step-by-step reconstruction of the inscription process, with particular attention to how those features were produced.[45]

First, a leather-hard clay slab of the desired size was prepared (Fig. 4:1), and the grid was incised (Fig. 4:2). The uneven width and height of grid lines in cast

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Henan, during the 1970s; see Luoyang shi wenwu gongzuodui 1983, 439. This site is dated to the mid-eleventh to mid-tenth century BCE, and published line drawings of two shards suggest that they have partially preserved relievo lines. However, personal inspection or at least clear photographs are needed before more conclusions can be drawn.

45 The reconstruction here is given for the scenario where the inscription block was used. As mentioned above, it was also possible to produce the inscription directly on the core or outer mould.

inscriptions suggest that they were typically incised by a stylus rather than by impressions of a long, thin bamboo slat or a similar tool. However, it is possible that sometimes the incisions were not done freehand, but by using a straightedge. The analysis of the inscription block shard unearthed in Kongtougou bronze foundry site in 2006 suggests that the vertical lines were incised first.[46]

In the next step, the text of the inscription was incised in the prepared grid (Fig. 4:3). Ideally, each graph would occupy one cell of the grid, but there are cases in which graphs overwrite the horizontal grid lines to crowd more (or evenly distribute less) characters into a column. The incised lines of the Kongtougou shard show a U-shaped cross-section in which the bottom of the grooves is narrower than their opening, and the middle parts of strokes are slightly deeper than their ends (Fig. 3).[47] Note that the graphs were incised in mirror-reversed form, a practice that is still observable in much later bronze mirror workshops.[48]
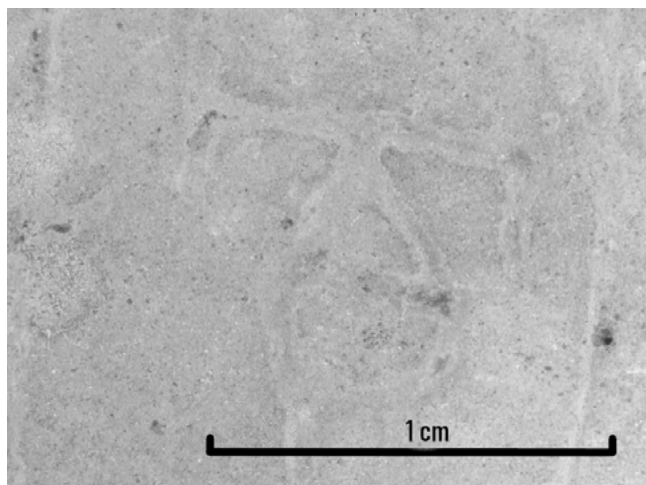
Fig. 3: Close-up of the Kongtougou shard (H48:6) with an intaglio graph and grid lines. © School of Archaeology and Museology, Peking University.

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46 Guo Shijia, Chong Jianrong and Lei Xingshan 2020, 107. The size of the grid cells on this shard is 2.3 cm in height and 1.4–1.5 cm in width; the depth and width of the incised grooves does not exceed one millimetre, see Fig. 3.
47 Guo Shijia, Chong Jianrong and Lei Xingshan 2020, 107.
48 Note that if free rein was given to one's hand and the sketch was prepared in positive, this would result in a mirror-reversed graph or inscription, an effect not uncommon in ancient Chinese bronze epigraphy. For this point, see Chen Chusheng 1998, 120; Nickel 2006, 37.

The question that remains to be clarified is whether the manuscript from which the artisan transferred the text to the inscription block was already carried out in mirror writing to facilitate the transfer, or whether the conversion occurred during the transfer;[49] the latter case would imply that the artisan was trained in mirror-writing or made use of a handy mirror.

Next, proofreading took place – though not always, as suggested by occasional mistakes in cast inscriptions. There were several ways of correcting a mistake discovered during proofreading. An omission of an individual graph could be remedied simply by supplementing the graph onto a blank space available in the laid-out inscription, or by levelling up the grooves of the graph sketched in the position where the omitted graph was originally planned and then reincising both graphs in a somewhat smaller size in this cell.[50] More complex mistakes, such as inadvertent additions or omissions of larger chunks of text, required levelling up the flawed part of the sketch and new incision of the correct text. When the sketched grooves of unused graphs were not levelled up, they became faint relievo ghost characters in the cast inscription.[51]

After proofreading came the most crucial stage of the modelling procedure. Thin lines were modelled from clay and their bottom portions were nested in the grooves sketched in the inscription block, so that relievo graphs were created (Fig. 4:4). How exactly the clay lines were modelled is a question that awaits more archaeological evidence. Both scenarios proposed by Chen Yang are feasible, but the 'liquid' appearance of graphs in some inscriptions (the wavy lines) seems to suggest that the ridges of relievo graphs were produced by slip trailing, a method in which thin lines of watered-down clay (slip) are squeezed from a dispenser onto the surface to create a relief line. Essentially, as Chen Yang put it, this is like decorating a cake using a piping bag.[52] Upon drying, the ridges could be trimmed with a stylus to even the width of strokes. Such a procedure would arguably leave gouges or impressions of the stylus in the surface of the inscription block in the immediate vicinity of the modelled ridges, which, upon casting, would create the raised-edge effect. The slip trailing method seems more efficient than other techniques, for which the craftsmen would need to constantly divide their attention between 'writing out' the relievo lines of an inscription and modelling the clay into the desired shape in their hand. In any

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49 For studies on such hypothetical manuscripts, see Škrabal 2019; Shi Anrui 2020b.

50 For both types of correction, see Škrabal 2019, 309–313.

51 Škrabal 2019, 318–326. Sometimes graphs were re-sketched only to improve their position, see Shi Anrui 2020a, 159–160.

52 Chen Yang 2005, 27.

event, the cross-section of the relievo ridges on both the décor and inscription moulds are wider at the top of the ridges than at the bottom,[53] which explains the undercutting feature.[54] Moreover, where two ridges join, the excessive clay would spread around the intersection, creating thickened cross-strokes.[55]

After the relievo inscription had been modelled and, optionally, proofread and trimmed, the inscription block would have been dried, fired and embedded in the core or outer mould (Figs 4: 5–6). The piece-mould assembly was then set up to receive the molten bronze. When the bronze solidified and the moulds cooled off, the assembly was dismantled, quite likely beginning by removing the core.[56] This procedure (divesting) required several strokes of a mallet, and the laboriously produced moulds, core and the inscription block were thus turned into shards, such as those discovered at Kongtougou and Guanzhuang.

Divesting was followed by cleaning, which included removing the sprue, cleaning away the residue of moulds and core, deburring, polishing and perhaps even burnishing to achieve the desired effect.[57] Note that, due to the undercutting, the ceramic strokes might have become wedged in the cast inscription; this would explain why some inscription block shards do not have relievo ridges.[58] Chipped-off fragments of ceramic strokes would then have to be removed from the inscription area.

Finally, the inscription area could be polished to remove any undesired protrusions (Fig. 4:8). These protrusions were by no means limited to the grid lines. When poured into the moulds, the weight of the molten bronze could cause some of the relievo lines of the modelled inscription to shear off,[59] and then the bronze would flow into the exposed grooves in which the lines were originally nested. When the casting was completed, this resulted in partial relievo strokes in otherwise intaglio graphs (Fig. 4:7b). The degree to which graphs were flawed

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53 For a photograph of such cross-section on a décor mould, see Chen Yang 2005, 28 figure 18:1, reproduced also in Shi Anrui 2020a, 145.

54 Nickel 2006, 36; You Guoqing 2012, 348–349.

55 You Guoqing 2012, 349; Guan Shuqiang 2016, 185–186; Guan Shuqiang 2017, 72.

56 Liu Yu 2019: 158.

57 See Dong Yawei 2006, 42–45; Hua Jueming 2007; Liu Yu 2019, 158–162 for details. Fine-grained and coarse-grained sandstone were used for polishing, see Liu Yu 2019: 159–160. 246 sandstone whetstones were unearthed from the remains of the Late Shang bronze foundry in Xiaomintun, see Zhongguo shehui kexueyuan Kaogu yanjiusuo Anyang gongzuodui 2006, 375–376 and plates 15–16.

58 For inscriptions containing ceramic remains, see Zhang Yuyao and Zhang Tian'en 2018, 66. It is also possible that parts of the ridges were detached from the block later, during the discarding process.

59 You Guoqing 2009, 3 and 28–29; You Guoqing 2012, 349; Guan Shuqiang 2016, 186–187.

in this way varied from a negligible portion of a stroke to a considerable part of the whole graph, and occasionally, the relievo lines of the entire graph were washed away and the graph registered in relievo upon casting.[60] In some cases, the detached relievo line was not washed away completely, dislocated from its original position, producing the displaced stroke effect.[61] Moreover, when proof-reading and subsequent corrections left behind unused intaglio grooves in the inscription block that were later not levelled up, the molten bronze flowed in and turned these abandoned grooves into ghost characters in the cast inscription. Polishing of the inscribed area would efface the relievo grid lines as well as all relievo strokes produced by casting (Fig. 4:8b). While it was certainly desirable to remove the unwanted ghost characters, polishing off the relievo strokes of the intended graphs produced the missing stroke (or even missing graph) effect, a toll paid for a smooth and shiny inscription area.[62]
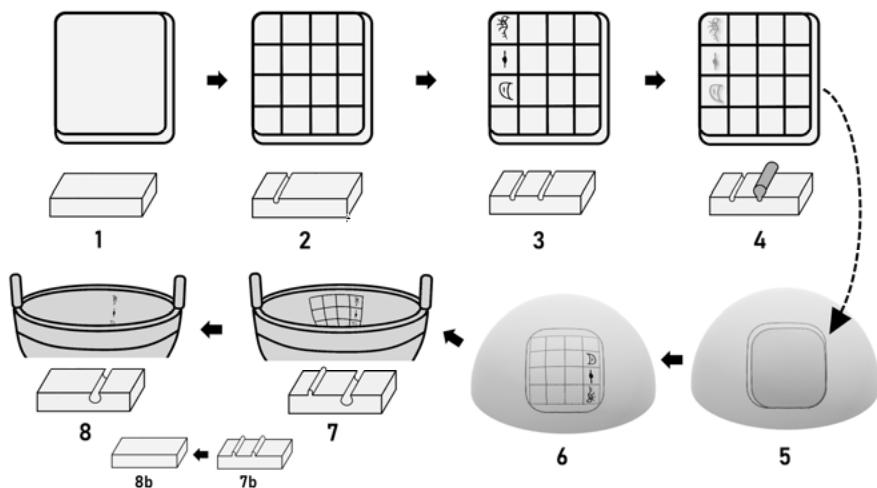
Fig. 4: Production of an inscription using the modelling technique.

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60 Zhang 2012, 276 suggested that these cases might be due to negligence that led the intaglio sketch of a graph to not be filled by relievo clay lines. While it is possible that sculpted strokes broke off the inscription block also during manipulation prior to casting, the displaced strokes testify that it was not uncommon for ridges to break off when pouring the molten bronze.
61 Chen Chusheng 1998; Shi Anrui 2020a, 160–161.
62 Škrabal 2019, 325–326; Shi Anrui 2020a, 157–159. Note that the 'missing graphs' are typically simple graphs consisting of only few strokes; see Shi Anrui 2020a, 155 n. 1. As noted by Hayashi 1979, 9 and 36, most of the 'raised edges' would also be polished away.

It follows that the grid lines, relievo strokes and ghost characters can only be observed in inscriptions that were not polished or were polished incompletely (Fig. 4:7). In some vessels, polishing was not done due to limited accessibility of the inscribed area, such as inside the neck of *hu* 壺 containers. On the other hand, flat and open inscription areas on vessels such as *gui* 簋 tureens, *xu* 盨 containers or *pan* 盤 trays were nearly always polished.[63]

7 The modelling technique and the inscriptions of earlier periods

While the above survey is based on evidence from the tenth to eighth centuries BCE, archaeological evidence seems to corroborate that modelling was in use already by the Late Shang period, though the exact procedure seems to have differed somewhat. Between 2000 and 2001, excavations of Late Shang bronze foundry remains in Xiaomintun 孝民屯 near Anyang, Henan, yielded a nearly complete inscription block 6.2 cm high, 4.4 cm wide and roughly 3 cm thick, inscribed with 11 graphs in three columns.[64] All graphs were first incised in the block, but unlike in later periods, the incisions are not limited to thin lines; rather, the incised strokes are written out in full width. Subsequently, relievo graphs were modelled in these incisions.[65] The fact that most of the grooves preserve remains of the modelled ridges means that they were well nested in the grooves and would not break off as easily as in later periods.[66] Thus, it seems

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63 There are, of course, cases in which easily accessible inscriptions were left unpolished. Of these, the Larger Ke *ding* inscription constitutes a special case in which the polishing procedure was not completed out of concerns for legibility; see Škrabal 2019, 324–325.

64 Zhongguo shehui kexueyuan Kaogu yanjiusuo Anyang gongzuodui (2006), 374–376, plate 15.2. For an English summary, see Anyang Work Station, Institute of Archaeology, CASS 2007.

65 See You Guoqing 2012, 349; Guan Shuqiang 2016, 184–185, Guo Shijia, Chong Jianrong and Lei Xingshan 2020, 112–113, *pace* Yue Zhanwei, Yue Hongbin and Liu Yu 2012, 63–64, who claim that the block was produced by an impression from a master pattern. However, in that case, the relievo lines of individual graphs on the Xiaomintun block would not break away so cleanly and leave the surrounding surface undisturbed. Scholars made the same point with regards to the Lüshun core, see below. Note that the graphs on the Xiaomintun block are written in positive, which means that the inscription cast from it would appear mirror-reversed.

66 However, both displaced strokes and intaglio graphs with partial relievo strokes can be observed in Late Shang bronze inscriptions; for the former, see Hayashi 1979, 42–43; for the latter, see for example the inscription on the lid of the famous Min *fanglei* 皿方罍.

that the modelling technique evolved over time.[67] The features of the Xiao-mintun block match well those of an inscribed ceramic lid core of unknown provenance, roughly from the mid-eleventh century BCE, which is now in the collection of Lüshun Museum 旅順博物館 in Dalian, Liaoning. This is an unused core,[68] so the majority of its relievo graphs are preserved, but where parts of the ridges broke off, the surrounding core surface is undisturbed, suggesting that these graphs, too, were modelled directly on the core and not embossed from a master pattern.[69]

It is obvious that the modelling technique underwent new developments during the tenth century BCE. Earlier, the grooves incised into the inscription block were of the same width as the modelled ridges, or even slightly wider (producing the raised edge effect upon casting). However, during this period, the grooves were linearized, with significantly wider ridges modelled over them. On the one hand, this solution expedited the production of longer inscriptions, but on the other hand, the modelled ridges were not as firmly nested in the grooves and were more susceptible to breakage. This explains not only the difference in ductus between the Early and Middle Western Zhou periods (compare Figs 1:1 and 1:2) but also the increasing presence of missing strokes and related features from this time on.

8 Conclusion

In so far as production technique is concerned, ancient Chinese cast inscriptions are unique in the context of the ancient world. Their specific features have long bemused scholars; some leading specialists even considered them to be acid etched.[70] In recent years, the study of inscription-making in ancient China has entered a new stage in which scholarly interpretations are supported by

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67 Guan Shuqiang 2017, for instance, suggested that at an earlier stage, strips of clay were applied on the inscription block and carved into the desired shape (as proposed in Tan Derui 1999), and at a later stage, slip trailing was employed. The proposal advanced in Zhang Yuyao and Zhang Tian'en 2018, 65–67 combines elements of the master pattern and modelling techniques but remains unconvincing as it retains the weaknesses of the traditional explanation.
68 An observation by Matsumaru Michio as quoted in Hayashi 1979, 52, n. 30. For photographs, see Hayashi 1979, 30–31; Barnard and Cheung 1996, 214; Lüshun bowuguan 2009, 28.
69 This point was made by the most unlikely person, Noel Barnard, who, however, concluded that the core must be a twentieth century forgery, see Barnard and Cheung 1996, 215–219. The Xiaomintun block refutes his conclusion.
70 Gettens 1969, 146–147.

archaeological evidence. The current question is not anymore what the main technique of inscribing bronze was in ancient China, but rather when the modelling technique began to be used, how exactly the relievo lines were modelled, at what stages the moulds were baked, and what factors led to its simplification during the tenth century BCE. The new interpretation has a direct bearing on understanding of various aspects of ancient Chinese bronze inscriptions, from authentication to comparative research. In fact, some of the past verdicts of spuriousness may warrant reassessment, while later uses of the modelling technique for both bronze and ceramic production deserve further attention. The confidence with which Chen Jieqi identified modelling as the ancient technique to inscribe bronzes suggests that it was probably known in ceramic workshops of his time; indeed, slip trailing remains a common technique used in ceramic workshops worldwide. Regarding Chinese bronze epigraphy, hard evidence confirms that modelling was used as late as the fifth century BCE and was likely that it was known in later centuries as well, perhaps even until the beginning of the Common Era.[71] Soon afterwards, however, the proliferation of powerful carving tools seems to have brought to an end this remarkable chapter in the production of written artefacts.

Acknowledgements

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71 The inscription on the bottom side of the handle of a bronze measure dated to 9 CE, which is in the collection of the Xiangyang City Museum, shows some features of the modelling technique; see Zhang Tian'en 2016, 134–135. However, personal study with a magnifying glass is required to corroborate this observation.

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Barend J. ter Haar

What Inscriptions do not Tell You about Themselves: Chinese Cases

Abstract: Inscriptions on stone are always more than their texts, since most people would not have been able to read them. In the Chinese context, inscriptions are highly stylized, normative texts and therefore remain largely silent about the context of their production and usage. The Chinese anecdotal record preserves at least something of the gossip and storytelling that surrounded inscriptions. This record teaches us how people complained about the excessive costs involved in producing inscriptions, conflicts about their contents, and the repurposing as well as reimagining of inscriptions after their original meaning and purpose had been lost. This article is based on accounts that stem from the early eighth until the early tenth century, when China was ruled by the Tang Dynasty (618–907).

1 Introduction

China historians tend to read stone inscriptions exclusively for their contents, overlooking the rather obvious fact that most people would have been unable to read these texts, not only because of a lack of suitable literacy for their often highly literary texts, but also because of their size and location, accumulated dirt and of course damage over time.[1] Many more steles have been lost than preserved, and this process continues until the present day. If they were not destroyed outright, steles have been repurposed in the walls of later buildings, local roads, bridges, pigsties and so on.[2] Even the common displacement of inscriptions to museums or the local Cultural Bureau is a form of repurposing, taking the object out of its original context and moving it to the limited context of historical, aesthetic or political appreciation. Nonetheless, inscriptions on stone steles can still be found today in any self-respecting religious institution (see Fig. 1).

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1 Zhao Chao 2019 provides a detailed introduction to stone inscriptions. De Groot 1897, 1100–1164 is still the most concise introduction to grave inscriptions and their religious context.
2 Cf. Halbertsma 2008, 241–290.

In this contribution I look at early evidence on the material dimensions of inscriptions, with a special focus on their fate outside of communicative service. In the process, I will have occasion to illustrate various material aspects, from the selection of a stone, the production of a text and nice calligraphy, to the final monument in the form of an inscribed stone slab or rock surface in the hills and mountains. We will learn about their communicative function, but also about conflicts around their contents and miracles surrounding them. Many of these aspects are not recorded in the inscriptions themselves, but only in anecdotal sources such as those preserved in the late tenth-century collection entitled *Extensive Records from the Period of Great Peace* (*Taiping guangji* 太平廣記). This was one of a number of compilation projects carried out during the years 976–983 in order to enhance the cultural legitimacy of the newly founded Song dynasty (960–1276).[3] Like its fellow projects, the *Extensive Records* was named after the period of compilation, which was called Great Peace or *taiping* 太平. It drew its materials from a wealth of anecdotal collections dating to the preceding centuries, which are now mostly lost. The book is organized according to topic, ranging from Buddhist or Daoist miracle stories to accounts of foreign nations and purely literary tales.

Although these anecdotes often include supernatural elements, the events and people depicted in them were all considered real and true by contemporaries. We should therefore take the term 'Records' in the title very seriously, as an expression of the compilers' intent. The stories also provide contextual information about inscriptions that we cannot obtain from the objects themselves, which tend to erase the context of their production (quite literally, as we will see) and tell us nothing about their reception after completion. Because of their chatty nature, these materials are often ignored as relevant historical sources by scholars, but precisely for that reason these materials also reflect the discourse of the social elite of the period and the way in which they talked about a broad variety of topics, in this case inscriptions on wood, rocks, and stone.[4]

Although the *Extensive Records* includes materials from the first centuries of the Common Era onwards, references to inscriptions largely stem from the early eighth until the early tenth century, when China was ruled by the Tang Dynasty

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3 On these projects, see Kurz 2003. References are to the modern standard edition, but I have retained the chapter (*juan*) numbers to facilitate finding the references in other editions (including online). Since it does not affect the arguments of this article, I have refrained from providing references to the original provenance of the anecdotes.

4 Over the past three decades, a complete reevaluation of these sources has taken place, at least in Western-language research. See, for instance, Campany 1996 and Dudbridge 1995.

(618–907) and its regional successor kingdoms. This chronological distribution seems to reflect real changes in the production of inscriptions, which significantly increased with the establishment of the Tang dynasty. Robert Harrist has pointed out that prohibitions on the production of public (i.e. above ground) inscriptions in the early third century, repeated by succeeding dynasties in northern and southern China, led to a noticeable decrease in epigraphic production until the early seventh century. Only the imperial centre itself was allowed stone monuments.[5] Instead people who could afford it placed inscriptions inside the grave of the deceased (see Fig. 2).[6] This is not to say that nothing was produced at all, but at least in the capital regions of this age's fragmented China, control would have been sufficient to enforce this ban. As a result, anecdotal accounts about inscriptions before the early eighth century are relatively scarce.

The principal term for a stone slab with inscriptions as a whole is *bei* 碑 or 'stele'.[7] This term is often used in the formal names of inscriptions and originated in the use of stone slabs as a ritual territorial marker. Other terms refer more to the text itself than the object on which it is reproduced, such as the general *ji* 記 '(to) record' and the more specific *ming* 銘 'inscription on a (smaller) object'. The term *ji* is also widely used for records on paper and other writing surfaces. The term *ming* can also be used for rock inscriptions, but even then its size is usually smaller than a 'record' or 'stele'. Inscriptions on objects with a separate usage context such as bronzes are omitted from this contribution, since they are better understood in that larger context, which can be primarily religious (Buddhist, Daoist or otherwise) or more or less secular, for instance related to economic and political processes or social ceremonies. Not omitted are inscriptions on rock surfaces in the hills or mountains, though they are particular in that they can only be seen on a pilgrimage or touristic outing – still relatively rare undertakings in this early period.[8] In traditional society, even more so than today, accessibility was not only restricted physically, but also temporally and financially. Rock inscriptions therefore usually only mattered to the small in-crowd with time to spare and money to travel. Only later in imperial history did pilgrimages increase in frequency, with the result that more people had access

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5 Harrist 2008, 46–50, 61–63, 235–238. The period in which Buddhist steles were largely visual with only votive inscriptions coincides with the time that inscriptions on steles were also forbidden in the north, see Wong 2004, 178.

6 See Davis 2015 on pre-Tang epitaphs.

7 Wong 2004, 15–41.

8 Harrist 2008. Cf. the contribution by Lothar Ledderose in this volume.

to rock inscriptions. Rock inscriptions in the hills or mountains are different from the usual steles at graves or religious institutions, which might not be moved easily either, but which were located at places of ongoing religious worship and were therefore visited much more regularly. All of these texts could also be circulated by means of handwritten copies, rubbings, and later even in print. We will see an example of a travelling 'transcription' in the mysterious case from the Quanzhou region, discussed further below. Contrary to rock inscriptions, steles could also be repurposed more easily, whether for a new inscription or for a totally different use as part of a building.

2 Soliciting an inscription

When a stone inscription was erected, its main purpose was to praise the living or recently deceased,[9] or some kind of divine figure, on the assumption that a stele would last over time and continue to testify. The stele also carried the names of those involved in erecting it and thus contributed to their local reputation, even if the subject of the stele had died or moved elsewhere. It might also contain some information on the person who produced the actual text, which was often commissioned by the initiator(s) from a literatus known for his excellent style and perhaps also calligraphy. An inscription was always written with the person or group who ordered the text in mind. Even an extra-human or divine figure might give an opinion about an inscription in a dream or vision. Like anecdotes, inscriptions were highly subjective texts. That the process was potentially contentious becomes abundantly clear from the anecdotal sources.

The following account gives a good example of the effort involved in producing a stele, but also the political capital that was expected from it. During the reign of Tang emperor Xianzong 憲宗 (r. 805–820), the powerful eunuch Tutu Chengcui 吐突承璀 tried to ingratiate himself with the emperor by having an Inscription about Virtuous Government (*dezhengbei* 德政碑) erected somewhere in the Chang'an capital.[10] After the 'stele pavilion' (*beiwu* 碑屋) had been erected and the surface of the selected stone had been sanded (*molong shi qi* 磨礱石訖), he asked the emperor to request a text. This would normally have been written by someone from the Hanlin Academy, which was staffed by able

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9 Ditter 2014; Choo 2015; Yang Shao-yun 2018 are excellent studies of grave inscriptions or *muzhiming* 墓誌/志銘.
10 Liu Xu 1975, *juan* 184: 4768–4769.

writers with good calligraphy, but this time an official from this very institution memorialized against it. According to him, undue praise of someone's moral calibre only made the emperor look ridiculous in the eyes of both barbarians and Chinese. The emperor then ordered the destruction of the pavilion and the disposal of the stone. The eunuch retorted that so much effort had already been made, but the emperor now ordered that oxen should pull the stele down.[11] Eulogistic inscriptions were a common practice at the time, for officials as well as emperors, so the anecdote reflects the ongoing political struggle between eunuchs and officials, rather than a sudden change in epigraphic practice. A special pavilion for the stele protected an inscription against the ravages of weather, at least as long as they lasted themselves since they were usually constructed out of wood.

Given that an inscription was an attempt to put someone or something in a positive light, their production was a sensitive activity. In the struggle for prestige between two prominent (former) officials of the 720s, one dying official used an elaborate ploy to trick one of his political opponents into producing a eulogy for him after his death.[12] Yao Yuanchong 姚元崇 (650–721) was on his deathbed after a long and successful career. He felt that it was important to create for himself an incorruptible posthumous reputation for reasons to be suggested further below. His intention was to embarrass his rival Zhang Yue 張說 (663–730), who was known for his greediness. His sons were to display all of their father's clothes and other things of value at the ritual display of his spirit tablet, for Zhang Yue to see it when he came to make his condolence call. If he ignored it, the Yao family would be in grave trouble, probably because he might attempt to persecute them now that their main protector had died. However, if he did look at it, they should donate everything to him as a gift. At that point, they should request a 'Stele for the Spirit Road' (*shendaobei* 神道碑) from him. Once they obtained the text, they should have it immediately copied and submitted to the throne. Moreover they should have the 'stone sanded' (*longshi* 礲石) beforehand to wait for the approved inscription and then have it 'carved' (*junke* 鐫刻) at once. The family did as instructed. As expected, Zhang Yue was too greedy to ignore the gifts from Yao's sons and promised to donate an inscription for their deceased father. By the time he regretted it, it was too late since it had already been submitted for approval to the emperor. Moreover, Yao also left behind a last will that ordered his family not to hire Buddhist or Daoist ritual

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11 Li Fang 1961, *juan* 164: 1198.
12 The following account is based on Li Fang 1961, *juan* 170: 1240–1241.

specialists. Most likely, giving up on expensive funerary rituals served to create a positive image for the Yao family, in the ancient tradition of ritual frugality.[13]

What the anecdote does not tell us is that Yao's sons had been involved in a corruption scandal earlier, but this additional context suggests that the combined funerary proceedings were intended to save the family from political disaster after their major source of protection had died. The unusually modest proceedings were a powerful political statement and made it much more difficult for Zhang Yue or any others to avenge themselves on Yao Yuanchong's descendants. The extant text of the inscription itself is little more than the usual panegyric, from which nobody would have guessed the difficult relationship between these two politicians.[14] What the anecdote also fails to mention is that the calligraphy of Zhang Yue's inscription was in fact done by Emperor Xuanzong 玄宗 (685–762, r. 713–756) himself. This would have made it completely impossible to have it changed or destroyed afterwards.[15] Interestingly, Yao Yuanchong and his descendants together built one of the richest collections of graves and grave inscriptions in Tang history.[16]

A case with a much more mundane conflict about contents involves a descendant of Yao Yuanchong, named Yao Yanjie 姚巖傑 (precise dates unknown). He was known for his literary talent, but also a propensity to drink and then misbehave. Around 874, the local official of Boyang (in modern Jiangxi) wanted him to write an inscription commemorating the construction of official buildings for a kickball field (*juchang gongyu* 鞠場公宇), a sport that involved keeping a ball in the air by kicking it with the feet.[17] He produced a text of more than a thousand characters, but when the official wanted to change one or two characters, he got extremely angry. The official did not let it go through. Because the stone had already been carved and erected (*leshi* 勒石), he now ordered the stele to be toppled and the text to be sanded away (*longqu* 磨去).[18] No doubt the official wanted a more positive assessment of his role in the project and had been severely disappointed.

In the case of Yao Yanjie it remains unstated, but given his need to support an alcohol addiction he probably composed his inscription for some kind of reward. Of one talented man, Li Yong 李邕 (674–746), it is said that he received

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13 Compare Sterckx 2009, 872–878 on early arguments for frugality in ritual expenditure.

14 Dong Gao 1987, *juan* 230: 2327–2329.

15 Zhu Changwen 1098, *juan* 6: 23a.

16 Mao Yangguang 2019.

17 Vogel 2000.

18 Li Fang 1961, *juan* 200: 1502–1503. Also Li Fang 1961, *juan* 266: 2084.

gifts of more than 10,000 (no unit is given) for one inscription. Nobody made as much wealth from selling texts. On the other hand, he was also known for his unbridled corruption, and this eventually got him executed.[19] The account exhibits some ambivalence toward producing inscriptions in exchange for large sums of money, which is further illustrated by an anecdote featuring the great poet Wang Wei 王維 (699–759). One of his neighbours liked to produce 'stele grave inscriptions' (*beizhi* 碑誌) for other people, but on one occasion someone bringing the requisite amount to 'moisten the brush' (*runhao* 潤毫) delivered it to the house of the poet by mistake. He said sarcastically to the messenger: 'The great author lives over there'.[20] In fact, the production of exaggerated epigraphic eulogies had been an argument for the early third-century prohibition of inscriptions, mentioned above.

The following account takes the practice of producing inscriptions for money to its extreme, but also makes the point that truly talented authors always speak from their personal convictions, despite writing for a commission. Huangfu Shi 皇甫湜 (777–835) was well-known for his compositional talent and straight character, but also as a difficult man to deal with, prone to anger attacks and drinking, leading to considerable social isolation. Nonetheless, one of the most powerful officials of his age, Pei Du 裴度 (765–839) was somehow impressed by his brazen behaviour. In 817, Pei received huge imperial rewards for the hard-won victory over a separatist governor in the Huai River region. As a 'believer in the teachings of the Buddha' (*xin futujiao* 信浮圖教), he decided to invest his rewards in a Buddhist monastery to collect merit after all of the killing. Thereupon he visited fellow lay Buddhist and renowned poet Bai Juyi 白居易 (772–846) to request an inscription. Huangfu Shi happened to be there as well and felt insulted that he had not been asked himself. Pei Du now replied that he really wanted Huangfu's inscription, but was afraid of being turned down. After Huangfu's anger had subsided, he asked for a measure of liquor and went home. He first consumed half of it, then wielded his brush and wrote his text in one inebriated go. The text was so complicated and written in such strange characters, that Pei Du could not read it. Since Huangfu was not that famous, he decided that a bit more than 1000 strings of cash would be enough.[21] When his envoy offered this amount to Huangfu, the calligrapher exploded because he felt insufficiently appreciated. He now set forth his demands, claiming that his

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19 Li Fang 1961, *juan* 201: 1510–1511. The value unit could be single bronze coins or strings containing roughly 100 coins at a time. See von Glahn 2016, 377.

20 Li Fang 1961, *juan* 255: 1987.

21 On a string of cash, see note 19 above.

composition was an act of enormous favour and asking one bale of silk for each of the roughly 3000 characters. His boast was delivered by the embarrassed envoy to Pei Du, who agreed to pay. Everybody was stunned at the time by the procession of people delivering the silk, but Huangfu received it without a shimmer of embarrassment.[22] The point, in our context, is that nobody thought that such payments were strange, only that the amount was outrageous even in those days.

Ironically, at the same time the emperor himself had ordered Huangfu's friend, the famous writer and official Han Yu 韓愈 (768–824), to compose a text to commemorate the same victory over the rebels. A conflict then arose because Han Yu was thought to have been overly positive about the role of Pei Du, at the expense of the general who had won the final and decisive battle. Since the latter's wife was an imperial princess, she could complain directly with the emperor. As a result, the inscription which had taken two months to write and then put in stone was effaced.[23] Thus, an author might like to think of himself as independent, but in reality he would still be constricted by social norms and political expedience. The case of Huangfu is really the exception that proves the rule.

Stones for use as a stele had to be acquired, often under difficult conditions. In the capital cities of Chang'an and Luoyang, there definitely were professionals who took care of funerals, and this probably included the acquisition of a stone. The existence of undertaker companies is famously illustrated by the Story of Li Wa (*Li Wa zhuan* 李娃傳), in which the hero has come into hard times after dissipating all of his wealth on a courtesan named Li Wa. He joins 'a shop for inauspicious affairs' (*xiongsi* 凶肆) in order to make a living and eventually becomes a successful singer of mourning songs.[24] There may also have been specialist shops for acquiring stones, but the existence of such shops is not documented in the extant evidence. The stone slabs had to be hauled from elsewhere and sometimes over considerable distances.

The precise geographical provenance of stones still needs to be investigated, but the following account illustrates some of the problems involved. It is part of a long and highly critical discussion of general Gao Pian 高駢 (*c.* 821–887), who is best known today for his failure to subdue the devastating rebellion of Huang Chao 黃巢. This event lasted from 874 to 884 and effectively ended the aristocratic society of the preceding centuries. The account provides some

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22 Li Fang 1961, *juan* 244: 1889–1890. Poceski 2018, 39–74, discusses Bai's Buddhist beliefs.

23 Hartman 1986, 83–84.

24 Li Fang 1961, *juan* 484: 3987–3988.

interesting information about the hauling of stone slabs. At some point an imperial edict was dispatched to erect a Shrine for Living Men (*shengci* 生祠) for Gao Pian in Guangling 廣陵 (modern Yangzhou and then the third city of the empire) and to have a 'Eulogy in Stone' (*shisong* 石頌) carved. People were dispatched to select a slab in Xuancheng (in modern Anhui), several hundred kilometres away by water. When they reached the inspection office for the salt and iron monopolies at Yangzhou, one of Gao Pian's religious advisors secretly sent people to pull the slab with fifty strong oxen to the south of the prefectural capital during the night. He had the city wall bored through and the moat bridged to move it into the walled city. When it became light the fences around the stone slab's former location were shut as before. The advisor now claimed that the stone had been lost, but by the evening a rumour was spreading that the stones had been moved into the city by a divine being.

> 駢大驚，乃於其傍立一大木柱，上以金書云。不因人力，自然而至。即令兩都出兵仗鼓樂，迎入碧筠亭。至三橋擁鬧之處，故埋石以礙之，偽云。人牛拽不動。駢乃朱篆數字，帖於碑上，須臾去石乃行。觀者互相謂曰。碑動也。

> [Gao] Pian was greatly startled. He had a big wooden pillar erected next to it, in the top it was written in gold: 'It did not arrive through human force, but of its own accord'. Then he ordered the two capitals to send an armed escort, drums and music to welcome it into the Pavilion of Emerald Bamboo. When it reached a crowded place at the third bridge [Gao Pian's advisor] stranded the stone on purpose to block [the road], and falsely claimed: 'Humans and oxen cannot pull it into motion'. [Gao] Pian then wrote several characters in red seal script, pasted them on the stele, and after a while the stone could move again. The spectators said to each other: 'The stele is moving'.

The next day, however, a village hag came to the local official to complain that yamen runners had borrowed her farming ox to pull the stele, wounding its foot (or feet) by accident. People everywhere heard about it, at least according to our source, and fell over with amusement.[25] The chronicler undoubtedly meant this account to shine further negative light on a general whom he held responsible for the fall of his glorious dynasty. The account tells of the elaborate way in which a stele might be utilized in premodern image-building, including the notion that the stele of an important figure such as Gao Pian would move of itself, or rather be moved by Heaven. In that respect, the manipulation of inscriptions by Gao Pian was no different from that by the great Tang emperors, and an example by one of them will be given further below.[26]

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25 Li Fang 1961, *juan* 291: 2308 for the account and the above quotation.
26 Harrist 2008, 238–244.

3 New meanings for ancient inscriptions

Over time, inscriptions acquired meanings and functions different from the ones originally intended. Even mysterious signs that were not quite writing in our modern sense were interpreted as divine script. One example stems from the Quanzhou region, where it has continued to draw the attention of local communities as well as educated elites until today. The earliest extant account claims that it was created in the first half of the eighth century. During a conflict about the correct border with a neighbouring prefecture, the local prefect prayed for a divine sign. A terrible thunder storm suddenly broke out and created a path in the rocks that formed a perfect border, with an inscription created on the rock face in old seal script to confirm it.[27] As the following account illustrates, this interpretation did not have much of an impact on the people living next to it, who believed that they were plagued by a murderous dragon living in an unfathomably deep pool. The creature swallowed any human or animal who attempted to drink from its pool.

One early evening in 810 a thunderstorm broke loose with the force of an earthquake, after which the pool was filled up and the ground was covered in the blood of the monster. Moreover, high up on the cliff were carved 19 characters. Nobody in the prefecture was able to decipher them. They were supposedly written in the 'tadpole' (*kedou* 蝌蚪) seal script style, a term (with or without the insect radical) that was often used as a general reference to texts in ancient scripts.[28] This powerful writing had brought an end to the monster. People who had fled elsewhere now returned and the prefect named the place 'Stone Inscription Village' (*shiming li* 石銘里). Eventually the text was copied down and reached Luoyang, where it was 'deciphered' by the above-mentioned Han Yu. According to him it was a command to punish the water monster, ending with the term *jiji* 急急 that usually concludes ritual spells to command a divinity to perform a certain task. He was known for his interest in ancient inscriptions, as shown by a lengthy poem about the oldest known stone inscriptions in China, the so-called Stone Drums from Qin that had been inscribed more than ten centuries before.[29] The Quanzhou inscription is still extant on the rocks next to the pool, relabelled as 'Characters of the Immortals' (*xianzi* 仙字). In reality all of the historical explanations mentioned were wrong. The drawings are mnemonic

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[27] Li Fang 1961, *juan* 393: 3139–3140.

[28] Loewe 1993, 381. For other references to this script, see Li Fang 1961, *juan* 19: 132–133; *juan* 206: 1573; *juan* 209: 1602; *juan* 231: 1773; *juan* 389: 3106; *juan* 472: 3884.

[29] Li Fang 1961, *juan* 392: 3130. On the Stone Drums and Han Yu, see Mattos 1988.

pictographs, and without the now lost oral traditions that once accompanied them, they cannot be 'read' in the same way as ordinary writing.[30]

Strange scripts could inspire remarkable stories about their provenance. On a peak high up on the famous Mount Lu in modern Jiangxi, many hundreds of meters above sea-level, the legendary King Yu had once moored his ship when he was taming the floods covering the realm. There was even a rock with a hole in it that had been used by him to tie up a cable. This taming of the floods is thought to have occurred over four millennia ago and belongs to the core narratives of Chinese mythology. People believed that at that time a text in tadpole script had been inscribed on the top of the mountain. It was still visible 'today', as reported by our early tenth-century source.[31] The inscription continued to fascinate later scholars as a witness to ancient times that to them were completely historical. In reality the tadpole script probably originates in the Cloud Seal Script (*yunzhuan shu* 雲篆書) from Daoist tradition. The most famous such inscription in fact originally stood in a Daoist temple on Mount Heng (see Fig. 3).[32]

When a stele had lost its relevance or literally lost its inscription due to the impact of the elements, it could be sanded and reused.[33] This was not entirely without risk, as discovered by the famous True Lord Xu 許真君 (or Xu Xun 許遜, 239?–374?), when he repurposed a faded inscription for his belvedere (*guan* 觀), as Daoist religious institutions are usually known. The long-deceased author of the original inscription then went to an underworld agency to start a posthumous lawsuit. Only by having a new stele carved with the old inscription and carrying out a large 'Water and Land ritual' (*shuilu dajiao* 水陸大醮) for the original author could a worse fate be averted.[34] The story stems from a collection by the Daoist political advisor, writer and ritual specialist Du Guangting 杜光庭 (850–933). It creates Daoist antecedents for a then still recent ritual invention that definitely was of Buddhist origin, the so-called 'Water and Land Gathering' (*shuiluhui* 水陸會) that provided hungry ghosts with the merit needed for a successful rebirth.[35] For those who believed, it proved the Daoist connection of this ritual and warned about the dangers of reusing old steles.

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30 Yang Qinglin 2009. This dissertation also contains illustrations.

31 Li Fang 1961, *juan* 397: 3181. See Dudbridge 2013, 75–76.

32 Wang Chang 1805, 2 *passim*. Chaves 2013.

33 Li Fang 1961, *juan* 392: 3131–3132.

34 Li Fang 1961, *juan* 72: 452–453.

35 Stevenson 2014; Verellen 1989.

Since inscriptions were often buried in the ground on purpose as part of a grave complex, or more or less by accident as a result of neglect, it is no surprise that people stumbled across them during various kinds of groundwork.[36] In such cases, people had a hard time providing a cogent interpretation. Of course, we generally only learn about those cases where the interpretation eventually proved to be correct. In 827 a stone was found during the digging of a city moat. It carried the text 山有石，石有玉。玉有瑕，即休也, meaning 'the hill (or mountain) has a stone, the stone contains a piece of jade, the jade has a flaw, this is auspicious (*xiu* 休)'. At first the inscription was read as an auspicious sign, but later a new interpretation made more sense, explaining the word *xiu* in its other meaning of 'stopping'. It was now interpreted as a prediction of the fate of the official who received this stone, whose family-line died out a few years later with his death.[37] In this way the find of the inscription could provide meaning to his death and the family's sad fate, by proclaiming all of it divinely ordained.

Over time, the stone slabs carrying inscriptions would break down until only fragments remained, but even they retained some kind of numinous aspect. The monks of a Buddhist monastery in Xiangyang (in the north of modern Hubei) explained the sudden appearance of a turtle that was several feet high in their newly expanded pool, by referring to an old and fragmented inscription for a previous monastery nearby. This text supposedly said that the pool was inhabited by a 'numinous turtle' (*linggui* 靈龜) that was three and a half feet long. It appeared every year in spring and hid in the winter; it even followed the monks to their hall and would eat at the appointed times. Because of the turtle's appearance, the old fragment was erected again.[38] Now almost extinct, turtles of this size were once common in the Yangzi River region. The emphatic mention of the broken inscription in combination with the turtle suggests an additional aspect, since larger inscriptions are traditionally erected on top of the shield of a giant turtle. Once the stele toppled over, the turtle was often all that remained (see Fig. 4). The connection is made explicit in the following story from Linyi in Shandong. Here a grave inscription has been lost, and only a stone turtle remained. In the first half of the fourth century, the turtle had supposedly taken

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36 For some examples, see Li Fang 1961, *juan* 157: 1126–1128; *juan* 390: 3115–3116; *juan* 455: 3713–3716; *juan* 472: 3886–3887.

37 Li Fang 1961, *juan* 392: 3132. Another example in Li Fang 1961, *juan* 392: 3131. According to Li Fang 1961, *juan* 366: 2913, all steles in the capital of the state of Min toppled over in the year 944, which was taken later to have presaged the fall of the kingdom in the next year.

38 Li Fang 1961, *juan* 472: 3886–3887.

its inscription and entered the water. He would come out covered in duckweeds. One day someone observed the turtle entering the water and shouted at it. The startled turtle ran away, and the stele was broken off.[39]

4 Divine encounters and inscriptions

Over time inscriptions would become a common feature of local religious institutions, down to the lowest village temple.[40] Before the eleventh century, however, this was still unusual. The following case is something of an exception to this rule. Here a deity even explicitly requested to be remembered.[41] A local official in Yongqing County in Fangzhou (modern Hubei) arrived in what was a desolate county seat in the hills. He and his younger brother who was visiting him stopped at a dilapidated temple, which still had statues, but no 'gate boards or signs' (*menbang paiji* 門榜牌記). He inquired with the local clerks, but they could only tell him it was the Great King of Yongqing. Thereupon his younger brother had an encounter with the deity in his dream, which clarified matters.

> 神曰。我名跡不顯久矣。鬱然欲自述其由，恐為妖怪。今吾子致問，得伸積年之憤。我毗陵人也，大父子隱，吳書有傳。

> The deity said: 'My name and accomplishments have long been forgotten. In my sadness I had wished to explain the details myself, but I was afraid of haunting [people by possessing them]. Now [you] have made inquiries, and I have obtained [the possibility of] stating my frustrations of many years. I was a man from Piling[42] 毗陵, I cannot disclose who was my grandfather but he has a biography in the Book of Wu.[43]

The deity explained in great detail how he was called Guo 廓 (perhaps a scribal error for Guo 郭) and had been ordered by the Emperor on High (*shangdi* 上帝, the highest deity) to get rid of evil creatures in the region, such as tigers and an evil dragon. Local people had erected a temple for him and 'incorrectly' (according to the deity, or rather the younger brother's dream) called him a 'White Tiger

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39 Li Fang 1961, *juan* 274: 2970.

40 Hansen 1990, 14–16.

41 Li Fang 1961, *juan* 307: 2431–2432.

42 Modern Changzhou in Jiangsu.

43 The Book of Wu (*Wushu* 吳書) is part of the *Records of the Three Kingdoms* (*Sanguozhi* 三國志), a dynastic history of the third century. No such ancestor could be found in this source.

Deity' (*baihu shen* 白虎神, nothing further is known about this deity). He now requested the younger brother to correct this view, which the man did by reporting to the person in charge of Xiangyang (in the north of modern Hubei). The younger brother now wrote a corrected version of the deity's provenance on wooden boards and placed them in the temple. Because it came to be covered with dust and soaked by rain, the writing was about to disappear. Luckily another official had a stone carved in the temple in 852 and the deity's rectified account continued to be preserved.

This story also tells us something else that is not often mentioned, but may have been quite common. Apparently, first a version of the miraculous events was written down on a wooden tablet. The much more expensive stone version was produced only later – and subsequently lost as well. As a final note on the supposedly mistaken identity of the cult, it is entirely possible that the cult originated in the worship of a white tiger and developed later into one for the figure who defeated the tiger. Once upon a time, different members of the cat species were omnipresent in China, and the history of human expansion into the forests and hills, such as Yongqing County, is also the history of the extinction of big felines. The hagiography of this deity seems to reflect this development from acceptance through worship to eradication.

In another striking story, the previously mentioned Emperor Xuanzong visited Mount Hua 華山 (in modern Shaanxi), the most western of the Five Great Mountains (*wuyue* 五嶽) that mark the territory of the earliest Chinese states in the Yellow River confluence. It was part of a large propaganda campaign of visiting the great mountains of his realm to offer sacrifice and leave his imprint there in stone. He saw the deity of the mountain who welcomed him, but nobody in his retinue shared this vision. Only a female medium saw the deity as well, with a red hat and in purple clothes, welcoming the emperor. He ordered her to command the deity to return to the temple. When he also arrived he saw the deity again and once more the emperor and the medium were the only ones who saw him. He then wrote a stele inscription in his own calligraphy to express his respect and surprise. The stele was reputed to be over 50 feet high, one fathom wide, and 4 to 5 feet thick, ranking as the biggest stone stele in the empire.[44] The largest part of the stele with the actual inscription on it was already destroyed during the rebellions of the late ninth century, before subsequent enthusiasts about old inscriptions and calligraphy from the eleventh century onwards could make a rubbing. Only parts of the damaged

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44 Li Fang 1961, *juan* 283: 2257–2258.

pedestal with some inscribed drawings still remain on the mountain today, testifying to its former size.[45]

A few decades after Emperor Xuanzong, a lowly soldier passed by the Shrine of the Marchmount (*yueci* 嶽祠) at the same Mount Hua. Stark naked and drunk with sacrificial liquor, he offered a prayer expressing his frustrations about his career. He slept off his stupor in the 'stele hall' (*beitang* 碑堂) during daytime, where he was visited by the deity in a dream and was predicted a high office. Of course, he only found out that it was true towards the end of his life when he was about to be executed as a rebel in 784, but had indeed reached the predicted office.[46] The story shows that such a building was an extension of the temple, allowing the deity to visit a lowly soldier and predict his career – even though it would have been more useful to warn him not to join any rebels.

5 Concluding comments

This article has not dealt much with the intrinsic value of stone inscriptions as historical evidence, which at least in Western research is still a relatively understudied topic, not least because they can be hard to read, whether literally on the original stone, linguistically in terms of prose and poetry, or contextually.[47] Instead, the article has focused primarily on the stone inscription as a social, political, and religious phenomenon in itself. The anecdotal material reveals a dimension that we cannot learn from the eulogistic texts themselves, ranging from conflict and embarrassment during their production, to different kinds of unintended use, decay, destruction, and reuse for other purposes. Things may sometimes have happened differently from the way that they are described in these anecdotes, but this is certainly how educated elites at the time thought about the production and later fate of inscriptions. Many people were involved in their production, from the stone masons who hewed out a suitable piece of rock to manufacture a stone slab with an appropriate surface, the transporters of the slab to its eventual location, the producers of the text and the calligraphy (which might be different persons), the stone carvers, and of course the family or community which had ordered and financed the whole enterprise. Potentially, only the producers of the text and calligraphy were literate and usually only

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45 *Huayin xianzhi* 1788, *juan* 16: 45a–46b.

46 Li Fang 1961, *juan* 304: 2410–2401.

47 Brown 2008.

they were literate enough to appreciate the often very ornate and contrived texts. It is also this aesthetic aspect that interested later collectors the most and still does today.

Over time many inscriptions have been removed from their original context, a process that is still going on today in the interest of local construction projects. Often we only have a transcription or rubbing of the text on the front, without the ornamentation or the inscription on the back, or in some cases even the sides. Lots of non-textual information has thus been lost, and the anecdotal literature is one way of creating a richer context than the texts themselves could ever provide.

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Fig. 1: Inscriptions as part of a larger religious landscape in a Buddhist monastery located on Mount Wutai in Shanxi province. Photograph by the author, July 2016.

Fig. 2: A Tang grave inscription; collection Royal Ontario Museum, Toronto, Canada. Creative Commons license <https://commons.wikimedia.org/wiki/File:Epitaph_for_Mei_Duan_and_his_wife,_Lady_Hu,_China,_Anyang,_Tang_dynasty,_713_AD,_limestone_-_Royal_Ontario_Museum_-_DSC03583.JPG>.

Fig. 3: Tadpole inscription ascribed to King Yu from the mythical Xia 夏 dynasty (its dates are sometimes given as circa 2070 to circa 1600 BCE) taken from a Daoist temple on Mount Heng (in Hunan province), then lost and since reinscribed on a modern stone in a modern pavilion. Creative Commons license <https://zh.wikipedia.org/wiki/File:大禹陵峋嵝碑.JPG>.

Fig. 4: Inscriptions on turtles or other mythical animals with shields preserved in the Temple for the Deity of the Saltpond near Xiezhou in Southern Shanxi. All steles have been toppled (probably in the late 1960s) and were restored more recently. Photograph by the author, May 2007.

Claudia Colini, Ivan Shevchuk, Kyle Ann Huskin, Ira Rabin,
Oliver Hahn

A New Standard Protocol for Identification of Writing Media

Abstract: Our standard protocol for the characterisation of writing materials
within advanced manuscript studies has been successfully used to investigate
manuscripts written with a pure ink on a homogeneous writing surface. How-
ever, this protocol is inadequate for analysing documents penned in mixed inks.
We present here the advantages and limitations of the improved version of the
protocol, which now includes imaging further into the infrared region
(1100–1700 nm).

1 Introduction

To assist scholars of manuscript studies, the Federal Institute of the Materials
Research and Testing (BAM) in Berlin and the Centre for the Study of Manu-
script Cultures (CSMC) in Hamburg have developed a two-part protocol of non-
destructive ink analysis: a primary screening performed with NIR (near infrared)
and UV (ultraviolet) reflectography at two specific wavelengths, followed by an
in-depth analysis using spectroscopic techniques that include X-ray Fluores-
cence (XRF) and, in individual cases, Fourier Transform Infrared (FTIR) and
Raman spectroscopy.[1] The primary screening was specifically developed for
manuscripts written on homogeneous substrates with a pure ink type.[2] The
inadequacy of the initial protocol became increasingly apparent during the
studies of papyri, manuscripts coming from an archaeological contest, and
Arabic inks.[3]

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1 Rabin et al. 2012.
2 Rabin 2015; Cohen et al. 2017.
3 We are referring in particular to PhD researches on Coptic manuscripts written on papyrus
and parchment and dating from the second to the eight centuries CE (Ghigo 2020 and Ghigo et
al. 2020); on Arabic-Jewish manuscripts from the Cairo Genizah written on paper and
parchment in the eleventh century CE (Cohen 2020); and on black inks reproduced from Arabic
recipes dated from the ninth to the twentieth centuries CE (Colini 2018).

When organising a new research project to focus on the materiality of Arabic fragments from Egypt during the first five centuries of Islam, it was clear from the historical material circumstances that the standard protocol would need an update.[4]

During the Umayyad period, and specifically at the beginning of the eighth century CE, when the Arabs conquered Central Asia, paper was introduced into the Islamic world thanks to the Sogdians, who were familiar with both Chinese and Central Asian paper types.[5] The new writing material was positively received, in particular the Central Asia type obtained from rags, and it eventually replaced papyrus, which was the main writing support, together with parchment, until the tenth century CE. In Egypt, the transition from papyrus to paper took place between 870 and 970 CE, although paper had already become the preferred writing support by 930–940 CE.[6] A combination of economic advantages and of prestige and legitimacy embedded in the new writing material seems to have been the reasons motivating this transition.[7]

Parchment was also frequently used, in Egypt and in the Islamic world, but it was specifically employed for relevant and durable contracts (such as purchase deeds and documents related to marriage), luxurious items and texts connected with religion and esoterism (Qur'ans and Jewish liturgical scrolls, for instance, but also amulets and magical texts).[8] Parchment continued to be used after the introduction of paper, and although it was never completely substituted by the new writing support, its use slowly decreased in the following

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4 The research project RFA01 'The Scribe's Choice: Writing Supports in Arabic Documents of the Early Islamic Centuries', part of the Excellence Cluster 2176 'Understanding Written Artefacts', Universität Hamburg.

5 The earliest surviving Arabic texts written on paper are the documents found at Sanjar-Shah (Tajikistan) and dating between 720 and 790 CE. Their paper was most likely imported from China, as it is made of pure new paper mulberry fibres, and differs from the Central Asian type as this is made of recycled fibres (mainly hemp, ramie and flax) from rags; Haim et al. 2016, 163–168; Shatzmiller 2018, 472–475. For a detailed explanation concerning the diffusion of paper by Sogdians and the adoption by Umayyads and Abbasids, see Rustow 2020, 116–135.

6 Grob 2010, 11–13; Rustow 2020, 135. It is possible, however, that paper was imported, mainly from Syria, as early as 860 CE; Youssef-Grob 2015, 431–432.

7 See Shatzmiller for the economic reasons (Shatzmiller 2018, 475–485) and Rustow for the prestige associated to paper (Rustow 2020, 135–137).

8 Rustow 2020, 137; Cohen 2020, 92–94; Bausi et al. 2015, 89–90. Entries of parchment fragments in the Arabic Papyrology Database (APD) confirm this trend <https://www.apd.gwi.uni-muenchen.de/apd/show_new.jsp> (accessed on 10 Dec. 2020).

centuries. Less common writing supports used in Egypt include leather, textile, bones, wooden tablets and ostraca.[9]

With regards to writing media, an overall familiarity with inks of different types and chemical compositions is well attested in the Middle East in the tenth and eleventh centuries CE. The inks of that time belonged to three typologically distinct classes: carbon, plant, and iron-gall inks.[10]

Carbon inks are obtained by mixing charcoal or soot with a water-soluble binder, such as gum arabic (common in the Middle East) or proteinaceous glues (common in the Far East), and dispersing the mixture in a water-based solvent.[11] Plant inks are mainly composed of tannins and are obtained by cooking or macerating various vegetal materials. Unlike the plant inks used in Europe, gall nuts are rarely used as ingredients according to the Arabic sources; instead, the few Arabic recipes call for bark, fruits or flowers.[12] Iron-gall inks are obtained by the reaction between iron ions (Fe^{2+}) with gallic acid in a water-based solvent, with the addition of a binder, normally gum arabic. The most common source of iron ions is vitriol (a mixture of hydrated metallic sulphates), but the recipes also attest to non-vitriolic iron-gall inks, which were prepared using filings, slags, nails and pieces of iron. Though the best source of gallic acid is gall nuts, they could be substituted by a variety of tannin-rich plant matter (e.g. tree bark, fruits and fruit rinds, leaves, etc.) that was cooked or macerated.

The distinct optical properties of carbon, plant and iron-gall inks can be used to differentiate them: carbon ink maintains its solid black colour across the ultraviolet, visible and infrared regions of the light spectrum; plant ink turns transparent at around 750 nm; and iron-gall ink gradually loses opacity towards the longer wavelengths.[13] Furthermore, tannins' ability to quench fluorescence enhances the contrast between a fluorescing background and the text, making UV reflectography a useful tool for identifying their presence.

In addition to observing their distinct optical properties, quantitative and semi-quantitative X-ray fluorescence spectrometry (XRF) measurements can also be used to detect differences in the elemental composition of marker elements (such as copper, manganese or zinc in vitriol-based iron-gall inks), making this another powerful tool for manuscript studies. The fingerprint model,

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9 Grohmann 1952, 44–62.

10 Cohen et al. 2017; Rabin 2017; Colini 2018, 17–18 and 39–40.

11 Zerdoun 1983, 55–67 and 71–90.

12 For European recipes of plant inks made with the extract of gall nuts, see Zerdoun 1983, 180 and 306–307. For Arabic plant inks, see Colini 2018, 40 and 119–220.

13 Mrusek et al. 1995, 72.

introduced some fifteen years ago, presents iron-gall ink as a series of ratios of the vitriolic impurities to iron (the main component of the ink) and also considers the relevant impurities of the paper.[14] The use of NIR imaging, accompanied by a semi-quantitative calculation of the iron-gall fingerprints, have shown excellent results in advanced codicological studies of medieval European manuscripts on paper and parchment.[15]

Besides these pure types, another class of inks appears to have been quite popular among the Arabic sources: mixed inks.[16] Depending on how these inks were prepared, two subtypes can be defined: mixed carbon-plant inks and mixed carbon-iron-gall inks. The former, which are characterised by the addition of plant extracts rich in tannins to a carbon ink, are attested in the sources as early as the ninth century CE.[17] Recipes of mixed carbon-iron-gall inks appeared later, in the thirteen century, although one of them is attributed to a vizier who died in 806 CE.[18] Their formulations can range from adding a small amount of soot or charcoal to an iron-gall ink, to adding vitriol and tannins to a carbon ink; therefore, inks with different ratios of carbon to iron are necessarily included in the same subtype. Currently, use of the mixed inks in Medieval period are considered rare and are only sporadically identified in manuscripts; however, this may be due to the difficulty of their identification rather than their absence.[19] Rabin suggests that mixed inks played an important role in the transition from the carbon inks of Antiquity to the iron-gall inks of the Middle Ages.[20]

Currently, a growing number of publications report presence of metals in the inks dating to the Greco-Roman period: carbon-based inks that also contain different admixtures or metallic elements, such as copper and lead.[21] Christiansen attributes presence of copper in the inks to the use of soot that came from metallurgical plants, while lead compounds could be used for their drying

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14 Hahn et al. 2004.

15 Hahn et al. 2008a; Geissbühler et al. 2018.

16 Colini 2018, 17–19 and 40.

17 Colini 2018, 39. The recipes can be found in the appendix, Colini 2018, 119–220.

18 Colini 2018, 40. The recipes can be found in the appendix, Colini 2018, 119–220.

19 The limitation of the current protocol for identification of the tannins is discussed in Rabin 2015, Colini et al. 2018, Cohen 2020, Ghigo et al. 2020, Ghigo 2020.

20 Rabin 2017, 7–11, Nehring et al. 2021.

21 Carbon inks containing copper were found in the Genesis Apocryphon scroll (1Q GenAp) from the Dead Sea Scrolls collection (Nir-El and Broshi 1996), in two fragments of private letters from Pathyris and in two others from the Tebtunis temple library (Christiansen et al. 2017), and a documentary papyrus from Fayum (Rabin et al. 2019). Carbon inks containing lead were identified in two fragments of the Herculaneum papyri (Brun et al. 2016), a fragment from Dime (Colini et al. 2018) and two others from the Tebtunis temple library (Christiansen et al. 2020).

properties.[22] It must be stressed, however, that in the absence of a non-destructive method that can unequivocally identify the presence of tannins in the ink, it is impossible to differentiate between a carbon ink with an admixture of iron or copper from a carbon-iron-gall mixed ink.

Here, we present the tests conducted with the new mobile equipment OPUS Instruments APOLLO Infrared Reflectography Imaging System (IRR), intended to unambiguously identify carbon in mixed inks. During the preparatory stage of the aforementioned research project, fifteen Arabic fragments preserved in the Department of Papyri of the Austrian National Library (ÖNB), Vienna, were tested.

2 Description of the corpus

Table 1 summarises the known historical data of the fifteen Arabic fragments from the Department of Papyri of the Austrian National Library (ÖNB), Vienna, investigated in this work. The collection was established in 1883 following several purchases made between 1878 and 1882 by the Archduke Rainer who was persuaded by Josef von Karabacek (1845–1918), Professor of History of the Orient at the University of Vienna, to buy a large number of papyri from the Viennese antiques dealer Theodor Graf (1840–1903).[23] The majority of the fragments in the collection come from the excavation sites of al-Ušmūnayn (the ancient city of Hermopolis Magna) and Ihnasiya (Heracleopolis Magna) in central Egypt, as well as various archaeological sites in the Fayum oasis.[24]

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22 The first statement can be found in Christiansen et al. 2017, 7; the second in Christiansen et al. 2020, 27834.

23 <https://www.onb.ac.at/en/library/departments/papyri/about-the-department-of-papyri> (access on 06 Apr. 2021).

24 When talking about provenance, a distinction should be made between the finding place, the actual place of production of the written artefacts and the internal references to locations in the texts. Since the fragments in the collection were acquired through the antiques market, the place of production is extremely difficult to identify, and while the finding place is often provided in the acquisition records, they are not always reliable. Finding place and area of production may coincide, but this is not always the case: letters, for example, often have a different place of production than the site where they were excavated. When a location mentioned in the text, such as a village referred to in a sales contract, can be found, it is possible that this location coincides with the place of production, although each instance should be evaluated individually. In this paper we are using the concept of provenance in a broad sense, including all the aforementioned meanings.

Table 1: List of fragments ordered by date.

Shelf mark	Type of document	Subtype of document	Date (CE)	Date in the text	Provenance	Writing support	h × w (mm)
A.P.6004	Legal	Receipt of *ḫarāǧ* on an inheritance	900	287 AH	al-Ušmūnayn	Papyrus	245 × 80
A.Ch.9	Legal	Acknowledgement of a debt	900, July	287 AH, Raǧab		Paper	125 × 257
A.P.4097	Protocol		902–3			Papyrus	170 × 108
A.Ch.12868	Paraliterary	Ephemeris	931–2	300 (Persian)	Aswān	Paper	178 × 115
A.P.14000	Legal	Receipt of *ḫarāǧ*	932	320 AH	al-Ušmūnayn	Papyrus	100 × 95
A.Ch.7814	Legal	Receipt of *ḫarāǧ*	937	325 AH		Paper	160 × 110
A.P.14063	Legal	Receipt of per capita tax (*jizyah*)	942, 13 Aug.	330 AH, 18 Pachon		Papyrus	40 × 92
A.Perg.82	Legal	Contract of sale (house)	945	333 AH	al-Ušmūnayn	Parchment	286 × 256
A.P.4360	Protocol		944–6			Papyrus	260 × 137
A.Perg.340	Legal	Receipt of marriage gift	948, Nov.	337 AH, Ǧumāda I		Parchment	130 × 120
A.Ch.1488	Paraliterary	Almanac	990–1	707 (Coptic)		Paper	49 × 81
A.Ch.32363	Paraliterary	Ephemeris	1002–3	371 (Persian)		Paper	59 × 48
A.Perg.236	Paraliterary	Horoscope	1002			Parchment	86 × 55
A.Ch.7379	Legal	Receipt of per capita tax (*jizyah*)	1036, 8 July	427 AH, 11 Ramaḍān	al-Ušmūnayn	Paper	55 × 70
A.Ch.1252 + A.Ch.14324	Paraliterary	Ephemeris	1044–5	413 (Persian)		Paper	57 × 64; 40 × 61

The manuscripts selected for this study – written in black inks on parchment, papyrus and paper – are dated between the tenth and the first half of the eleven century CE and represent different contents and contexts of production.

3 Experimental section

The writing supports of the fragments were first described according to their visual characteristics, both in ambient and transmitted light (using a light sheet). The latter is commonly used to observe the marks left by the sieve during paper production, but it also reveals the fibre distribution of a papyrus sheet.

3.1 Dino-Lite USB microscope, AD413T-I2V

Following a visual description, we conducted the primary screening with a handheld Dino-Lite USB microscope. Measuring just 10 cm in length, this miniature microscope features built-in LED illumination at 395 nm (UV) and 940 nm (NIR), as well as a customised external white light (VIS) source mounted on the microscope. This instrument is used to differentiate the types of inks by comparing the change of opacity between the visible and the infrared image. In addition to the NIR micrographs, we usually also examine the images captured under UV light: the presence of tannins can be inferred from the enhanced contrast of ink and substrate, a result of tannins' ability to quench the UV-induced fluorescence of organic supports. In some cases, the dimensions of the writing stroke appear larger in the UV image compared to the VIS image due to the spreading of tannins in the writing support.

3.2 Elio Bruker Nano GmbH (formerly XG Lab)

This X-ray spectrometer features a 4W low-power rhodium tube and adjustable excitation parameters. It has a 17 mm^2 Silicon Drift Detector (SDD) with energy resolution < 140 eV for Mn Kα. The beam size is roughly 1 mm. The measurements were performed on single spots at 40 kV and 80 μA, with an acquisition time of 2 minutes. Bruker's SPEKTRA software was used for the peak fitting and the semi-quantitative data evaluation. This simple portable instrument is usually the first choice when a quick identification of elemental composition is required and the inked areas are compatible with the beam spot size.

3.3 OPUS Instruments Apollo

Verification of the presence of carbon in the inks was performed with OPUS Instruments APOLLO Infrared Reflectography Imaging System (IRR). The regular Short-Wave Infrared (SWIR) sensing range (900–1700 nm) of the 128×128-pixel scanning InGaAs sensor was reduced by the following filters: Short Wave Pass Filter (SWP1250, range 900–1250 nm), Band Pass Filter (BPF1250–1510, range 1250–1510 nm) and Long Wave Pass Filter (LWP1510, range 1510–1700 nm). Each filter was mounted in front of the IR lens (150 mm, f/5.6–f/45) with the aperture set to f/11. The working distance between the sensor and the object was set to 73 cm and the acquisition time to 50 ms per tile. Two 20W halogen lamps provided broadband illumination. The filters allow us to limit the range of infrared light to the portion where iron-gall inks become completely transparent, thereby enabling the discrimination of pure iron-gall inks and mixed inks.

4 Results and discussion

The fact that the original protocol was never intended for the complete characterisation of mixed inks, which were hardly employed in late medieval or European manuscripts, has been discussed at length elsewhere.[25] Here, we would like to present three selected examples from the corpus to illustrate some common classes of inks encountered during field studies. Fig. 1 shows, on the right, the photographs of these fragments; the blue squares highlight the area shown in the Dino-Lite micrographs, taken in visible light and at 940 nm (NIR), which appear in the middle of the figure. On the left, we present the XRF spectra of the writing supports and of the inks.

The ink of the papyrus fragment A.P.4360, in Fig. 1a, is easily identified as an iron-gall ink because its opacity decreases noticeably (but not completely) at 940 nm when compared to the visible light image. Furthermore, in the XRF spectra, the signal of iron from the inscribed area far exceeds that detected on the uninscribed papyrus. The ink of the main text of the contract on the parchment manuscript A.Perg.82, in Fig. 1b, is most probably of the carbon ink variety, as there is neither a change in opacity at 940 nm nor any meaningful change between the spectra of the inscribed and uninscribed areas.

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25 Colini et al. 2018; Ghigo et al. 2020.
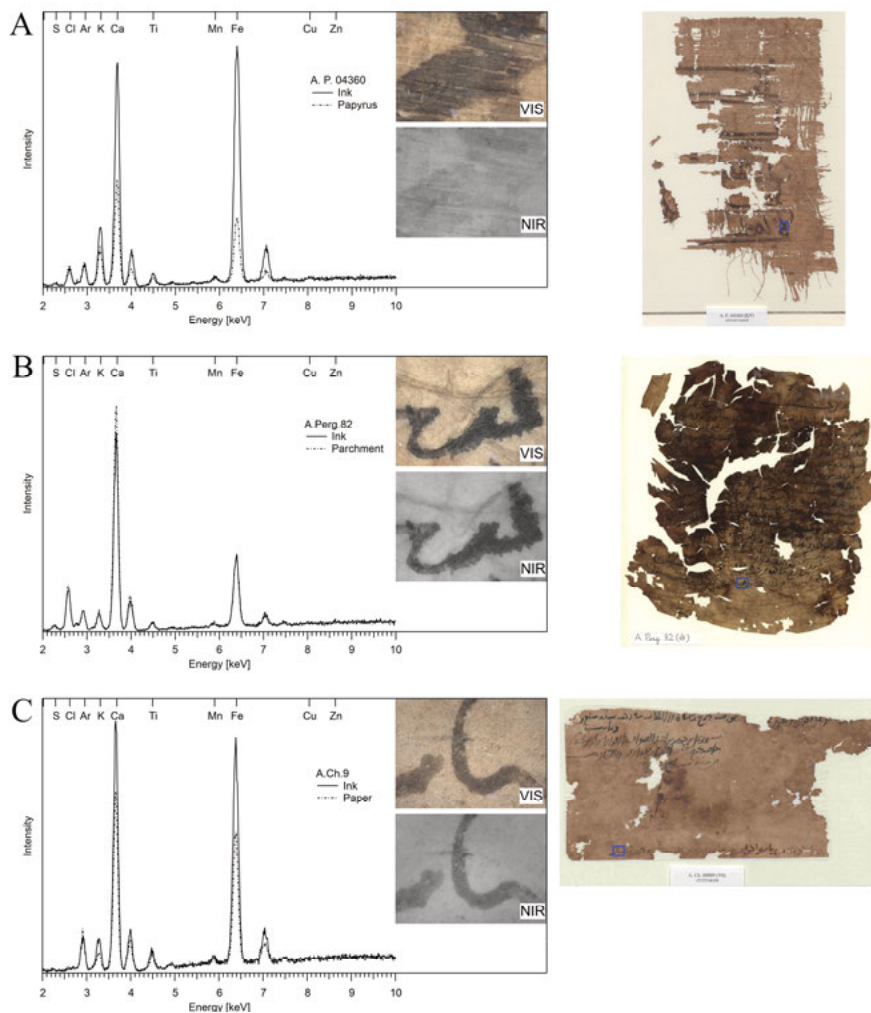
Fig. 1: On the left, XRF spectra of writing supports and of inks; micrographs at 50x magnification of the measured spot taken with Dino-Lite in VIS light and at 940 nm (NIR); on the right, image in visible light of the entire fragment with the area of the micrographs highlighted in blue: A) A.P.4360; B) A.Perg.82; C) A.Ch.9. Manuscript images © Österreichische Nationalbibliothek, Papyrussammlung.

The fragment in Fig. 1c, A.Ch.9, contains four different inks; the ink in question is found at the end of the bottom line, a later remark attesting that debt has been partially cleared. This line is written with two inks, the beginning with a brown-red one that has corroded the paper, the ending with a darker one and

slightly thinner pen strokes.[26] The ink in which these last words were written shows little opacity change at 940 nm compared to the visible image, as seen in the Dino-Lite micrograph in Fig. 1c. By comparing the XRF spectra of this ink and the writing support, an increase in the amounts of iron, calcium and potassium in the inscribed area can be detected (black curve). Based on the current protocol, we tentatively conclude that we are dealing here, in A.Ch.9, with a non-vitriolic carbon-iron-gall mixed ink.

As the case in Fig. 1c illustrates, it is difficult to verify the presence of iron in the writing media because the paper also contains a high amount of the same element. This is indicative of a larger problem of identifying mixed inks, on papyrus or Arabic paper using the XRF-method. The low iron signal in the ink, accompanied by a heterogeneous distribution of iron in the writing support resulting in a strong noise of the iron signals, makes the use of the fingerprint model practically impossible, since the calculations require small quantities and homogeneous distribution of iron signals in the writing support.

In Fig. 2, we illustrate the average iron content of three fragments (A.Perg.82, A.Ch.32363 and A.P.14063) from the Vienna Papyri Collection. The error bars represent the standard deviation (i.e. the dispersion of the data relative to its arithmetical average).
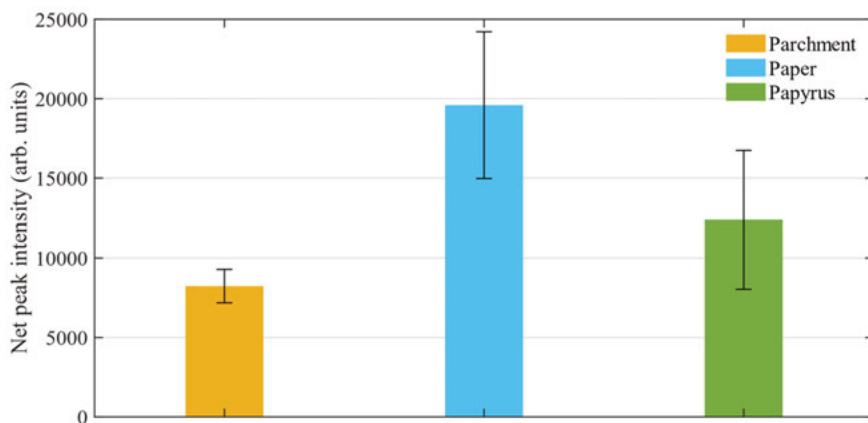
Fig. 2: Distribution of iron in the writing supports of three fragments: A.Perg.82 (parchment, in orange), A.Ch.32363 (paper, in light blue) and A.P.14063 (papyrus, in green).

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26 Unfortunately, the edition of the fragment does not clarify whether these last words were added to the line or if they were written by another scribe. In fact, this part of the document could only partially be read and translated due to its preservation state; Youssef-Grob 2015, 440–441.

As we can see, the writing supports of the analysed fragments have high iron concentrations, especially paper and papyrus. The smaller error bar of the parchment average, compared to those of paper and papyrus, indicates that the distribution of iron in the parchment fragment is more homogeneous. The heterogeneous distribution of elements is caused by the intrinsically uneven structure of papyrus, and also by residual archaeological materials (e.g. dirt, sand, etc.) that contaminate it with iron. It is possible that the tools used to cut and beat the rags as well as the water employed in papermaking were responsible for the iron contamination in paper fragments. Furthermore, conservation treatments or abrasions resulting from past use may also contribute to the contamination of the writing support or the wider distribution of iron that was initially localised in the inked area.[27] Thus, not only do paper and papyrus contain more iron, but its distribution is also extremely uneven.[28]

It is clear that when NIR reflectography at 940 nm, coupled with XRF, fails to identify the ink type, we must resort to the IR reflectography method originally proposed by Mrusek and colleagues.[29] In this study, we tested the Infrared Reflectography Imaging System (IRR) OPUS Instruments Apollo, in addition to the NIR screening conducted with the Dino-Lite and XRF analysis conducted with Elio.

The performance and suitability of the instrument were tested on a set of three-year-old ink samples prepared at the manuscript lab of the CSMC, University of Hamburg.[30] Fig. 3a shows a picture of the inks – respectively, an iron-gall ink, a carbon ink, a mixed carbon-plant ink and a mixed carbon-iron-gall ink – taken in visible light. The images in Fig. 3b-c-d were taken with the Apollo imaging system equipped with the SWP1250, BPF1250–1510 and LWP1510 filters, respectively. As expected, the carbon ink shows no change in opacity across all four images, while the mixed inks progressively become more transparent, although they remain visible even in Fig. 3d. The iron-gall ink, in contrast, shows

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27 Water-based conservation treatments can cause the delocalisation of the soluble parts of the iron-gall inks resulting in the emergence of an iron-rich background in the writing support; Hahn et al. 2008b. The use of the tannic tincture caused delocalization of iron and potassium in the Vercelli Book; Rabin et al. 2015.

28 Similar observations based on a higher number of documents can be found in Cohen 2020, 120–124 and 142–150.

29 Mrusek et al. 1995.

30 The inks were prepared in 2016 according to Arabic recipes. They were artificially aged for 49 days in the ageing chamber WK11-180/40 by Weiss Umwelttechnik GmbH at BAM, with the condition of T=80°C; RH=65%, and subsequently stored in the rooms of CSMC. Colini 2018, 59–78 (nos 17, 52, 165, 173) and 82–87.

a clear change in opacity in Fig. 3b, while traces of it are barely detectable in Fig. 3c, and it becomes completely undetectable in Fig. 3d.
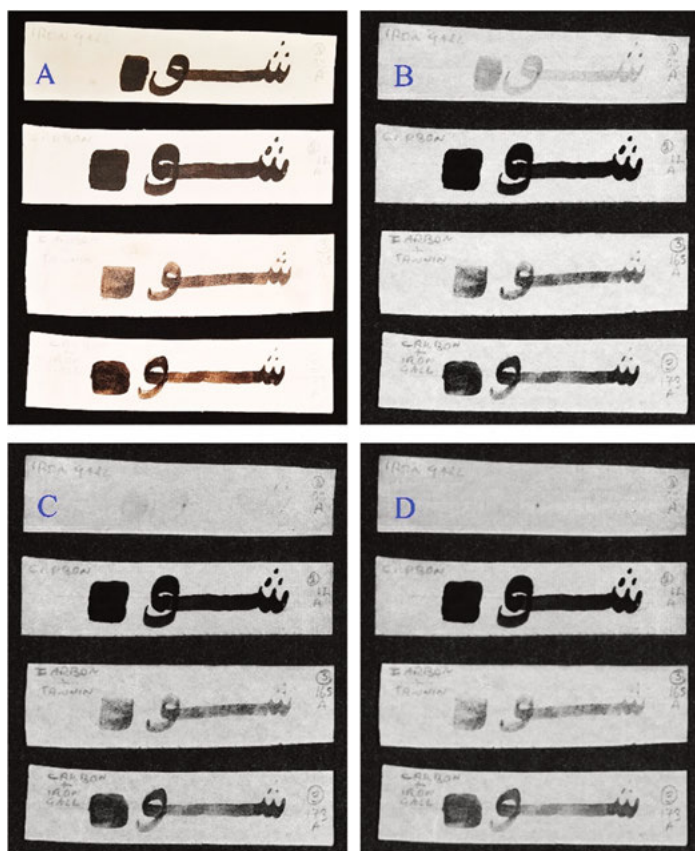
Fig. 3: Results of IR reflectography on three-year-old ink samples, normalized to Spectralon. From top to bottom: iron-gall ink, carbon ink, mixed carbon-plant ink; mixed carbon-iron-gall ink. A) image taken in visible light; B) image taken with Apollo Imaging System with SWP1250 filter; C) image taken with Apollo Imaging System with BPF1250–1510 filter; D) image taken with Apollo Imaging System with LWP1510 filter.

The lower contrast between the iron-gall ink and the writing support in the BPF1250–1510 image (Fig. 3c) compared to the higher contrast in the SWP1250 image (Fig. 3b) suggests that the iron component must have stopped absorbing light shortly above 1250 nm; this may be due to the prevalence of insoluble black iron (III) bis-gallate in freshly made inks, which is significantly higher

than the amount in ancient ones.[31] This assumption is based on reports, from the late eighteenth century CE onwards, of originally black iron-gall inks degrading into brownish substances.[32]

The low contrast or 'faint trace' observed in the fresh iron-gall ink sample in the BPF1250–1510 (Fig. 3c) image can be explained by the broad spectral width of the band pass filter (260 nm) and the inability of the imaging sensor to discriminate the energy (wavelength) of the reflected photons. Each pixel of the InGaAs sensor simply counts and digitises the number of incoming photons that were generated by the broadband illumination using halogen lamps. For pixels corresponding to ink, the photons absorbed in the 1250–1300 nm range do not reach the sensor and, consequently, fewer total photons are counted. These pixels then have slightly lower intensity values than the pixels corresponding to the surrounding and underlying writing support, which explains the low contrast.

The spectral properties of the BPF1250–1510 filter are therefore not optimal for the unequivocal identification of the presence of iron-gall inks and carbon, but they still provide valuable information for the discrimination of inks. A series of measurements on the original documents with a device that can operate within the spectral range of 900–1700 nm and with a higher spectral resolution of 10 nm would be necessary to study and understand the absorption properties of iron-gall inks depending on their chemical composition, thickness and their interplay with the writing supports, specifically in the range of 1200–1300 nm. A comparison of the spectral reflectance curves of iron-gall ink and the writing support would significantly narrow the range of wavelengths (down to ±10 nm) at which the iron-gall inks stop absorbing and lose their opacity completely.

Given the aforementioned reasons, the LWP1510 filter would be a better choice to verify the presence of carbon. This filter enables wavelengths longer than 1510 nm (sufficiently above the critical region of 1200–1300 nm) to pass through and therefore ensures that there is only carbon absorbing in this region of the electromagnetic spectrum. However, images acquired with this filter appear dark and underexposed even under the maximum exposure time of 50 ms and halogen lamps set to full power. We believe that the source of this problem lies, on the one hand, in the low transmission of the filter, and on the other hand, in the apparent drop in the intensity of the light provided by the halogen lamp in this spectral region. Unfortunately, it is not possible to increase the exposure time to collect more photons. Being underexposed, the images must then undergo the post-processing step of histogram stretching in order to be

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31 Krekel 1999.
32 Ribeaucourt 1797; Fuchs 2003, 160–161.

viewed on a computer monitor by the researcher. Stretching the histogram to enhance the appearance can also create artefacts in the pictures by enhancing the noise.

Based on the outcome of the tests on ink samples prior to the imaging in Vienna and on the underexposed LWP1510 images, it was decided to select the BPF1250–1510 filter and include its results in the protocol. The permanence of iron-gall ink beyond 1250 nm in the tests was regarded as exceptional due to the young age of the media. We thus expected that it would still be possible to distinguish mixed inks from pure iron-gall inks, as the carbon particles dispersed in the plant or iron-gall ink base would have a stronger contrast, and therefore a much darker appearance, than the low contrast 'faint trace' of iron-gall ink.

The decision to use only one filter was additionally motivated by the need to minimise the exposure to heat generated by the broadband halogen light sources. As each scan takes ten to twenty minutes, adding a second filter to the protocol would increase the time that the fragment is exposed to heat, which is not ideal for manuscript preservation. Changes in temperature can cause the relative humidity in the area surrounding the object to fluctuate, resulting in changes to the water content of the manuscript, which desorbs water particles into the air. This desorption can create alterations, such as waves and cracks, to the writing supports; particularly susceptible are parchment, which is highly sensitive to temperature and relative humidity fluctuations, and papyrus, whose fibres are often already dry and fragile. To address this issue, we are developing a novel illumination panel set that consists of short-wave infrared (SWIR) LEDs and limits the heat emission to a technically plausible minimum. Because available LEDs emit considerably less heat than halogen or incandescent lamps, we will significantly reduce the potential risk of causing irreversible alterations to the manuscripts.

The application of this revised protocol to identify mixed inks is demonstrated by the imaging results of the bottom line of fragment A.Ch.9 (Fig. 4a). In the BPF1250–1510 image (Fig. 4b), the low contrast of this part of the text is indicative of an iron-gall ink with the exception of the last words, which show only a slight change in opacity. This confirms that the line was written using two different inks and that the last words contain carbon, as they have a strong contrast in the 1250–1510 nm range. By combining this result with the previous observations displayed in Fig. 1c, we can conclude that those words were written with a non-vitriolic carbon-iron-gall mixed ink. To confirm the identification of this ink on A.Ch.9 as a mixed carbon-iron-gall ink beyond any doubt, we should have also used the LWP1510 filter. Unfortunately, this was not done

because we expected that the BPF1250–1510 filter alone would provide sufficient information to discriminate between iron-gall and mixed inks.
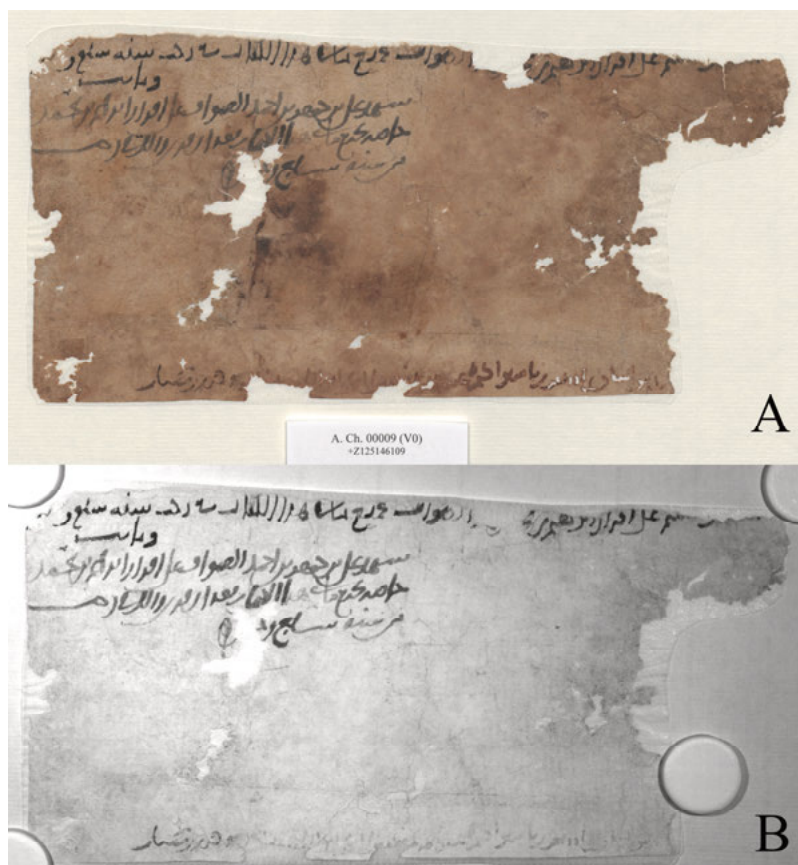
Fig. 4: A) Photograph of A.Ch.9 in visible light © Österreichische Nationalbibliothek, Papyrussammlung; B) Picture of the same fragment taken with Apollo Imaging System with BPF1250–1510 filter.

Because the presence of plant and iron-gall components is determined by the absence of their signal (i.e. no contrast) above 900 nm and 1300 nm, respectively, the change in opacity of a mixed ink is highly dependent on the ratio of plant or iron-gall and carbon components. When the proportion of carbon, which continues absorbing throughout the entire range, significantly outweighs that of the other ingredients, it becomes impossible to discern changes to the opacity

of mixed inks. The exact ratio that prevents identification is not yet known, but it will be investigated in future studies.

The importance of resolving this issue becomes apparent when examining the ink used to write the tax receipt in the papyrus fragment A.P.14000 (Fig. 5), which remains difficult to identify even after performing IR reflectography.
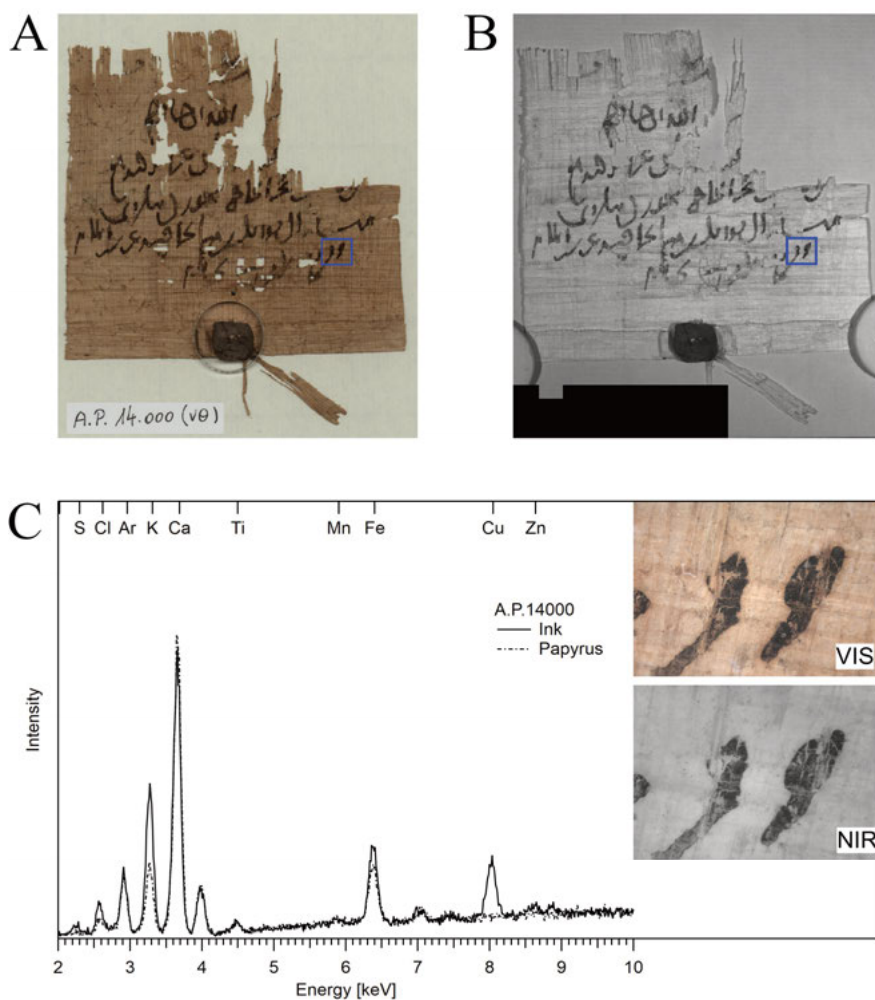
Fig. 5: A) Photograph of A.P.14000 in visible light © Österreichische Nationalbibliothek, Papyrussammlung; B) Picture of the same fragment taken with Apollo Imaging System with BPF1250–1510 filter; C) XRF spectra of writing supports and inks, and micrographs at 50x magnification of the measured spot taken with Dino-Lite in VIS light and at 940 nm (NIR).

Compared to the image taken in visible light, no change in opacity can be observed in the image taken at 940 nm (Fig. 5c) nor in the 1250–1510 nm range (Fig. 5b), a clear indication of a carbon-based ink. In the XRF spectra, however, there is an increase in the intensities corresponding to iron and potassium and the appearance of the copper- and zinc-related peaks in the inscribed area (black curve in Fig. 5c). These elements suggest the presence of a vitriolic component in the ink. We therefore conclude that we are dealing here, in A.P.14000, with a carbon-iron-gall mixed ink with a high carbon component.

5 Conclusions

In this paper we present the advantages and limitations of the improved version of the ink identification protocol, which was tested on fifteen Arabic fragments preserved in the Department of Papyri of the Austrian National Library (ÖNB), Vienna. In table 2, we provide a summary of the results obtained by the application of the improved version of the protocol on the writing media of the analysed fragments.

Table 2: Results of the analytical campaign on inks. The fragments are ordered by date.

Shelf mark	Writing	Date (CE)	Type of ink
A.P.6004	Receipt (v)	900	Carbon ink
	Bottom notation (v)	unknown	Carbon ink
	Letter (r)	unknown	Carbon ink with addition of copper
A.Ch.9	First subscription (lines 1-2)	900, July	Carbon ink
	Second subscription (lines 3-5)	900, July	Carbon ink
	Later remark (line 6)	After 900, July	Iron-gall ink
	Last words of remark (line 6)	After 900, July	Mixed ink (iron-gall with addition of carbon ink)
A.P.4097	Protocol (r)	902-3	Iron-gall ink
	List of names (v)	After 902-3	Mixed ink (carbon with little addition of iron-gall ink)
A.Ch.12868	Black ink	931-2	Plant ink or iron-poor iron-gall ink
	Red ink	931-2	Vermillion with some red lead

Table 2 (continued).

Shelf mark	Writing	Date (CE)	Type of ink
A.P.14000	Black ink	932	Mixed ink (carbon with addition of vitriolic iron-gall ink)
A.Ch.7814	Tax receipt (v)	937	Mixed ink (carbon with little addition of iron-gall ink)
	Letter (r)	Before 937 (2nd use)	Carbon ink
	Previous text (r)	Before 937 (1st use)	Carbon ink
A.P.14063	Black ink (r)	942, 13 Aug.	Carbon ink
	Black ink (v)	unknown	Carbon ink
A.Perg.82	Black ink (several hands)	945	Carbon ink
A.P.4360	Protocol	944-6	Iron-gall ink
A.Perg.340	Brown ink (several hands)	948, Nov.	Iron-gall ink (likely same ink for all the hands)
A.Ch.1488	Black-brown ink and lines	990-1	Iron-poor iron-gall ink
A.Ch.32363	Black-brown ink	1002-3	Plant ink or iron-poor iron-gall ink
	Lines	1002-3	Plant ink or iron-poor iron-gall ink
	Red inks	1002-3	Iron based pigment (red ochre?)
A.Perg.236	Black ink	1002	Carbon ink
A.Ch.7379	Tax receipt (r)	1036, 8 July	Carbon ink
	Other text (v)	Before 1036 (1st use)	Carbon ink
A.Ch.1252 + A.Ch.14324	Black ink	1044-5	Iron-gall ink
	Lines	1044-5	Iron-gall ink
	Red ink	1044-5	Vermillion with some red lead

This study has shown that adding an IRR mobile camera to the standard protocol would enable the detection of carbon in the inks, and thus the discrimination between iron-gall and mixed inks. For the unequivocal identification of carbon, the IRR investigation needs to be conducted at wavelengths higher than 1300 nm. For this reason, the Long Wave Pass Filter (LWP1510) will replace the initially selected Band Pass Filter (BPF1250–1510) in our routine protocol. To address the issue of LWP1510 images being underexposed and reduce the risk of

introducing post-processing artefacts, we will work closely with the manufacturers of the system to design a new, LED-based illumination set that is optimised for the range of 1500–1700 nm. LED light sources, which irradiate less heat, will also render the ink identification protocol much safer for the objects from a conservation perspective.

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Marina Creydt, Markus Fischer

Mass Spectrometry-Based Proteomics and Metaproteomics Analysis of Ancient Manuscripts

Abstract: Ancient manuscripts may contain a large amount of additional information besides the written words. This information is not readily visible to the naked eye and is also analytically very challenging to uncover. In the last ten years, mass spectrometric techniques in particular have emerged in this context to provide additional information about the history of an ancient manuscript and the living conditions at that time through proteomics and metaproteomics analyses. This additional information includes not only the methods of book production and the raw materials used, but also the historical usages of the manuscripts. This review is intended to provide insights into the scientific questions that can be addressed with mass spectrometric proteome analyses, as well as an overview of the possible methods and procedures. In addition to the correct handling of the valuable samples, the various possibilities of sampling as non-invasively as possible as well as technical aspects and data evaluation that need to be considered will be discussed.

1 Introduction

In the last twenty years, the so-called 'omics-disciplines' have increasingly moved into the focus of many research areas. This includes not only the classical disciplines of the natural sciences, but increasingly also the humanities to address archaeometric issues. The suffix '-omics' describes the hypothesis-free, non-targeted analysis of complete or almost complete cellular levels (genome, transcriptome, proteome, metabolome), although even these techniques often fail to detect all substances or sequences. Depending on the cellular level analysed, the terms genomics, transcriptomics, proteomics and metabolomics have been introduced, which together describe the flow of information from genotype to phenotype (Fig. 1).[1] In addition, many other neologisms have since emerged, including the research areas paleogenomics and paleoproteomics. According to

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1 Creydt and Fischer 2018; Dettmer et al. 2007.

Hendy's recently published definition, the focus of both disciplines is the study of 'archaeological, historical, and paleontological remains and materials' using ancient DNA (aDNA) or ancient proteins or ancient peptides.[2] This is because it can be assumed that, depending on the history, state of preservation, the age of a sample or microbial infestation, some of the proteins have since been degraded into peptides. However, little is currently known about the degree of protein conservation in ancient samples, as the detection methods that have been predominantly used to date are based on the detection of short amino acid sequences (see Section 3.4 top-down approaches).[3] In addition, proteins have a low solubility in water and are comparatively difficult to extract using standard methods, especially since proteins agglomerate and show crosslinking reactions over the time, further complicating their analysis, which is why the analytical focus is usually on peptides.[4]

Palaeoproteomics is a relatively young discipline that emerged in the early 2000s and which has become increasingly relevant due to the advancing development in mass spectrometry (MS).[5] Although the discovery that amino acids can also be detected in fossils that are hundreds of millions of years old is not new and can be traced back to the 1950s.[6] Compared to aDNA, it is assumed that ancient peptide sequences are more stable and can therefore also be used for an analysis if aDNA can no longer be detected. According to current knowledge, the oldest DNA residues that could still be sequenced, were found in a tooth from *Homo antecessor*, which are estimated to be 800,000 years old, and in a horse bone, which is approximately 700,000 years old.[7] In contrast to these results, large proteome residues could also be detected in the molar tooth of a rhinoceros (*Stephanorhinus*), which lived 1.8 million years ago after the attempt to obtain DNA initially failed.[8] Furthermore, performing proteome analyses is quicker and cheaper compared to genome studies.[9]

Nevertheless, the analysis of the proteome cannot completely replace the DNA analysis, so that these two techniques complement each other optimally. For example, a comparatively quick species identification can be made with proteome analyses, but the sex or relatedness cannot be determined, which in

2 Hendy 2021.

3 Cleland and Schroeter 2018; Hendy 2021.

4 Orsini et al. 2017.

5 Ostrom et al. 2000.

6 Abelson 1954a; Abelson 1954b.

7 Orlando et al. 2013; Welker et al. 2020.

8 Cappellini et al. 2019.

9 Fiddyment et al. 2019.

turn is possible using DNA studies.[10] For this reason, it has recently been proposed to carry out proteome analyses first and then proceed with DNA analyses based on the results obtained.[11]

2 Which scientific questions can be answered in the context of manuscript science?

The word 'manuscript' is derived from the Latin 'manu scriptum' which means 'written by hand'. With the development of the first scripts and alphabets in different parts of the world, a wide variety of raw materials were used as writing surfaces, depending on availability. These included, for example, metal, fired and unfired clay, wax tablets, palm leaves, wood, bark, bamboo, cloths made of cotton, linen or silk, bones and ivory, animal skins that haven been converted into leather, parchment, or vellum as well as papyrus and paper. As diverse as the writing surfaces are, so are the writing instruments.[12] Accordingly, a wide variety of analytical platforms have to be used for the analysis of manuscripts and numerous of complementary techniques and sampling procedures are often required in order to obtain correct interpretations and assumptions, as has recently been demonstrated by some forgeries.[13] In addition to the genome and proteome already mentioned, small molecules (<1,000 Da), elements or isotope ratios are also analysed.[14]

Using proteomics-based methods, it is possible to more deeply characterise organic writing materials that still contain protein residues and to identify the species (Fig. 1). This works especially well with writing materials that are made from animal skins. In this context, the analysis of parchment is particularly relevant because a large part of the historically preserved documents were made on parchment. The identification of the animal species used allows conclusions to be drawn about the geographical origin, since the parchment was made with animals (e.g. sheep, cattle, goat) that were available locally. Sometimes the intended use is related to the type of animal skin. For example, a special animal

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10 Teasdale et al. 2021.

11 Collins et al. 2006; Fiddyment et al. 2019.

12 Colomo 2012.

13 Newton et al. 2018; Rabin and Hahn 2020.

14 Dallongeville et al. 2016; Vilanova and Porcar 2020.

parchment was sometimes used for illustrations.[15] Toniolo et al. were the first to obtain a sufficient amount of proteins or peptides from a very thin parchment (vellum) to perform species identification on a thirteenth-century pocket Bible.[16]
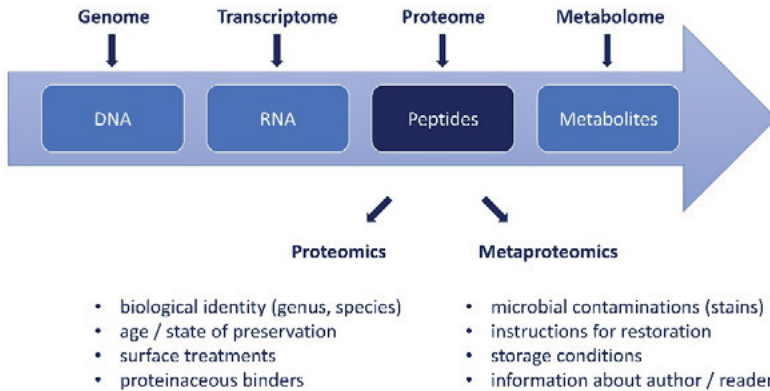
Fig. 1: The cellular cascade and its hidden information that can be obtained with proteomics and metaproteomics analyses.

While this study is based on destructive sampling, Collins and Buckley used a less invasive sampling method that came to be known as 'zooarchaeology by mass spectrometry' (ZooMS) and 'electrostatic zooarchaeology by mass spectrometry' (eZooMS). ZooMS describes the almost non-destructive identification of animal species on the basis of characteristic peptide sequences (peptide mass fingerprinting, PMF), which are obtained from collagen I by tryptic digestion (see Section 3.4, bottom-up approach). eZooMs includes non-invasive sampling with the help of a commercially available plastic eraser (see Section 3.3.1). In the research of parchment, this approach is therefore particularly suitable for a species identification of the animals used, since animal skins consist mainly of the protein collagen I, so that in the meantime several studies have been published in this context.[17]

While proteomics studies on the analysis of ancient manuscripts made from animal skins are comparatively advanced, research on other writing surfaces is still in its infancy. For example, manuscripts made from silk, also an animal

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15 Fiddyment et al. 2015; Teasdale et al. 2021.
16 Toniolo et al. 2012.
17 Collins et al. 2010; Fiddyment et al. 2015; Fiddyment et al. 2021; Teasdale et al. 2021.

product that was primarily used in China, could be suitable for proteomics studies. Even if no studies have yet been published in the context of manuscripts. Nevertheless, degradation processes of silk have already been successfully investigated by means of proteomics analyses on cultural relicts made from ancient silk, and species identifications have been carried out on silk spinners in order to be able to trace the origin of ancient artefacts.[18]

In contrast, when using plant-based raw materials, it can be assumed that performing proteome analyses will be even more challenging. This is mainly due to the lower protein content of these materials and possibly the higher degree of processing, such as with paper, which makes it even more difficult to extract sufficient amounts of proteins and peptides from ancient manuscripts. Nevertheless, plant raw materials also have a small proportion of proteins and peptides that potentially still be detected as the sensitivity of MS instruments increases and depending on degradation processes. However, there is still too little knowledge in this regard to be able to make a more detailed assessment. Alternatively, genomics and metabolomics (in particular lipidomics) analyses should be more appropriate in this context.[19]

In addition, proteome-based analyses can also be used to estimate the age or the state of preservation of the manuscripts, whereby exogenous influences must also be taken into account (see Section 3.2). The age of ancient artefacts is usually estimated by means of radiocarbon dating, by comparing the decay of the radioactive carbon isotopes ^{14}C to ^{12}C. However, this method is comparatively laborious and requires a sample volume of 3-10 mg, i.e. it is a destructive sampling, which is why it cannot always be performed.[20] However, research efforts are underway to reduce the sample size required for isotope measurements to less than 50 μg.[21] In addition, it may also be useful to use several complementary approaches to verify the results obtained or to expose potential falsifications.[22]

Furthermore, proteomics analyses can provide information about surface treatments and, in the case of illuminated manuscripts, information about the colour binders and glues used, in order to better place the ancient manuscripts in their historical and also technical context or, if necessary, to be able to take

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18 Chen et al. 2020; Gu et al. 2019; Li et al. 2019; Solazzo 2019.

19 Kostyukevich et al. 2018; Schulz et al. 2018.

20 Brock 2013.

21 Kasso et al. 2020.

22 Mazza 2019; Rabin and Hahn 2020.

appropriate conservation and restoration steps.[23] The protein-containing binders, which are suitable for the production of colours, include, e.g. eggs (egg yolk/egg white) from different birds, gelatin or collagen from various animals, and casein of milk. Using proteomics, it is not only possible to differentiate between individual protein binders as such, but also to characterise the raw materials used in more detail. For example, whether whole eggs or only the yolk or white were used, since the proteome is composed differently depending on the raw material used. Such sub-differentiation is not possible by means of DNA analysis.[24]

While proteomics refers to the analysis of the proteome of an individual organelle, cells, tissues or an entire organism,[25] metaproteome analyses include proteome studies of other organisms. Originally, when the term metaproteomics was introduced in 2004, it primarily referred to microbial communities.[26] However, when analysing ancient artefacts, in addition to microbial proteome residues, the remains of many other organisms can often be detected, too. These foreign protein and peptide profiles can be used to obtain information not only about the manuscript itself, but also, for example, about a possible pest infestation, biodeterioration, and even about the author or the reader.[27] For instance, on the original manuscript of *Master and Margarita* by Mikhail Bulgakov, peptide biomarkers for the author's nephrotic syndrome could be found.[28] Other applications include the detection of *Mycobacterium tuberculosis* in the notebooks of the Russian writer Anton Chekov and the detection of plague pathogens (*Yersinia pestis*) in death registries of Milan from 1630. In the last-mentioned study, residues of vegetable proteins could also be proved, which allow conclusions to be drawn about the meals of the secretaries from this time.[29] Furthermore, a recent study using a medieval parchment document on childbirth detected human body fluids in addition to numerous nonhuman residues of egg, milk, legumes, cereals and honey, presumably used for medical reasons, suggesting that this manuscript was indeed used in childbirth.[30]

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23 Van der Werf et al. 2017.

24 Calvano et al. 2020a; Dallongeville et al. 2013; Kuckova et al. 2004; van der Werf et al. 2017.

25 Lim and Elenitoba-Johnson 2004.

26 Rodriguez-Valera 2004.

27 Marvasi et al. 2019.

28 Zilberstein et al. 2016.

29 D'Amato et al. 2018a.

30 D'Amato et al. 2018b.

3 Basics of proteomics analyses of ancient manuscripts

3.1 Handling and laboratory work with ancient manuscripts for proteome analyses

Ancient manuscripts have a high cultural heritage and are unique, rare as well as irreplaceable. Therefore, they should be handled with care and only by appropriately trained experts. Manuscripts are best stored for longer periods in special archives that ensure optimal storage parameters and protection against fire and water damage and take precautions against theft. By monitoring temperature and humidity as well as ensuring adequate ventilation, pest and fungal infestation can also be avoided, and chemical degradation processes can be reduced. Ancient objects should also not be exposed to short-wave UV light, particularly rich in energy, because UV light accelerates the decay of organic materials, so that they turn yellow and brittle. In addition, inks, and colours fade. Dust and dirt should also be kept out of the archives, or the manuscripts should be protected in appropriate acid-free packaging. In the best-case scenario, laboratories that regularly work with manuscripts meet these requirements mentioned and have appropriately equipped rooms for storing valuable artefacts. Further details in this context can be found, among others, in ISO 11799,[31] which defines the requirements for archive rooms and packaging.

Concerning the practical implementation of proteome-based studies on ancient artefacts, there are currently no generally applicable guidelines, as this is a very young research discipline. Due to this gap, some helpful information have recently been published in this context, which should promote the process of establishing generally recognised standards.[32] In addition, recommendations for dealing with aDNA can serve as orientation, which also include the construction and installation of suitable laboratories.[33] As when working with aDNA, contamination of the samples must be avoided. Consequently, practical work with ancient materials should be carried out spatially separated from other

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31 International organization for standardization (ISO) 11799 (2017), Information and documentation — Document storage requirements for archive and library materials, <https://www.iso.org/standard/63810.html> (accessed on 24 Jan. 2021).

32 Fiddyment et al. 2019.

33 Fulton and Shapiro 2019; Gilbert et al. 2005.

work, especially with modern samples. In the best case, a separate laminar flow workbench and/or a clean room is available for this purpose.[34]

To avoid contaminations brought from other laboratories, the work should be carried out in clean rooms firstly in the morning. Furthermore, appropriate protective clothing should also be worn (full bodysuit including shoes, hairnet, safety glasses, face mask and powder-free gloves). Gloves made of nitrile are suitable, but latex gloves should be avoided as they can contain high levels of protein. The same applies to clothing or jewellery made of wood, wool, rubber, silk, or leather. In contrast, synthetic materials are particularly recommended. It is advisable to wear two pairs of gloves on top of each other, of which only the upper pair is changed regularly. Chemicals should be used in the highest purity available. In addition, stock solutions must be portioned, and the aliquots regularly exchanged. The reuse of consumables should also be avoided. Likewise, only pipette tips with filters should be used. Bleach solution and subsequently 70% ethanol are suitable for regular cleaning of all work surfaces and equipment. As with DNA studies, irradiation of surfaces and materials can help denature proteins to ensure the cleanest possible work environment.[35]

3.2 Dealing with contaminations

In addition to proteins and peptides from the material of the writing medium, signals can also come from bacteria, viruses, fungi, insects, leftovers of the readers or authors, or manual handling. They do not always have to be contaminations in the negative sense but can be used for metaproteomics analyses to obtain further information about the manuscript (see Section 2). Nevertheless, dealing with unwanted contaminant is not easy, e. g. if it originates from recent conservation and restoration measures, was created during the recovery of historical documents, or an incorrect handling, e. g. if gloves were not worn. In the best case, such manipulations are known and can be taken into account accordingly in order to avoid misinterpretations.

A comparatively reliable method to distinguish ancient from modern age proteins and peptides allows the degree of the post-translational modifications (PTMs) e. g. deamidation from glutamine to glutamic acid and asparagine to aspartic acid with the loss of the ammonium group. Glutamine deamidation is preferred for age estimation because deamination of asparagine is about 10

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34 Fiddyment et al. 2019.

35 Fiddyment et al. 2019; Fulton and Shapiro 2019; Gilbert et al. 2005; Llamas et al. 2017.

times faster compared to glutamine. Nevertheless, in addition to age, other exogenous factors such as the storage parameters have an impact on the degree of deamination, which may have to be taken into account, so direct correlations are not always possible.[36] Another way to estimate age and protein degradation is to study amino acid racemisation (AAR), which is the conversion of the L-configuration of amino acids commonly found in living organisms to D-enantiomers. There are a number of ways to detect D-amino acids, for example by chromatographic separation on chiral stationary phases or by converting the amino acids into diasteromers, which can then also be separated on achiral phases. In addition, enzymatic detection methods, for example, are also suitable. Nevertheless, even with these methods, the influences of the environment during the storage of the documents must be taken into account.[37] In addition to the age-dependent modifications explained, other reactions can also provide information about the age of proteins, such as hydroxylation in collagen-containing matrices.[38] Furthermore, additional information can be obtained from the fragmentation pattern of certain proteins and peptides. For this purpose, the systematic analysis of samples with known ageing grades is suitable, which can be used as references and in the determination of further molecular markers for a comparison.[39] Furthermore, common contaminants, e.g., such as human creatine or human serum albumin, can be identified with the help of databases such as the 'common Repository of Adventitious Proteins' (cRAP, https://www.thegpm.org/crap/)[40] or the MaxQuant database.[41]

During the laboratory work, extraction blanks should also be processed and then measured, in order to be able to take into account the purity of the chemicals and contamination if necessary. In addition, samples and protein standards should also be stored separately from one another in order not to risk cross contamination.

3.3 Sampling strategies

Sampling should be as gentle and minimally invasive as possible, at best non-destructive, without contaminating the manuscript. In addition, it must be

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36 Leo et al. 2011; Ramsøe et al. 2020; Schroeter and Cleland 2015.

37 Carenzi et al. 2020; Collins et al. 2006; Rosini et al. 2020.

38 Cleland et al. 2015; Hill et al. 2015.

39 Li et al. 2015.

40 Mellacheruvu et al. 2013.

41 Cox and Mann 2008.

ensured that the analytes are not subject to changes that could, in the worst case, lead to false conclusions. The location of the sampling on the manuscript is also crucial, as various factors can have an influence on the preservation of proteins and peptides.

Starting from destructive micro-sampling strategies, in which a few milli- or micrograms of materials are taken from the analysis object using tools such as scalpels and tweezers, the focus in the last five years has been on the development of non-invasive or almost non-invasive methods. The criticism that non-destructive methods are relatively insensitive is increasingly being eclipsed by new mass spectrometric developments with ever-improving sensitivity.

3.3.1 On-Site Sampling Strategies

On-site sampling strategies have the advantage that the historical documents do not have to be transported to a laboratory, i.e. sampling can also be done directly in libraries, museums, archives or private collections, which greatly facilitates access to the samples. In addition, these methods are relatively easy to perform and require only a minimal labour. Furthermore, the documents can be of any size and do not need to be cut up (Fig. 2).
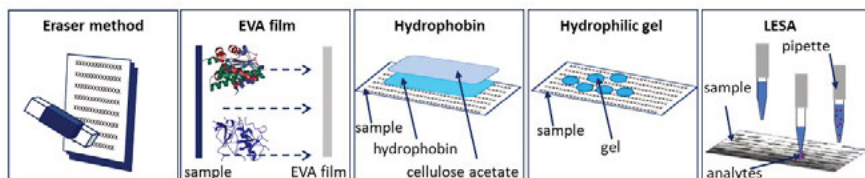
Fig. 2: Overview of different on-site sampling strategies that are suitable for manuscripts.

The first almost non-invasive on-site sampling method was described by the group of Matthew Collins, in which analytes are detached from the surface of different materials by means of a simple plastic eraser made of polyvinyl chloride (PVC) using the triboelectric effect. In this procedure, the analytes are picked up by the eraser through careful rubbing. The resulting polymer residues, with the adhering peptides, can presumably be stored at room temperature for any length of time without changes occurring. At an appropriate time, eraser crumb samples are mixed with a trypsin-containing solution for enzymatic

digestion (see Section 3.4) so that the peptides obtained pass into solution and can be analysed.[42]

Another non-destructive alternative is the use of a special ethyl-vinyl acetate (EVA) film made from C8 and/or C18 resins as well as cations/anion exchangers to which the molecules are bound. The film is produced using an extruder, in a thickness of 150–200 µm. Before use, the film is moistened and then placed on the document for several minutes. In addition to macromolecules such as proteins and DNA, peptides as well as metabolites are also absorbed. Superficially, non-covalent bonds such as polar ion-ion interactions and hydrogen bonds as well as hydrophobic van der Waals forces are effective. Noncovalent bonds such as polar ion-ion interactions and hydrogen bonds as well as hydrophobic van der Waals forces are the primary agents. Depending on the material and preferred analyte class, the EVA technology offers different modifications by adding various chemical additives to the starting material so that an optimal result can be achieved. Compared to an invasive method on wall paintings and canvases for the detection of binders, qualitatively fewer proteins were detected, but the binders used could be identified on the basis of the remaining signals. In addition, studies on the surface of parchment, for example, have shown that no damage occurs, or residues remain.[43]

An alternative option for sampling is the use of a class I hydrophobin (Vmh2) of the fungus *Pleurotus ostreatus*. With hydrophobin Vmh2 as mediator, *in situ* digestion with trypsin can also be performed. Hydrophobin Vmh2, which is initially in an ethanolic solution, is spotted onto small plates made of cellulose acetate. After the alcohol has evaporated, trypsin is added, which is immobilised on hydrophobin Vmh2. Shortly before use, the plates are moistened with an aqueous buffer solution so that the optimal ambient conditions for the activation of trypsin are present. The cellulose acetate plates are placed on the sample material for approx. 10 min and after drying, the peptides can simply be washed off and analysed. This method was originally developed for the detection of binders in paintings. In the meantime, however, several metaproteomics analyses have been carried out on paper and on parchment documents.[44]

Another method, also suitable for *in situ* digestion with trypsin, is based on the use of a hydrophilic gel of poly(2-hydroxyethyl methacrylate)/poly(vinyl-

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42 Fiddyment et al. 2015.

43 D'Amato et al. 2018a; D'Amato et al. 2018b; Manfredi et al. 2017; Righetti et al. 2019, Righetti et al. 2020; Zilberstein et al. 2016; Zilberstein et al. 2020.

44 Cicatiello et al. 2018; Ntasi et al. 2021.

pyrrolidone) (pHEMA/PVP) loaded with trypsin before use. So far, this recently introduced method has not been applied to manuscripts. The analyses carried out concentrated primarily on work of arts and statues, but a transfer to other materials is quite conceivable.[45]

A very simple procedure that can be carried out with standard chemicals, has recently been proposed for the authentication of historical manuscripts. Based on a liquid extraction surface analysis (LESA) approach, 2 µL of a mixture of methanol, water and a small amount of formic acid are added to the manuscript using a pipette. After pulling up and emptying the pipette several times, the solvent is analysed by MS. The focus of this procedure was primarily the analysis of small molecules, but it can be assumed that this approach could also potentially be suitable for the detection of peptides for metaproteomics interpretations.[46]

Compared to the method with the eraser, the other methods require somewhat more time, as the absorbent material must be in contact with the objects for longer. However, a comparison of which of the presented methods is best suited for different materials and issues is still pending.

3.3.2 Sampling in the laboratory: Ambient ionisation and laser ablation techniques

Ambient ionisation techniques, which can be coupled using different mass analysers, are usually carried out in appropriately equipped laboratories, i.e. the artefact must first be transported there. In ambient ionisation sources, the ions are formed outside the MS device. The main advantage is that no sample preparation is required, and sampling is practically non-destructive. Furthermore, these developments usually can also be used to generate spatially resolved chemical images, which is why they are also referred to as mass spectrometry imaging (MSI). For some techniques, however, it should be noted that the object to be analysed must not be too large. In addition, the analysis of larger peptides and proteins with ambient ionisation methods is not that simple, due to their molecular weight, the poor desorption efficiency and the surrounding matrix.[47]

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45 Calvano et al. 2020a; Calvano et al. 2020b.
46 Newton et al. 2018.
47 Douglass and Venter 2013.

Using relatively established desorption electrospray ionisation mass spectrometry (DESI-MS), the surface of an artefact is exposed to an electrospray cloud (see Section 3.5) so that the analytes are directly desorbed and ionised. The optimisation of various parameters such as the distance or the angle of the electrospray and the MS inlet is decisive in determining which analyte classes are detected.[48] So far, this method has been used, for example, to detect proteins (app. 20 kDa) and peptides after *in situ* digestion on flint flakes and potsherd samples, but the analysis of historical manuscripts has also been possible.[49] By means of a nanospray DESI (nano-DESI) source, the spatial resolution can also be reduced from approx. 40 μm to 10 μm and splashing effects can be avoided, so that destructive processes are minimised.[50]

Another modification of an electrospray ionisation (ESI) source is the laser ablation electrospray ionisation (LAESI) procedure, in which the sample first has to be slightly moistened. Subsequently, the analytes are ablated from the surface by means of an infrared (IR) laser, in which initially mainly the water molecules evaporate abruptly. During this process, the analytes are carried along into the resulting ablation plume and can then be ionised using an electrospray, consequently, this is a two-stage process.[51] It is also conceivable to replace the usual nanosecond IR laser with a more efficient picosecond IR laser (PIRL) in order to be able to detect larger proteins efficiently while damaging the surrounding analysis material as little as possible, since the lateral resolution (~100μm) is 3-fold smaller than by means of a nanosecond laser.[52] It is also possible to decouple the laser from the ionisation and ablate the samples on site. The collected ablation plume can later be analysed by MS in the laboratory. Such technologies are already used in proteome analysis for medical questions, e.g. for the identification of different tissue types, but have hardly been validated in studies on ancient artefacts. However, these approaches could become increasingly relevant in the near future and as technology develops.

In addition to the techniques described above, there are numerous other research efforts and ambient ionisation techniques e.g. LESA, Matrix-assisted laser desorption electrospray ionisation (MALDESI) or time-of-flight-secondary ion mass spectrometry (SIMS-ToF) that could have the potential to become more

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48 Takáts et al. 2005.

49 Heaton et al. 2009; Newton et al. 2018; Schedl et al. 2015; Stephens et al. 2010.

50 Roach et al. 2010.

51 Nemes and Vertes 2007; Stephens et al. 2010.

52 Zou et al. 2015.

relevant for the MS analysis of peptides and proteins of historical documents in the future.[53]

3.4 Mass spectrometric strategies for proteomics analysis

The primary goal of proteome and metaproteome analyses of ancient artefacts is to identify proteins and peptides. This is mainly achieved by clarifying the primary structure, i.e. the amino acid sequence or fragments thereof, and the subsequent comparison and assignment using databases (see Section 3.6). Sequencing of amino acid sequences was traditionally carried out using Edman's method.[54] However, this procedure is both very complex and requires the presence of isolated analytes. Therefore, this procedure is not suitable for the analysis of more complex extracts and, moreover, is not capable of high throughput. Other approaches are based on immunoassays to bind certain sequences, but these are very limiting for qualitative approaches and also not very sensitive.[55] For this reason, MS methods have primarily become established. There are mainly two different approaches:

In the bottom-up approach, proteins and peptides are first digested enzymatically. Usually, the enzyme trypsin is used as the gold standard, which hydrolytically cleaves the amino acids arginine and lysine at the C-terminus. The peptides obtained have a length of 7–20 amino acids and molecular masses of 0.7 kDa–3 kDa. However, the disadvantage of using trypsin is that this enzyme is sometimes too efficient and about 56% of the peptide fragments obtained are too small for further data evaluation. Hence, it may be helpful to try other endopeptidases as well.[56]

The peptide fragments are then separated one-dimensionally or two-dimensionally by liquid chromatography (LC).[57] In contrast to a direct infusion mass spectrometry (DIMS) approach, not all analytes reach the ion source at the same time, but rather with a time delay. In addition to gaining information about the retention time, ion suppression effects are reduced so that a greater number of molecules can be detected overall. This advantage is of particular

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53 Cleland and Schroeter 2018; Feider et al. 2019; Spraker et al. 2020.

54 Edman 1949.

55 Cartechini et al. 2010; Hendy 2021; Manfredi et al. 2017; Palmieri et al. 2013; Sciutto et al. 2016.

56 Cristobal et al. 2017; Pandeswari and Sabareesh 2019; Swaney et al. 2010; Tsiatsiani and Heck 2015.

57 Delmotte et al. 2007.

relevance for the detection of minor compounds and not only abundant analytes. In most studies, LC separation is performed by reverse phase (RP) chromatography utilising hydrophobic interactions. In this context, water and acetonitrile are the most suitable eluents. A small addition of formic acid to the eluent can be helpful in order to achieve a positive net charge of the peptides, which in turn has a positive effect on the ionisation. In addition, hydrophilic interactions with potential silanol residues of the stationary phase are suppressed, which in turn leads to greater retention and better peak shapes. However, the use of formic acid carries the risk of causing undesired formylation reactions on the peptides. Therefore, the amount of formic acid should not be too high.[58] In addition to the use of stationary RP, other LC separation principles are also suitable for the analysis of peptides. These include the use of hydrophilic interaction liquid chromatography (HILIC), ion exchange chromatography, or size exclusion chromatography, although with the latter two it must be taken into account that high salt concentrations must be used which are not compatible with the MS instruments, which is why they are of subordinate relevance.[59]

High performance liquid chromatography (HPLC), ultra-high performance liquid chromatography (UHPLC) as well as nano-LC devices are suitable for chromatographic separation. Compared to HPLC systems, significantly higher back pressures can be generated using HPLC systems (up to approx. 1,300 bar). Therefore, by means of UHPLC, stationary phases with smaller particle sizes <3 μm can be used, which results in improved resolution, sensitivity and shorter analysis times. In addition, nano-LC devices are increasingly being used for proteomics studies. The main advantage is improved sensitivity, as more intense, albeit narrower, peaks are produced. This means that low-abundant peptides can still be recorded. Therefore, nano-LC devices are particularly recommended for studies on ancient artefacts, when often only sample material and proteome residues are available. With particularly sensitive methods, detection limits in the low femtomol and sometimes even attomol range can be achieved, whereby the selected mass analyser also has a major influence.[60]

Nano-columns typically have an inner diameter of 50–100 μm and particle size of 1.4–5 μm. They are operated at flow rates of about 100–500 nL/min. The comparatively low flow rates imply lower ion suppression in the subsequent ionisation step, which in turn is also reflected in an increased sensitivity. De-

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58 Lenčo et al. 2020.

59 Badgett et al. 2018; Mant et al. 2007.

60 Ivanov et al. 2003; Martin et al. 2000.

pending on the manufacturer, nano-LC systems can withstand back pressures of up to 1,000 bar. Unlike UHPLC or HPLC systems, it is not possible to apply the sample extract directly to the nano-column, since the low flow rates would require a large amount of time for the extract to reach the analytical column. Therefore, the extract is first added to a trap column using a microcharge pump, which allows higher flow rates. This step also allows sample enrichment and purification. Water with little amount of trifluoroacetic acid (TFA) is suitable for loading the trap column in order to bind the peptides to the trap column first, while the salts are rinsed away. TFA is a better ion pair reagent than, for example, formic acid, which is why the analytes bind more strongly to the stationary phase. Subsequently, the trap column is switched into the nano-LC system, using water and acetonitrile together with formic acid as additive as described above, since TFA can lead to strong suppression effects during ionisation. By increasing the acetonitrile content, the peptides then elute gradually from the analytical nano-column. As an alternative to trap columns, injection loops with fixed volumes can also be used, but these are only suitable for small sample volumes and can lead to wide peak shapes. In addition, the loops do not allow an online desalting step.[61] In addition to the 'classic' columns described, chip-based systems are also suitable for achieving purification and separation of the smallest amounts of analytes. Such chips can be replaced very easily using a 'plug and play' procedure and require almost no manual effort. Chip systems can now be purchased commercially from various suppliers. In addition, a number of developments can be expected in this area over the next few years.[62]

The procedure described is also known as shotgun approach, which has become well established in recent years. The shotgun approach differs from procedures in which proteins are first separated using two-dimensional polyacrylamide gel electrophoresis (2D page) before tryptic digestion takes place. The main advantage of the shotgun strategy is that many proteins and peptides can be identified simultaneously with relatively little effort. A disadvantage, however, is that due to the fragmentation PTMs, protein truncations and alternative splicing events of eukaryotic organisms cannot always be taken into account, which on the one hand leads to a limited sequence coverage and on the other hand to a significant loss of information. Despite this drawback, most scientists prefer the bottom-up approach rather than the top-down approach presented below.[63]

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61 Noga et al. 2007; Wilson et al. 2015.

62 Vargas Medina et al. 2020.

63 Aebersold and Mann 2003; Dupree et al. 2020; Zhang et al. 2013.

In contrast to the bottom-up approach, the top-down approach aims to ana-lyse intact proteins. Accordingly, there is no enzymatic digestion. After isolating the proteins, which can already be challenging because proteins have lower solubilities than peptides, a chromatographic separation is also carried out either by electrophoresis and/or by LC. However, the separation and purification of proteins is significantly more complex than the separation of peptides and a comparatively large part of the analytes is already lost in this process. In addition, the comparatively low utilisation of top-down strategies is due to the limited size of proteins that can be detected by MS detectors with sufficient sensitivity and resolution.[64] Usually, only proteins <30 kDa are detected.[65] However, a lot of research is currently being carried out on both disadvantages in order to overcome these drawbacks in the future.[66]

In some cases, well-preserved and larger proteins can be detected in ancient fossils, as the surrounding biominerals of bones or teeth have good preservation properties. For example, in 2,000-year-old ancient bone, approx. 30 kDa pro-teins could be detected and proteins that were still in good condition could also be recorded in the brain tissue of the Tyrolean Iceman 'Ötzi'.[67] For such samples, the use of a top-down approach may be useful. However, the extent to which a top-down approach can provide additional information for proteome and meta-proteome analysis of ancient manuscripts has not yet been investigated. Nev-ertheless, a use of top-down approaches would be conceivable to analyse the chemical composition of comparatively stable proteins such as collagen in leather or parchment in more detail. Further possible applications include stud-ies on protein survival and degradation.[68] Also, whether enzymatic digestion can be dispensed with and whether it is sufficient to analyse only the undigest-ed fragments that arise solely due to the ageing process has not been adequately researched and certainly offers potential for further investigations. However, it must be noted that the last option mentioned is not a top-down approach in the classic sense.

To overcome the disadvantages of bottom-up approaches, which are mainly based on a low sequence coverage, and of top-down approaches, which are more associated with technical limitations, new considerations deal with mid-dle-down approaches as a further strategy. This middle way, although not yet

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64 Chen et al., 2018; Padula et al. 2017.
65 Fornelli et al. 2018.
66 Shin et al. 2018; Toby et al. 2016.
67 Bona et al. 2014; Maixner et al. 2013.
68 Hendy et al. 2021.

widely used, involves enzymatic digestion with special proteases that are less efficient than trypsin, yielding longer peptide fragments of about 20-100 amino acids that have a molecular mass of 2.5 kDa-10 kDa. Because larger fragments are obtained overall, both the number of peptides and the complexity of the sample extracts decrease. As a result, the requirements for chromatographic separation are reduced, too. At the same time, more unique fragments are formed so that the sequence coverage increases and PTMs as well as proteoforms can be analysed more easily.[69] So far, the middle-down strategy has been used to a very limited extent. Nevertheless, there could also be great potential here for the proteomics analysis of ancient documents.

3.5 Technology requirements for proteomics analyses using mass spectrometry

Since the development of the first MS instruments by Aston and Thomson at the beginning of the twentieth century, a wide variety of techniques and designs have been developed for various scientific issues and applications, and yet they are all based on a similar principle: (i) The desorption of the analytes into the gas phase including their ionisation, (ii) the separation of the ions according to their mass-to-charge ratio (m/z) and (iii) the detection.[70] Nevertheless, the different types are more or less suitable for the analysis of proteins and peptides; in the following sections we will briefly discuss the most important ones.

Some potential ion sources for the desorption and ionisation of the analytes have already been explained in Section 3.3.2. However, the most commonly used ion sources for the detection of proteins and peptides are ESI and matrix-assisted laser desorption/ionisation (MALDI). Both techniques are soft ionisation sources in which the analytes fragment only weakly, if at all. MALDI is based on the use of UV-absorbing substances, the so-called matrix, which are mixed with the analytes. The matrix must be present in a large excess so that a solid matrix crystal is formed by co-crystallisation. Subsequently, the matrix is then ablated using a pulsed UV laser, and the analytes are entrained and ionised, although the exact ionisation process is not yet fully understood. However, different theories exist. MALDI predominantly leads to the formation of singly charged adducts such as, for example, $[M+H]^+$, $[M+Na]^+$ or $[M+K]^+$.[71]

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69 Cristobal et al. 2017; Pandeswari and Sabareesh 2019.
70 Smoluch and Silberring 2019.
71 Dreisewerd 2003; Karas and Hillenkamp 1988.

Compared to MALDI, online couplings with LC principles are possible using ESI. The eluate of the LC is sprayed under atmospheric pressure by means of nitrogen within an electric field. As the solvent evaporates, the charged analytes accumulate on the surface of the individual droplets. Due to the high charge density, the individual droplets disintegrate like an explosion (Coulomb explosion) until only the charged analytes are present and passed into the MS.[72] Characteristic of the ESI process is the formation of pseudo ($[M+H]^+$, $[M+H]^-$) and adduct molecules ($[M+Na]^+$, $[M+NH_4]^+$ etc.) as well as the induction of multiple charges ($[M+H]^{2+}$, $[M+3H]^{3+}$etc.), especially with higher mass molecules like proteins. With certain additives such as weak acids or salts to the eluents, the ionisation processes can be influenced and thus possibly higher signal intensities can be achieved.[73] Nanospray-ESI sources enable the formation of a stable spray and maximum sensitivity even at low flow rates, which is particularly relevant when only small amounts of the analytes are available.[74] Since MALDI and ESI are based on different ionisation processes and are complementary to each other, it is recommended to use both techniques in order to record the maximum information content from the proteome of a sample.[75]

To determine the m/z ratios of proteins and peptides, high-resolution analysers such as time-of-flight (ToF), orbitrap or fourier-transform ion-cyclotron-resonance (FT-ICR) analysers are primarily used. The various mass analysers differ mainly in resolution, accuracy, measuring range, scan rate and price.[76] ToF analysers are combined with both ESI and MALDI ion sources. They are characterised by fast scan rates and are therefore suitable for fast LC separations. In addition, very large m/z-ratios can still be analysed with them. Compared to ToF analysers, orbitraps are comparatively compact, but do not allow as fast scan rates. In addition, the mass range is limited to about m/z 6,000. However, they have a significantly better resolution and MS^n spectra can be recorded. The highest mass resolution is achieved with FT-ICR devices. They are also the most expensive both to purchase and to maintain, as they are operated with superconducting magnets that are cooled with liquid nitrogen and helium. However, scan rates are the lowest compared to the other two analysers. Usually, different analysers are coupled with each other so that MS/MS or MS^n experiments are possible.

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72 Yamashita and Fenn 1984.

73 García 2005; Leitner et al. 2007; Nshanian et al. 2018.

74 Karas et al. 2000; Wilm and Mann 1994.

75 Nadler et al. 2017.

76 Creydt and Fischer 2020.

In recent years, the market leaders have also equipped some of their LC-ESI-QToF devices with ion mobility spectroscopy (IMS) cells. Depending on the device manufacturer (Agilent, Bruker or Waters), different designs are available, all with the aim of introducing an additional orthogonal separation in order to be able to distinguish compounds that have the same (isobars) or a very similar m/z ratios. The ion mobility of a molecule is influenced by the mass and the charge but also by its size and shape (collision cross section, CCS). Especially in proteomics studies, this technology offers a high added value, both at the protein level, to distinguish structural conformers and especially at the peptide level in shotgun approaches to increase the sequence coverage, as isobar fragments can be separated better and background noise is reduced, which leads to an improved signal-to-noise ratio. Furthermore, this technique can also be very helpful in identifying PTMs.[77] Even if, to our knowledge, no comprehensive studies using IMS devices have yet been carried out on ancient artefacts, it can be assumed that this technology will have a high added value in future studies.

3.6 Data evaluation

The identification of peptides and their associated proteins in proteomics and metaproteomics experiments is often challenging and can be very time-consuming. In the simplest case, with PMF approaches, which are usually carried out with MALDI-ToF devices, a bottom-up experiment is carried out and, after enzymatic digestion, the peptides obtained are measured by MS in full-scan mode (Fig. 3A). In this way, no sequence data are obtained, but a fingerprint that is dependent on both the peptide or protein and the enzyme. The protein can then be identified on the basis of a comparison of the peak list obtained with the corresponding sequence databases. The ZooMS method already presented is based on this procedure (see Section 2). The prerequisite for this simple and quick procedure is, on the one hand, that there are as few impurities or PTMs as possible and, on the other hand, that the corresponding sequences are available in the protein or genome databases used, such as Swiss-Prot or NCBI. Suitable search programs are, for example Mascot,[78] MS-FiT,[79] ProFound[80]

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77 Dodds and Baker 2019; Winter et al. 2019.

78 Perkins et al. 1999.

79 https://prospector.ucsf.edu/prospector/cgi-bin/msform.cgi?form=msfitstandard (accessed on 24 Jan. 2021).

80 Zhang and Chait 2000.

or PeptIdent.[81] Sometimes it can be helpful to use different programs and databases, as the tools rely on different algorithms and quality parameters for the calculations.[82]

If PMF is not sufficient for reliable identification, e. g. because the extract is not pure enough, or if the peptide sequence is to be determined more precisely, peptide fragment fingerprinting (PFF) approaches are particularly suitable (Fig. 3B).
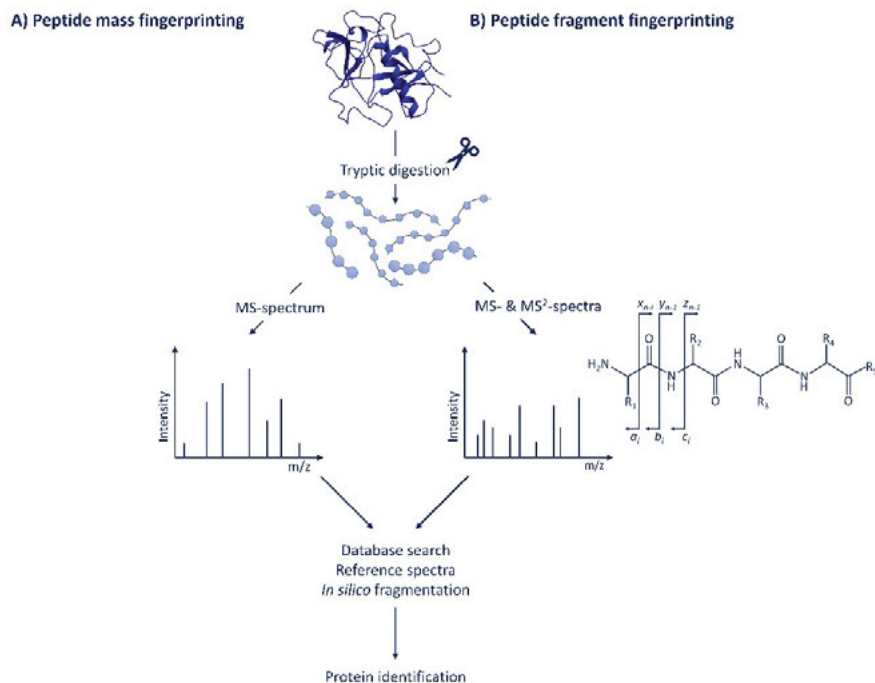
Fig. 3: Workflow of A) PMF and B) PFF. While only MS spectra are recorded for PMF experiments, PFF studies enable additional structural information by generating MS^2 or MS^n spectra.

For this purpose, the peptides are subjected to mass spectrometric fragmentation after enzymatic digestion, so that even smaller fragment ions are

81 NCSC US, PeptIdent <http://www.pdg.cnb.uam.es/cursos/BioInfo2004/pages/visualizacion/programas_manuales/spdbv_userguide/us.expasy.org/tools/peptident.html> (accessed on 24 Jan. 2021).

82 Damodaran et al. 2007; Dupree et al. 2020; Henzel et al. 2003; Zengin et al. 2017.

obtained. In this way, structural information for a database comparison is obtained. The Mascot software can also be used for this step. In addition to many other programs, SEQUEST[83] is a helpful tool in this context, especially when spectra with low signal-to-noise ratios are available. PFF experiments are also suitable for *de novo* sequencing, which is relevant if peptides are not registered in databases, and PTMs can be more easily traced.[84]

In addition to the procedures explained, as in many other research areas, bioinformatic methods for pattern recognition are becoming increasingly relevant.[85] These have the advantage, on the one hand, that the data can be evaluated automatically and, on the other hand, that more signals and multivariate relationships can be taken into account so that sub-differentiations can be made between the various sample groups. Overall, more signals can be used in this way than with a pure database comparison, which assumes that the signals are already known. At the same time, relevant marker signals can be extracted, the structure of which can be particularly relevant for further interpretations. While such approaches have so far hardly been pursued in manuscript research using proteomics, the work on other ancient artefacts or with other technological platforms is already more advanced.[86] This procedure assumes that reference samples are measured using the same method, but the larger such a database becomes, the more information can be made available. It can be assumed that some developments in this area can be expected in the next few years.

4 Conclusions

Although paleoprotomics is a comparatively young discipline, numerous breakthroughs have already been made in manuscript research. Above all, the progress from destructive sampling to non-invasive procedures is of great value and enables research in this area to be progressed increasingly, as the acquisition of samples as a whole is made significantly easier. Further future developments on the part of MS and also chromatographic methods will make it possible to measure with ever greater sensitivity, so that details of the proteome can be recorded better and better. In this regard, we see great potential in the establishment of IMS technologies. Some successes could already be recorded

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83 Eng et al. 1994.

84 Dupree et al. 2020; Na and Paek 2020; Zengin et al. 2017.

85 Creydt and Fischer 2020.

86 Alvarez et al. 2019; Bacci et al. 2001; Gu and Buckley 2018; Navas et al. 2008.

on the data evaluation side. Nevertheless, there are still some challenges to be mastered in this area in order to achieve a greater coverage of the sequences and improve the database research. Furthermore, with the implementation of bioinformatic methods it should be possible to obtain a large amount of additional information via a manuscript, since signals that have not yet been interpreted can be explained better. There is further potential in expanding the currently predominantly applied bottom-up approaches to middle-down and top-down strategies, since in this way less information could be lost.

Overall, the proteomics and metaproteomics analysis of ancient manuscripts offers a great deal of added information, also in connection with other, comparatively more established methods. Based on the successes already achieved, further progress can be expected in the next few years, even if there is still much to be done.

Acknowledgements

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Laurenza

Scientific Analysis of Leonardo's *Manuscript with Anatomic Drawings and Notes*

Abstract: In this paper, we discuss the importance of scientifically investigating cultural artefacts in a non-invasive way. Taking as test case Leonardo da Vinci's *Manuscript with anatomic drawings and notes*, which is stored in Weimar, we clarify fundamental steps in the chronology of this folio. By means of microscopy, infrared reflectography, UV photography, and X-ray fluorescence analysis, we were able to identify various types of sketching material and several varieties of iron gall ink. For his sketches, Leonardo used two different sketching tools, a lead pencil and a graphite pencil, as well as several types of ink for developing these sketches into drawings. With regard to ink, it is important to observe that there is no difference between the ink Leonardo used for drawing and the ink he used for writing text. Based on the materials analysed, we suggest a chronology for the creation of this unique folio.

1 Introduction

The particular manuscript with anatomic drawings and notes[1] that is now kept in the Klassik Stiftung Weimar[2] originally belonged to the Royal Collection in Windsor (*Anatomic manuscript B* or *Fogli B*).[3] It is unclear how this folio – formerly part of the Anatomy B folios, related to RL 19095, and facing RL 19052 – made its way to Weimar.[4] There might be a connection to Johann Wolfgang von Goethe, who was also interested in anatomical study, especially in studies of skulls.[5] It would be interesting to consider whether this manuscript came to Weimar at Goethe's urging.[6]

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1 See also Keele 1983.

2 Favaro 1928.

3 Keele and Pedretti 1980, 164–167, 820–822, 830; Clayton and Philo 1992, 74–76; Pedretti 2005, 165–178.

4 Steinitz 1960, Möller 1930.

5 Marmor 1988.

6 Mildenberger et al. 2016.

2 Current state of research

Most scholars date the drawing to about 1506–1508,[7] which seems to be confirmed by the hatched areas. During the 1490s, hatching along the outline and within the figure was done with straight lines.[8]
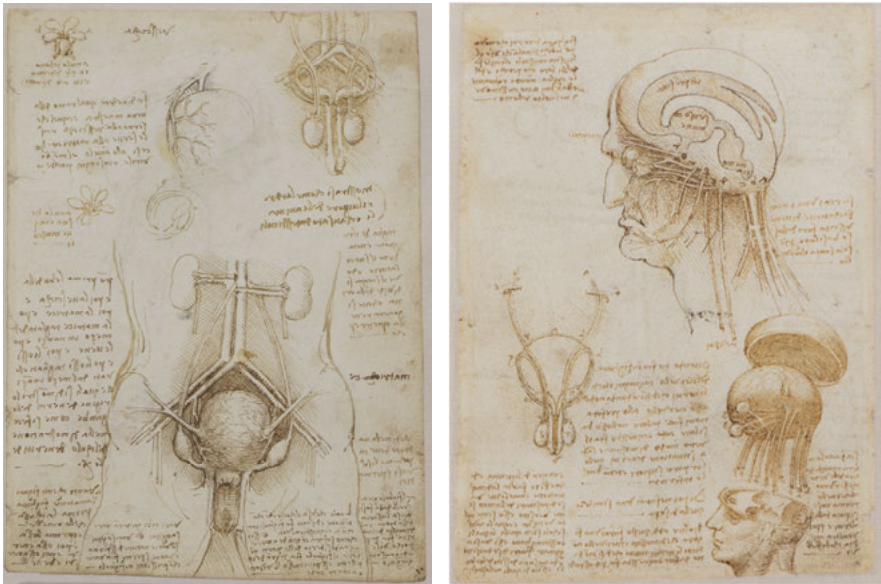
Fig. 1: Presentation of the recto (left) and verso side (right) of the folio. Recto, upper half, from the right: frontal view of male genitalia; bladder (also dissected), muscles of the anal sphincter. Lower half: frontal view of female genitalia. Verso, above: brain with cerebral ventricles, emergence of the spinal cord (flanked by two small cords), cranial nerves. Cranial nerves illustrated (top to bottom): the olfactory nerves directed toward the frontal sinus, the optic chiasm with nerves and optical tracts, the trigeminal branches, the vagus nerve. Lower right: exploded view of the head, with the cranial vault, brain with cranial nerves, and the cranial base. Lower left: frontal view of the male genitalia. © Uwe Golle, Carsten Wintermann, Klassik Stiftung Weimar.

The contents of this folio are dominated by scholastic analogical thought, which, after centuries of verbal expression, finds a formidable visual expression

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7 Müntz 1899, 526.
8 See also Herrlinger 1953.

for the first time in Leonardo. There are two main sets of analogies here: the analogies between male and female genitalia, and the analogies between the reproductive and nervous systems. On the recto side of the folio, the female genitalia (below) are coupled with the depiction of the male genitalia (upper right), both presented in a frontal view. On the Windsor folio (RL 19059v; K/P 54v), which originally opposite the recto side of the Weimar folio, both images are again paired in a side view[9]. A notation on the Weimar folio highlights the analogy: 'The female has two sperm ducts in the form of testicles, and her sperm is first blood like that of the man [...]' Scholastic medicine described the female genital organs as being analogous to male organs, except that the female organs are internal.

Our main task is not an art-historical interpretation of the drawings, which have been described in detail elsewhere and do not require further interpretation here. Rather, based on the physically available materials, we shed light on the genesis of the folio and thus the relationship between text and drawing.

3 Scientific analysis

In summary, the focus of this paper is the material aspects of the folio and the findings of scientific analysis. The drawing and the text passages were executed in different iron gall inks. As mentioned above, visual inspection reveals at least two different colours; a closer investigation reveals what appear to be additional different ink colours (see Fig. 2). Moreover, traces of preliminary sketches are visible to the naked eye.

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9 Keele 1983, 66–67, 350–351.
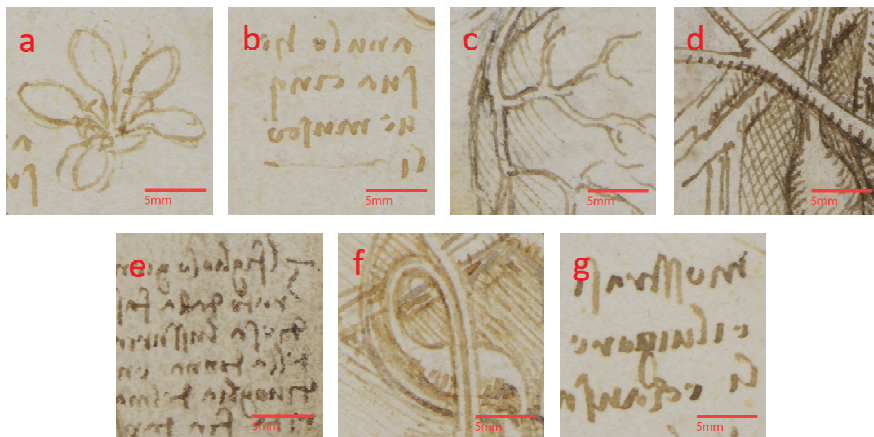
Fig. 2: Detailed views of different parts of the sheet, showing what appear to be different ink colours. These 'differing colours' may in fact be caused by the presence (or absence) of materials used in preliminary sketches or by corrosion processes.

Because the folio is unique and fragile, it must be kept in a controlled environment and cannot be moved. In addition, any analysis of its composition must be conducted without taking samples and without touching the surface of the object. We therefore used UV photography (UV), infrared reflectography (IRR), and X-ray fluorescence analysis to investigate the drawings and text passages (see Appendix).

4 First results

4.1 UV/IRR

Figure 3 displays various microscopic images taken of several details under UV, VIS, and NIR light. Due to their tannin content, iron gall inks are clearly visible under UV light, whereas the preliminary sketches are visible under NIR illumination.
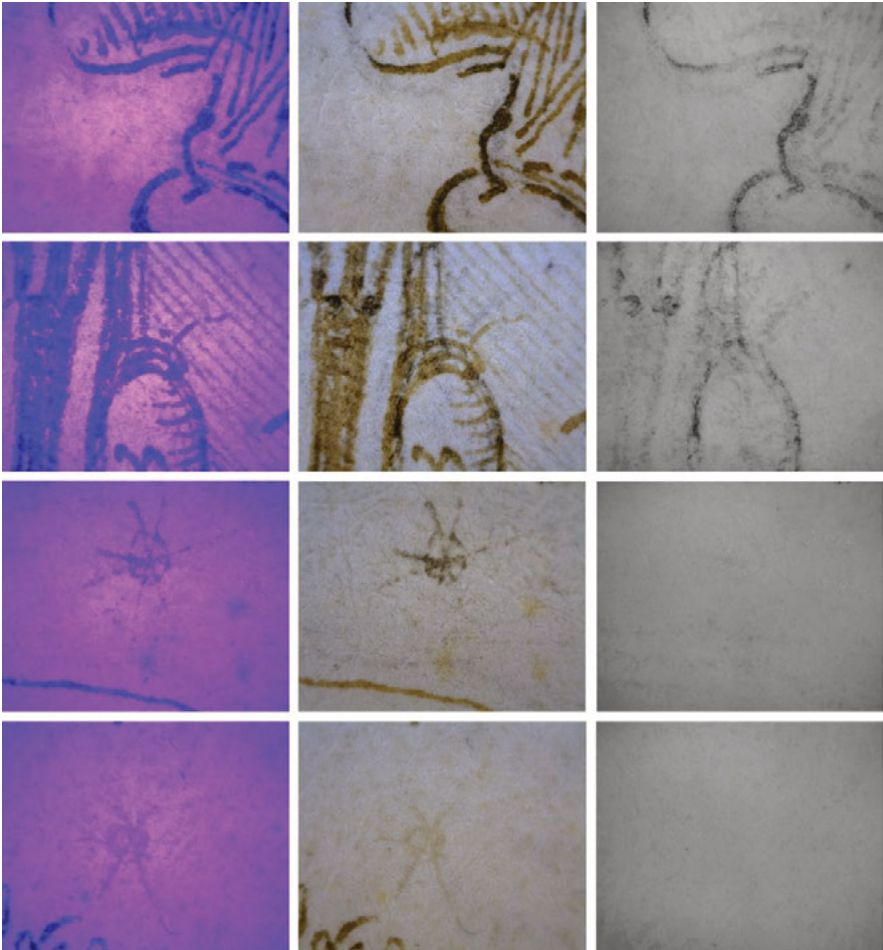
Fig. 3: Microscopic images taken under UV light (365 nm, first column), visible light (second column), and NIR light (third column). First row: part of a man's head; second row: part of a male genital organ; third row: star-like marker on the verso side; last row: star-like marker on the recto side. In contrast to IR radiation, UV light is easily absorbed by tannins and increases the visibility of iron gall inks. In addition to the drawings and text passages, elements such as the star-like patterns are visible under UV light.

Infrared reflectography (IRR) of both pages clearly reveals preliminary sketches beneath the various drawings. However, not all parts exhibit sketches (Fig. 4). On the recto side, preliminary sketches of female genital organs (front view) and a bladder (side view) are clearly visible. In contrast to these drawings, the

drawings of the male genital organs and the five muscles of an anus do not appear to be based on any preliminary sketches. In addition, another preliminary sketch below the bladder drawing was not elaborated.

On the verso side, we can observe preliminary sketches of a man's head with brain (side view), the figure of the top of a skull with brain and related nerves (side view), and the male genital organs (front view). Therefore, a similar pictorial object was sketched in one case but not in the other.
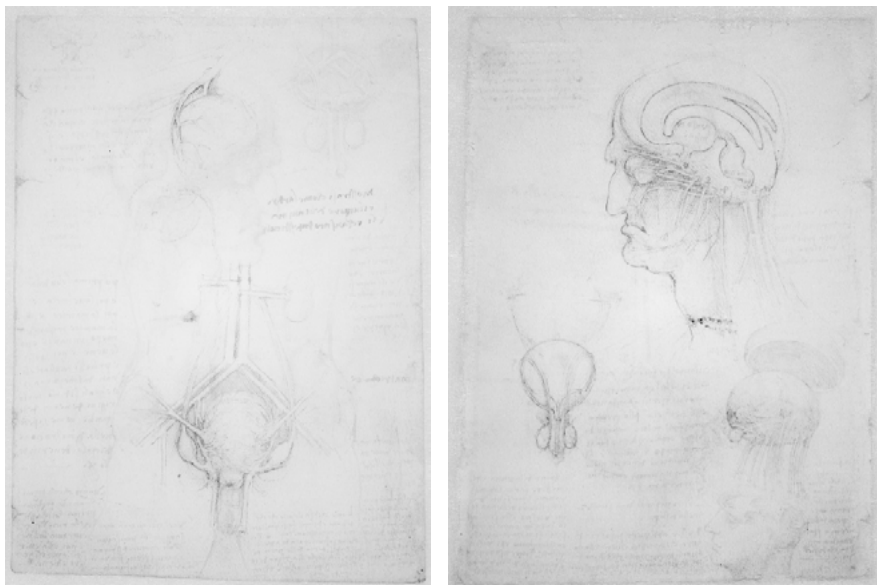
Fig. 4: IRR (1000 nm) of recto (left) and verso side (right).

It is remarkable that we were able to detect the element lead (Pb) in various amounts irregularly disseminated throughout the paper. An elaborate analysis by means of XRF reveals two different types of material for sketching. In the upper parts of each side, Leonardo used a carbon-based material (i.e. a graphite pencil), whereas the lower parts of each side were executed with a lead pen. It is impossible to say why Leonardo used two different types of material for sketching (see Fig. 5). Furthermore, we cannot reconstruct the chronology of the preliminary sketches based on the analytical results, which were conducted on only one object.
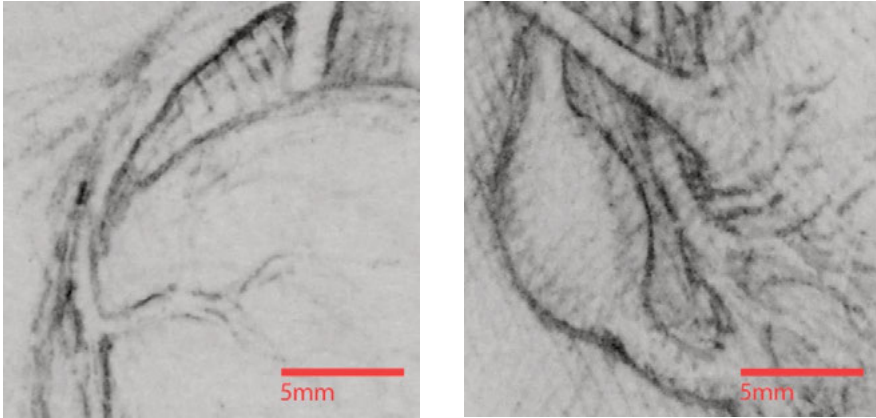
Fig. 5: Detailed views of two different preliminary sketches under IR light (1000 nm) – left: graphite pencil; right: lead pen.

4.2 XRF

Investigation of the iron gall ink by means of XRF shows that three different types of ink were used for the drawings and the text passages. In addition, we analysed two iron gall inks that were used for the stars and the pagination character *y*. It must be emphasized that the star-like markers on the recto side are nearly washed out (in contrast to the verso side); these measurements therefore contain a significant measuring error. Nevertheless, it is possible to prove the similarity of the ink used for these markers.

Figure 6 displays, in different colours, the elements of the different groups of iron gall ink. Leonardo did not restrict himself to two types of ink for the drawings and text passages. The two visible colours of ink are due either to a chemical reaction or to the mixing of iron gall ink with the sketching material. We were able to identify three different inks, types A, B, and C, in the drawings and text passages; the markers were performed with ink type D; and the pagination character was written with ink type E.
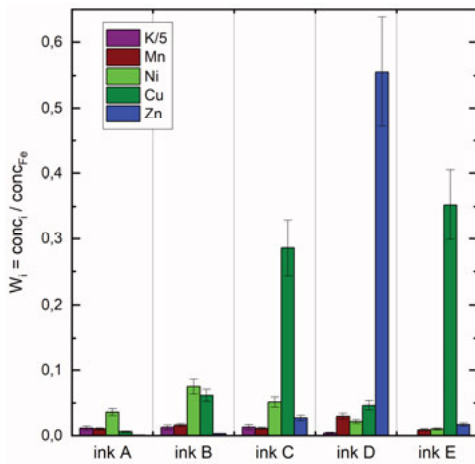
Fig. 6: Fingerprint values (e.g. relative concentration) of different elements (potassium, K; manganese, Mn; nickel, Ni; copper, Cu; zinc, Zn) present in the iron gall inks. The error bars indicate analytical error.

Based on the various materials, we can reconstruct the chronology of the two pages. As mentioned before, it is not possible to fix the sequence of the various preliminary sketches based on the analytical results. Nevertheless for the recto side we may conclude that Leonardo first used a lead pencil for the preliminary sketch of the female genital organs and then switched to a carbon-based material, maybe graphite, for the preliminary sketch of the bladder (Fig. 7).
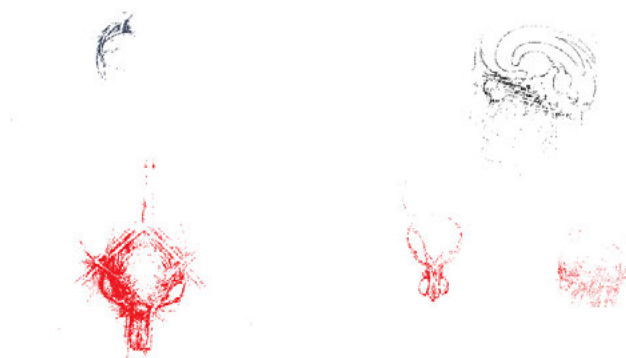
Fig. 7: Reconstruction of the chronology of preliminary drawings (red: lead pen; black: graphite pencil).

In the next step, most of the drawings and the text passages were executed with one iron gall ink, type A (Fig. 8, brown lines). It must be emphasized that all preliminary sketches (in either led pen or graphite pencil) were then elaborated with this type of ink. After this step, additional parts of the drawings were executed in two different types of ink: type B (Fig. 8, blue) and type C (Fig. 8, green). Finally, the markers (Fig. 8, red) and the pagination (Fig. 8, violet) were added. It is very important to emphasize that Leonardo mostly used the same ink for the drawings and for the text passages.
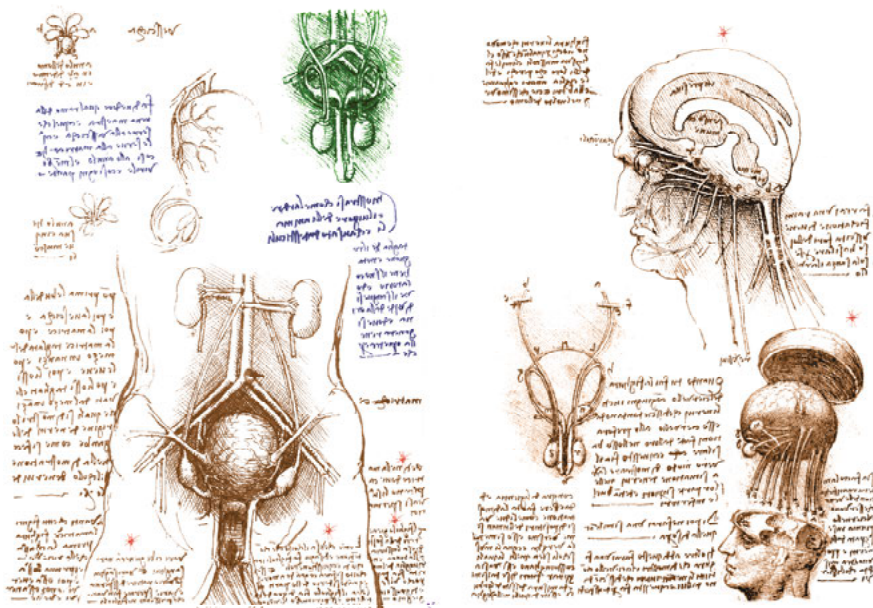
Fig. 8: Reconstruction of the iron gall ink drawings and the text passages.

5 Conclusion

Scientific investigation of this folio reveals distinct steps in the chronology of Leonardo's anatomic sketchbook. We have been able to identify various types of sketching material and various types of iron gall ink. Leonardo used two different sketching materials, and he used several inks to develop the sketches into drawings. It is remarkable that there is no difference between the ink used for drawing and the ink used for text. These findings lead to a general interpretation

of the scientific results, based on different types of hatching corresponding to different functions, and might provide new insights into Leonardo's creative working process.

As mentioned before, the relation of this folio to the bundle of anatomic drawings stored in the Windsor Castle collection is evident. It is noteworthy that we analysed only one folio of the whole codex. To answer broader questions about the use of two different sketching materials, the varying use of ink for drawings and for text passages, and the significance of star-like markers, additional analysis of these objects will have to be conducted.

6 Excursus

6.1 Reconstruction of the primary appearance

Regarding the chemical composition of iron gall ink, it should be borne in mind that the appearance of the various types of iron gall ink may have changed over time. During the manufacturing process, iron gall ink is black due to the formation of the black ferro-gallate pigment. With age, the colour can change from black to brown, depending on storage conditions, climate, and the chemical composition of the ink itself. These phenomena have been well known for generations and were first described by Ribeaucourt.[10] On the other hand, paper degrades and turns brown due to oxidation and other corrosion processes. Further details are discussed elsewhere.[11]

Figure 9 shows how the two pages may have appeared originally. The various types of iron gall ink are all black, and the optical interference of the different sketching materials is not visible.

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10 Ribeaucourt 1797.
11 Meyer et al. 2015.
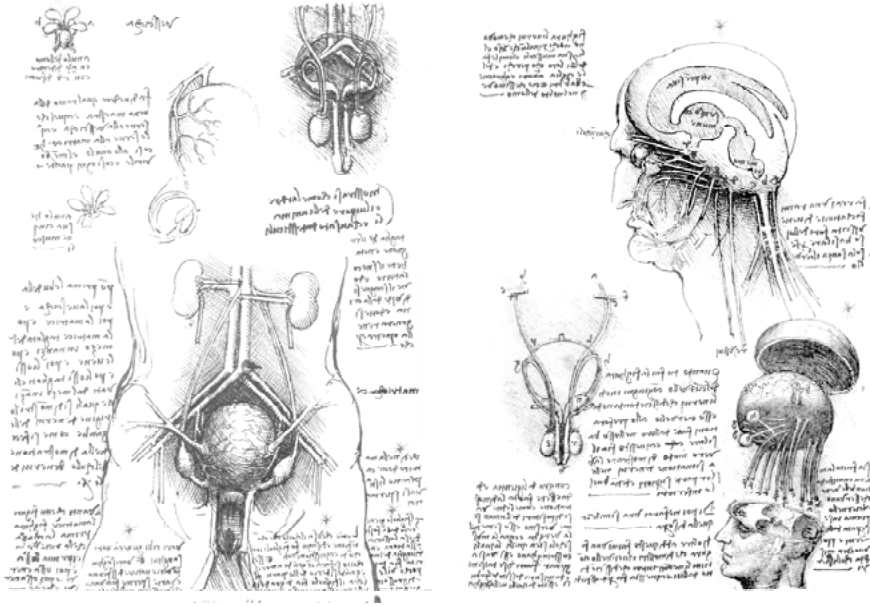
Fig. 9: Reconstruction of the original appearance

6.2 The paper

Visually observed under grazing light, the surface of the paper exhibits textile imprints. These imprints are due to the use of wool felt during production of the paper. There is no difference between the recto and verso sides. Therefore, it is not possible to distinguish between a sieve and a felt side. Examination of the folio under transmitted light reveals no watermark; however, two other observations indicate an early type of paper. The rib wires are very broad (up to 1 mm). The copper wire was first drawn and then flattened. No weft-wire structure is visible; presumably, the weft wires were not woven in during the construction of the sieve. The rib wires were not fixed, or horsehair was used as weft wire, and the wires are therefore invisible in the paper structure (see Fig. 10).[12]

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12 Dietz and Wintermann 2013.
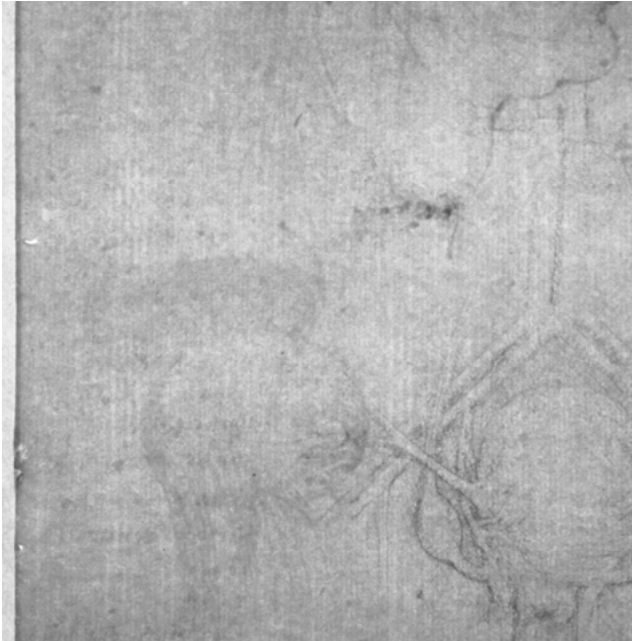
Fig. 10: Visualization of the paper structure.

Appendix

Multispectral Imaging analysis: UV photography (UV) and Infrared Reflectography (IRR)

Infrared and UV reflectography are well-established, non-destructive examination tools that can reveal information about a broad range of cultural heritage artefacts. Both techniques may be described as Multispectral Imaging (MSI) techniques.

UVA (320–400 nm) is most commonly used in the examination of artefacts. Some materials absorb UV radiation and re-emit it in the visible spectrum as UV-induced visible fluorescence. UV radiation causes visible fluorescence in various proteinaceous materials such as glue and paper sizing implements and is easily absorbed by tannins.

Infrared radiation used for the examination of cultural artefacts is generally divided into near IR (NIR, 700–1000 nm) and mid IR (MIR, 1000–3000 nm). Many materials exhibit different visual appearances under specific wavelengths

of IR radiation, depending on whether they absorb, transmit, or reflect the radiation. Most important in these investigations is the behaviour of certain types of ink and drawing media, which enables classification of these materials. Carbon-based ink, graphite, charcoal, and metal points easily absorb in MIR, while organic ink and iron gall ink become increasingly transparent under longer wavelengths.[13]

We used a USB microscope equipped with white light LEDs in addition to the UV (390 nm) and near infrared LEDs (NIR, 940 nm) (magnification × 3.4). In addition, the objects were photographed with an X71 Microbox camera under UV (365 nm), normal, and NIR (1100 nm) illumination.

Fingerprint model

It is well known that iron gall inks are produced by mixing natural iron vitriol with gallnut extracts. Because the inks are made from natural raw materials, they have heterogeneous, often very different, compositions.[14] In addition to iron sulfate, they contain secondary components, such as vitriols of the aluminum (Al), manganese (Mn), copper (Cu), or zinc (Zn),[15] which are also referred to as 'metal salts'. These metals do not contribute to colour formation in the ink solution, but they may change the chemical properties of the inks and influence corrosion processes. The varying composition of these different vitriols is a characteristic property of historical iron gall inks and makes their exact determination possible.[16]

The inorganic contaminants mentioned above provide a basis for differentiating between the iron gall inks. The present micro-XRF measurements of the iron gall inks were quantified using the composition fingerprint model, which is based on fundamental parameter procedures leading to the value W_i (relative amount of weight concentration of the element i, e.g. Mn, Cu, Zn, relative to Fe).[17] Ageing phenomena have no influence on the method of analysis we used, because even if the appearance of an iron gall ink has changed (e.g. from black to brown) due to chemical corrosion processes that alter the organic material, the proportion of metal salts in the ink remains the same.

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13 Mrusek et al. 1995.

14 Krekel 1999, Oltrogge 2005.

15 Hickel 1963, Lucarelli and Mando 1996.

16 Hahn 2010.

17 Hahn et al. 2004, Malzer et al. 2004.

X-ray fluorescence (XRF)

Elemental analyses were carried out with the mobile energy dispersive micro-X-ray spectrometer ARTAX® (Bruker GmbH, Berlin), which consists of an air-cooled, low-power molybdenum tube, polycapillary X-ray optics (measuring a spot size 70 µm in diameter), an electrothermally cooled Xflash detector, and a CCD camera for sample positioning. Additional open helium purging in the excitation and detection paths enables the determination of light elements (11 < Z < 20) without a vacuum. All measurements were made using a 30 W low-power Mo tube, 45 kV, 600 µA, with an acquisition time of 15 s (live time) to minimize the risk of damage. For better statistics, at least ten single measurements were averaged for one data point. Further details of the method are described elsewhere.[18]

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18 Bronk et al. 2001, Hahn et al. 2004, Wolff 2009.

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Boriana Mihailova, Jochen Schlüter, Kaja Harter-Uibopuu

Inscribed Gems: Material Profiling beyond Visible Examination

Abstract: A series of thirty-five engraved gems from the collection of the Museum für Kunst und Gewerbe, Hamburg, were re-examined using non-destructive material-science methods in order to verify the previously determined rock type. The results of four selected, engraved gems containing pictorial elements as well as inscribed letters are presented in detail as a showcase of opaque gems. These intaglios originate from different epochs and places in the Mediterranean. They were analysed using both classical gemmological approaches and the more advanced Raman and infrared-reflectance spectroscopic methods, which can fingerprint the solid material on the basis of its atomic structure and chemical composition. The results demonstrate the potential of these spectroscopic methods for unambiguous identification of engraved gems and, more importantly, the necessity of applying them along with traditional gemmological methods for a correct material identification, which may furthermore help in tracing the origin of the inscribed gem.

1 Introduction

The appearance of writing and creation of written artefacts was a key factor for the development and survival of ancient cultures. To better understand the role of written artefacts in this evolution, researchers ought to examine not only the message left by former generations, but also the process of creating the message: choice of writing support, development of suitable tools, and the establishment of production processes.

The diversity of written artefacts in terms of material support is huge and includes clay tablets, stones, metal, ivory, parchment, palm leaves, paper, etc. Among these, gems were chosen as both portable and durable, seemingly everlasting messengers, i.e. they were intended to deliver the text message to different places within the same time period as well as into the future. Gems are generally characterized by appealing visual appearance (to catch the eye)[1] as

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1 See e.g. Rapp 2009.

well as by having mechanical and chemical resistance to intensive everyday use. However, gemstones with a high level of hardness, such as ruby or sapphire (Al_2O_3-based, Mohs hardness[2] 9) and diamond (built up of four-coordinated carbon, Mohs hardness 10) are very difficult to carve and hence are rarely used as writing supports. Thus, most of the ancient engraved gems are varieties of quartz (SiO_2, framework silicates, Mohs hardness ~7), jade (composed of chain silicates, Mohs hardness ~6–7), and rocks containing predominantly layered silicates which have Mohs hardness ranging between 2 and 4. Typical examples of silica varieties are carnelian, jasper, agate, chalcedony, and opal, whereas the latter group includes soapstone, serpentinite, and mica rocks. Carnelian can be clearly distinguished from the other rocks mentioned above because it is translucent and appears optically homogenous and reddish in colour. Agate, chalcedony, and opal can also be identified by their common visual appearance. However, these mineral varieties may appear opaque, like jade, soapstone, serpentinite, and mica rocks, and sometimes the identification of opaque rocks via classical gemmological methods can be very challenging or almost impossible, even for experienced researchers, especially if the samples do not exhibit polished surfaces suitable for the determination of optical constants.

This reality calls for the application of more sophisticated analytical methods, which are sensitive to both the atomic structure and chemical composition and thus can provide the information necessary to unambiguously identify the mineral phases composing the gem. Since such methods should be non-destructive, one has to use techniques in which the reflection signal from the sample is analysed. Therefore, Raman spectroscopy and infrared (IR) reflectance spectroscopy are very suitable for this purpose. Both methods are based on the interaction between the incident electromagnetic radiation and the so-called normal vibrational modes of the solid sample, i.e. the set of atomic vibrations around the equilibrium positions of atoms that are allowed to exist in the material without destroying it. Hence, the resulting measured spectra carry unique information about the atomic-scale configuration and can truly fingerprint crystalline as well as amorphous phases.

Over the last decade, Raman spectroscopy has become popular for fast, easy-to-handle, non-destructive mineral identification.[3] This is partially due to

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2 The Mohs hardness scale represents the scratch resistance of solids relative to ten reference minerals, with diamond having the maximum value of 10. The absolute hardness plotted against the Mohs hardness resembles an exponential growth function. See e.g. Rapp 2009.

3 See e.g. Giarola et al. 2012; Centeno 2015.

the continuously growing databases available online, free of charge,[4] but also because of the establishment of strategies and protocols for quantitative determination of the chemical formulas of complex silicate minerals.[5] A thorough quantitative analysis of the phase and chemical compositions is also of great significance for analysing portable, mineral-base written artefacts because it may considerably advance provenance studies. However, Raman spectroscopy has one drawback that may hamper its application to natural samples: the existence of strong photoluminescence background (due to substitution or structural defects) combined with weak Raman signals may result in unfeasibility to detect any usable spectral profile. Infrared reflectance spectroscopy is rarely used for mineral identification because the assessable spectral range for probing the atomic vibrations is restricted due to instrument limitations. Besides, the collected spectral profiles are quite different from the IR spectra measured in the common transmittance regime due to the combined effect of multiple light-matter interaction processes. Nevertheless in the case of poor-quality Raman spectra, IR reflectance spectroscopy becomes the technique of choice as a non-destructive method that is also applicable to samples exhibiting strong photoluminescence.

In order to explore the potential of Raman and IR reflectance spectroscopy for identifying the rock type of engraved gems, we have analysed thirty-five samples from the collection of the Museum für Kunst und Gewerbe (MKG), Hamburg. Here we report our results for four selected samples, which contain symbols and written text along with engraved figures; these samples appear opaque and are thus representative for our study. We show that the original material assignment of these gems needs to be revised, and also demonstrate that if the writing support is atypical, then the material profile can be a marker for provenance.

2 Materials and methods

2.1 Samples and classical examination

The catalogue numbers, locality, and inscription age of the intaglios studied here are given in Table 1. The table also summarizes the previous rock-type

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4 See e.g. Lafuente et al. 2015.

5 Bendel and Schmidt 2008, 1055; Bersani et al. 2009, 484; Bersani et al. 2018, 684; Huang et al. 2000, 473; Kuebler et al. 2006, 6201; Leissner et al. 2015, 2682; Watenphul et al. 2016, 970.

identification.[6] Gem #1964.294 has been so far described as soapstone, gems #1964.324 and #1965.130 as jasper, and gem #1965.122 as moss agate. The intaglios were first re-examined using classical non-destructive gemmological approaches, namely: (i) observation of general appearance (e.g. colour, transparency, texture, occurrence of luminescence upon UV irradiation); (ii) determination of specific gravity and refractive index; and (iii) further physical properties (e.g. magnetic activity).

Table 1: Gem catalogue number, locality and age of inscription (after Zazoff 1975), material identification according to classical gemmological methods, and material identification via Raman or IR reflectance spectroscopy.

Gem	Locality / inscription age	Classical gemmological methods		Raman / IR spectroscopy
		previously	this study	
1964.294	Melos, Greece (?); second half of the 7th c. BCE	soapstone	serpentinite	muscovite variety
1964.324	Phoenicia – Carthage; 6th c. BCE	green jasper	green jasper	opal A + glauconite as a colouring agent
1965.122	locality unknown; 3rd–4th c. CE; inscription: Greek	black jasper	serpentinite + magnetite	Fe-containing antigorite + magnetite
1965.130	Persia; 6th–7th c. CE	moss agate	serpentinite with magnetite grains	antigorite + magnetite

2.2 Raman spectroscopy

The Raman spectra were collected in back-scattering geometry with a Horiba Jobin-Yvon T6400 triple-monochromator system equipped with an Olympus BX41 confocal microscope and an LN_2-cooled Symphony CCD Detector. The spectra were excited with the green line (λ=514.532 nm) of the Coherent Innova 90C FreD Ar$^+$ laser. The spectrometer was calibrated to the position of the Raman peak of Si wafer at 520.5 cm^{-1}, the spectral resolution was ~2 cm^{-1}, while the precision in determining the peak positions was ~0.35 cm^{-1}. All spectra were

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6 Zazoff 1975 provides a catalogue with commentary of the collection of engraved gems at the MKG.

collected with 50× long-working distance objective, using a confocal hole of 400 μm, which helped to reduce the undesired photoluminescence background. The laser power delivered on the sample surface was ~7.9 mW, while the diameter of the laser spot was approximately 2 μm. Several points from the same sample were probed in order to check for reproducibility of the spectra from the areas with the same appearance under a microscope. The Raman spectra presented below are baseline corrected for the continuum photoluminescence background, using spline interpolation, and temperature reduced to account for the Bose-Einstein phonon population. It is worth noting that none of these data-evaluation steps influences the peak positions, and the aforementioned evaluation procedure is not required for a simple phase identification based on qualitative comparison with reference spectra.

2.3 IR reflectance spectroscopy

The IR reflectance spectra were collected with a Bruker Vertex 70 FTIR spectrometer equipped with a Hyperion 2000 IR microscope with a 15× IR objective, using a Globar as IR white source, a wide-range MIR-FIR beam splitter, and an LN-MCT-D316-025 detector. The instrumental resolution was 2 cm^{-1} and the mirror scanner velocity was 20.0 kHz. The spectra were collected from an area of the size 80×80 μm.

The spectra of the engraved gems were compared with the spectra of reference mineral samples from the collection of the Mineralogical Museum, CeNak, Universität Hamburg, which were measured under the same experimental conditions as the gem spectra.

3 Results and Discussion

3.1 Engraved gem #1964.294

Among the intaglios in the collection of the MKG, two stones – due to their characteristic material and style – are referred to as island gems, that is, archaic intaglios, probably from Melos. The Cycladic island was a centre of art at the end of the seventh as well as at the beginning of the sixth century BCE.[7] Boardman points out that 'serpentine' is the most common gem used in Melos and is

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7 Boardman 1963, 106–107, refers to the exquisite pieces of jewelry from the Melian school.

represented in almost every shade of green. Furtwängler called the material steatite, thus trying to qualify the colour or translucency, and he has been followed by most subsequent archaeologists who have considered the matter (including Zazoff 1975).[8] Interestingly, Boardman also touches on the subject of the disagreement between scientists and archaeologists over terminology. Although he admits that the description will be 'wholly unacceptable to the petrologist', he deems its use justified in this case, since 'no archaeologist will be misled by another's use of it'.[9] This approach might have been acceptable in times when natural sciences and humanities had less contact, and collaborative work was seen as unnecessary. One of the aims of the cooperation between scientists and humanities scholars in Hamburg is to correct these obvious mistakes and prevent them from occurring again.

Gem #1964.294 is a lentoid intaglio (2.00 – 1.95 – 0.63 cm), drilled horizontally and obviously engraved with a manual graver. It shows the upper body of a winged horse antipodically connected to a winged Capricorn, which is a typical Melian pictorial element. Zazoff emphasizes the special quality of the work which distinguishes the stone from other specimens and dates it to the second half of the seventh century BCE.[10] Gem #1964.290, on the other hand, is amygdaloid and has been dated to the beginning of the seventh century BCE.[11] The decoration is a lizard in top view, although there are several alterations to the natural form of the animal.

Using gemmological approaches, this sample has been identified as soapstone (Zazoff) or serpentinite (this study). It is commonly accepted that soapstone consists largely of talc (end-member formula $Mg_3[Si_4O_{10}](OH)_2$), which is a layered silicate mineral exhibiting a sandwich structure of two SiO_4-tetrahedral layers and one MgO_6-octahedral layer. Serpentinite is a rock composed predominantly of serpentine minerals: another group of layered silicates characterized with an end-member formula $Mg_3[Si_2O_5](OH)_4$ and a sandwich structure of one SiO_4-tetrahedral and one MgO_6-octahedral layer. The three main structural polymorphs of serpentine are antigorite, lizardite, and chrysotile, which differ from each other in the undulation of the sandwich slabs. The spectral differences among the three serpentine minerals (if they have exactly the same composi-

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8 Boardman 1963, 15. Furtwängler 1900, 22.

9 Boardman 1963, 16.

10 Zazoff 1975, 355, n. 9 and t. 247, Boardman 1963, 63, n. 247. On the technique, cf. Boardman 1963, 19–20, who shows similar intaglios from Melos now to be found in London, Paris, and Munich amongst other places.

11 Zazoff 1975, 355–356, n. 10 and t. 247.

tion) are only subtle, but serpentines can be clearly distinguished from the other layered silicates and in particular from talc via their Raman scattering.[12]

Raman spectroscopy revealed that gem #1964.294 is neither soapstone, nor serpentine (see Fig. 1).
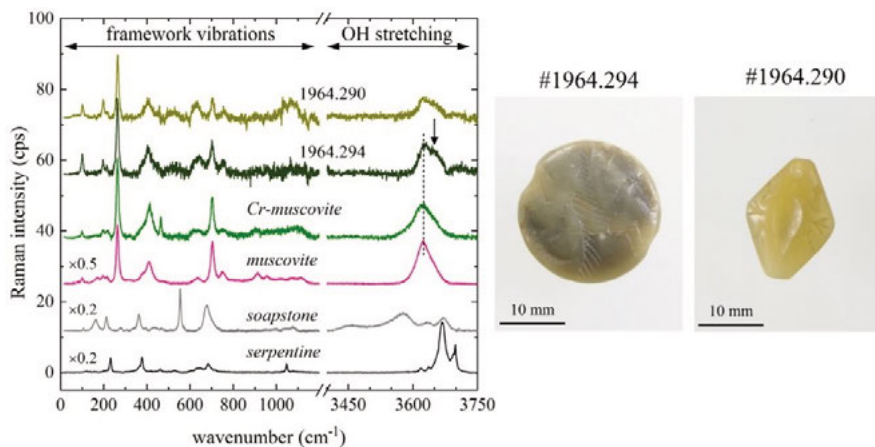
Fig. 1: Raman spectra of gems #1964.294 and #1964.290 compared to reference spectra of serpentine (Fe-containing antigorite), soapstone, muscovite, and Cr-bearing muscovite (fuchsite) as well as photographs of the engraved side of the samples. In the graph, the dashed vertical line traces the position of the strongest OH-stretching peak in near-end-member muscovite; the vertical arrow points to the higher-wavenumber shoulder, which is more pronounced in gems #1964.294 and #1964.290 than in the reference muscovite samples. Spectra in the plot are vertically offset for clarity.

The Raman spectrum profile of this sample clearly indicates that it is muscovite (another layered silicate with the chemical formula $KAl_2[AlSi_3O_{10}](OH)_2$), as the positions of all observed peaks generated by framework vibrations (in the range 15–1200 cm^{-1}) match those of reference near-end-member muscovite as well as of Cr-bearing muscovite. Muscovite is commonly transparent and colourless to pale yellow, whereas Cr-bearing muscovite, having a tiny amount of Cr replacing Al in the octahedral layer, can be light greenish, which is a bit closer to the appearance of gem #1964.294. However, colour and translucency can be influenced by the presence of other chemical elements substituting for Al or by the small average size of the mineral grains. If only the latter occurs, the Raman

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12 Wang et al. 2015, 829.

spectra would not be affected, whereas compositional changes larger than 2–3 % should reflect onto the Raman spectra. Variations in the crystal chemistry of hydrous silicates can be best detected via changes in the positions and relative intensities of the Raman or infrared peaks generated by the OH stretching modes, which appear in the range 3400–3750 cm^{-1}.[13] A close examination of this spectral range indicates that the strongest OH-stretching peak of gem #1964.294 is slightly shifted to higher wavenumbers in comparison with the reference muscovite and that the higher-wavenumber shoulder near 3650 cm^{-1} is more pronounced for the studied gem than for the reference muscovite. This result indicates that the engraved gem is built of muscovite with specific (atypical) crystal chemistry. Further studies involving complementary analytical methods on series of reference samples are necessary in order to establish a correlation between Raman spectra and the crystal chemistry of muscovite, which will make possible the non-destructive determination of the chemical composition of engraved artefacts with muscovite rocks as a writing support. Nevertheless, Raman spectroscopy clearly shows that this sample consists of muscovite with substitution disorder, and its appearance additionally suggests that it is an aggregate of fine-grained muscovite.

It should also be noted that according to Raman spectroscopy, among all thirty-five engraved gems from the MKG collections that were part of this investigation, only the two samples from Melos, #1964.290 and #1964.294, exhibit the same atomic structure and chemistry. Thus, a scientific analysis of similar island gems ascribed to this area, which macroscopically appear as soapstone or serpentinite, may prove useful in establishing whether in fact they are muscovite with the same crystal chemistry as that of #1964.294 and consequently, the same provenance.

3.2 Engraved gem #1965.122

The dark and polished intaglio (2.00 – 2.52 – 0.54 cm), with a pictorial element and inscription, probably dates to the third or fourth century CE (Zazoff). The gem features a female lion-griffon, combining elements of a griffon, a lioness, as well as other animals, and resembles in its presentation the griffon of Nemesis as depicted in Roman art, although the right fork here is supported on a branch and not on a wheel as usual.[14] Above the figure, the Greek letters ΚΑΚΑΛΧΕ can

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13 Leissner et al. 2015, Watenphul et al. 2016.
14 Zazoff 1975, 390 n. 82; Simon 1962, 770–771.

be read.[15] These seem to be an abbreviated form of κακόν and ἀλαλκεῖν, 'to ward off evil'. This combination of words is found in Hesiod's *Theogonia*, when the poet describes the suffering of Prometheus. Heracles is credited with relieving the sinner (*Theog.* 527): κακὴν δ' ἀπὸ νοῦσον ἀλάλκεν, 'relieved from pernicious disease'. The verb is mainly found in the Homeric epics, and Pindar uses it once, praising Chiron as a protector.[16] These mythological references to gods and heroes are well in line with the depiction of the griffon, which was originally used at the Persian royal court as a symbol of power.

This intaglio has been previously ascribed as jasper (Zazoff), which is an opaque rock containing predominantly quartz and other minor minerals that determine the colour of the stone (usually reddish, brownish, yellowish, green, or black). Our re-examination using classical approaches, however, suggests this gem is serpentinite, although serpentine is usually greenish rather than blackish in colour. Additional mineral grains embedded into the serpentine matrix could hardly be seen when examining with a classical gemmological lens. However, this gem displays strong magnetic activity, indicating a large fraction of magnetite (Fe_3O_4), which should be responsible for the overall black colour of the intaglio.

One could speculate that the magnetic behaviour of this stone was recognised by the ancient users and consequently added to the magic qualities of the intaglio, which are defined by the inscribed text; we would then have an ancient 'spiritual' variant of a modern concept from our technology-oriented society: 'material properties determine the material functionality'.

The Raman spectroscopic analysis (see Fig. 2) confirmed the conclusion of our macroscopic re-examination: under high magnification, plenty of submicrometre-size mineral grains with high reflectivity can be observed, whose Raman scattering indicates they are magnetite, while the matrix shows a typical spectrum of serpentine, more specifically Fe-containing antigorite[17]. As can be seen in Fig. 2, the Raman spectrum collected from the matrix of #1965.122 is almost identical with that of the reference greenish antigorite, indicating nearly the same crystal chemistry. The main compositional variation in serpentines is

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15 Zazoff 1975, 390, interprets them as a combination of κακος [*sic*] and ἀπαλλάσσω, 'Vom Bösen befreien'. He is right on the general meaning, but the derivation he posits is not entirely correct.

16 E.g. Homer, *Iliad*, 23, 185: ἀλλὰ κύνας μὲν ἄλαλκε Διὸς θυγάτηρ Ἀφροδίτη 'The daughter of Zeus, Aphrodite, warded off the dogs', referring to her protection of Hector's corpse; Hector had been slain by Achilles, who had threatened that Hector's corpse would be consumed by dogs. Similarly: Homer, *Iliad*, 19,30; 21,138 and Pindar, *Nemean Odes*, 4,60.

17 Wang et al. 2015, 829.

the ratio Fe^{2+}/Mg in the octahedral layer. Our ongoing study on series of reference antigorite samples with different amounts of iron aims to establish a method for non-destructive determination of Fe^{2+}/Mg, which is another material parameter that can quantitatively characterise written artefacts on a serpentine base.
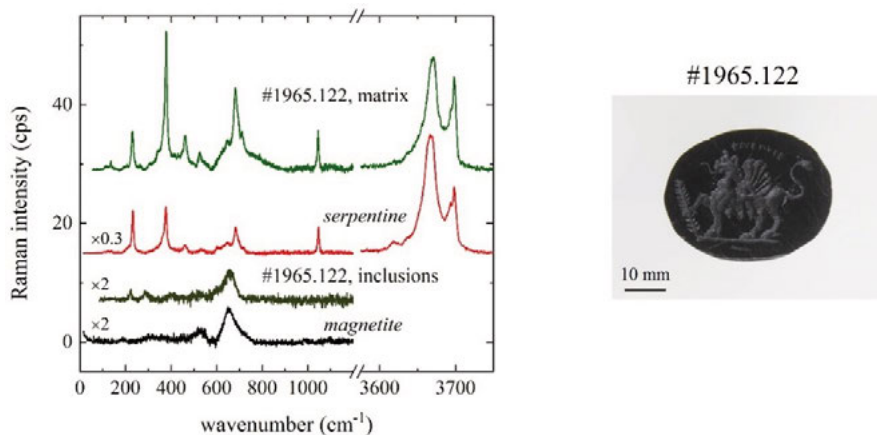
Fig. 2: Raman spectra of gem #1965.122 collected from the matrix and from blackish inclusions, compared to reference spectra of Fe-containing antigorite (serpentine mineral group) and magnetite, respectively, as well as a photograph of the engraved side of the intaglio. Spectra in the plot are vertically offset for clarity.

3.3 Engraved gem #1965.130

Most interesting is a large (3.4 – 3.4 – 1.44 cm) and unique intaglio classified by Zazoff as a Sassanian seal and dated to the sixth or seventh century CE. Zazoff based his dating on the form of the crown of the bust on the reverse.[18] On the obverse he sees Gaymoarth, the Iranian *Urmensch* depicted within a circle of creatures present at his birth.[19] A long inscription in Pahlavi surrounds the pictorial elements on both sides as well as on the vertical rim of the disc. It seems that the artist tried to copy a template but did not understand it. The

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[18] Zazoff 1975, 395 n. 93.

[19] Zazoff refers to Ackerman 1936, 126-127, who presents an illustration of a similar seal now in the Museum of Fine Arts in Boston (see n. 21).

remnants do not allow for a complete textual context and meaning.[20] The decipherable parts contain conjurations and thus point to the use of the disc in magical contexts. In a comprehensive study on magic seals from Sassanian Iran, R. Gyselen shows two close parallels from Berlin and Boston but is unaware of the piece in Hamburg.[21] She is cautious in identifying the figure on the back of the disc and does not attempt a mythological match.[22] Another seal of the same kind was described by E.W. West in 1882. He saw ink impressions of a stone amulet enclosed in a letter written by A.D. Mordtmann from Constantinople in 1875 to Prof. Haug in Munich. The disc seems to have been offered to Dr. Mordtmann for the sum of £ 45.[23] West considers the inscription legible and understandable, dates it, due to linguistic criteria, to the late seventh century CE and even provides a translation. In the text, which he interprets as part of a private letter – although from an insulting correspondence between two men – he sees no indication of the later use of the disc as an amulet. Whether the stone described by him is in fact one of the three discs now kept in Hamburg, Berlin, and Boston or yet another example of this specific kind of object remains to be seen.[24]

Based on its macroscopic appearance, this sample has previously been identified as moss agate. The dominant mineral phase of agate is quartz (crystalline SiO_2 polymorph), and moss agate refers to greenish agate, which contains moss-like mineral inclusions, usually green amphibole or chlorite. Re-examination using classical approaches, however, suggests that the matrix is also serpentine (see Table 1) and contains blackish grains with metallic lustre that may be magnetite. The latter assumption is supported by the fact that whole gem exhibits subtle magnetic activity.

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20 Zazoff 1975, 395 n. 93, indicating that the information on the inscription was provided by R.N. Frye, a historian and orientalist, who held a visiting professorship at the University of Hamburg in 1968–69.

21 Gyselen 1995, 25–28 with Figs 2a and 2b. On the Boston seal, see Pope and Ackerman 1964, 803 and pl. 256 W AA. The disc is presented as a 'Gnostic amulet' in the online collection of the Museum of Fine Arts, <https://collections.mfa.org/objects/134006/gnostic-amulet;jsessionid=16F89FDFC20A15060E8911DAD7CCE9A9> (accessed on 1 Dec. 2020). On the Berlin seal, see Enderlein 1986, 28, n. 24.

22 Gyselen 1995, 28: 'personnage à pieds fourchus'. It seems to her that the engraver wanted to depict a person dressed in a characteristic fashion, which is still hard to define.

23 West 1882, 223.

24 C.G. Cereti will closely scrutinize the example from Hamburg and prepare a publication.

The Raman scattering collected from this sample (see Fig. 3) verifies that the dominant phase is a serpentine polymorph, most probably antigorite[25]. However, the positions of the OH-stretching peaks indicate that this serpentine mineral contains a smaller amount of Fe^{2+} in comparison to the reference green antigorite as well as to the matrix of gem #1965.122. For now, only qualitative statements can be made, but as mentioned above we are currently working on developing a strategy for non-destructive quantitative determination of the crystal chemistry of this subgroup of layered silicates. The Raman analysis also confirms that the grains with metallic lustre are magnetite.
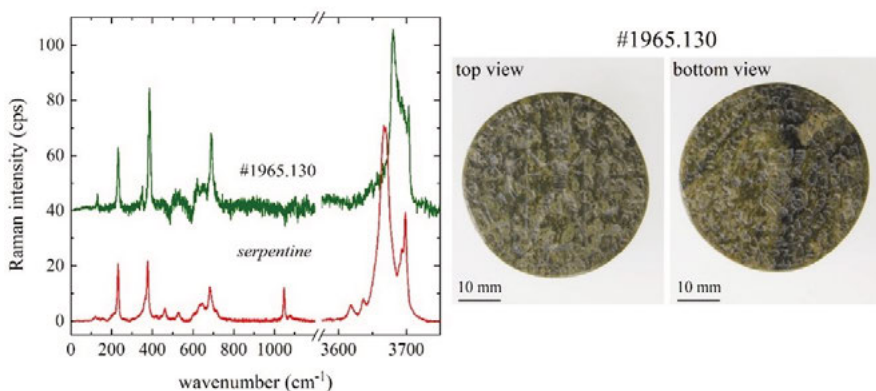
Fig. 3: Raman spectrum of gem #1965.130 compared to a reference spectrum of Fe-containing antigorite (serpentine mineral group) and photographs of the top and bottom side of the intaglio. Spectra in the plot are vertically offset for clarity.

3.4 Engraved gem #1964.324

This Phoenician pendant (1.45 – 1.08 – 0.77 cm) has the typical form of a scarab, held by a golden band and is dated to the sixth century BCE. Isis-Hathor is carved within a field framed by a ribbon. She sits on a throne wearing the headdress of Hathor: the sun within the horns of a cow. Whereas the ankh symbol on the side of her throne is probably a deliberate reference to eternal life, the other hieroglyphs are arranged in a nonsensical way and do not form a readable text. The inscription is thus to be seen as an imitation of an Egyptian artefact inspired by the Egyptianising models circulating at the time. To the untrained eye

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25 Wang et al. 2015, 829.

of the ancient beholder, the hieroglyphs may have presented a protective 'text' with magical functions.[26]

Macroscopic examination, previously by Zazoff and now undertaken as part of this study, identifies this gem as green jasper. It should be recalled that jasper is a rock with quartz (crystalline SiO_2) as the chief mineral. Our efforts to detect Raman signals on the topic of the photoluminescence background failed, although Raman peaks from quartz were easily detected from other jasper samples exhibiting a similar level of photoluminescence background. Hence, we suppose that gem #1964.324 might be non-crystalline, since amorphous solids in general have much weaker Raman cross section than crystalline solids. We have tried to use red laser (632. 8 nm) or blue laser (488.0), but the undesired photoluminescence background remained too high. Neither did prolonged irradiation of the sample help to reduce the background. Thus, we applied IR reflectance spectroscopy to check the mineral phases composing this sample (see Fig. 4).
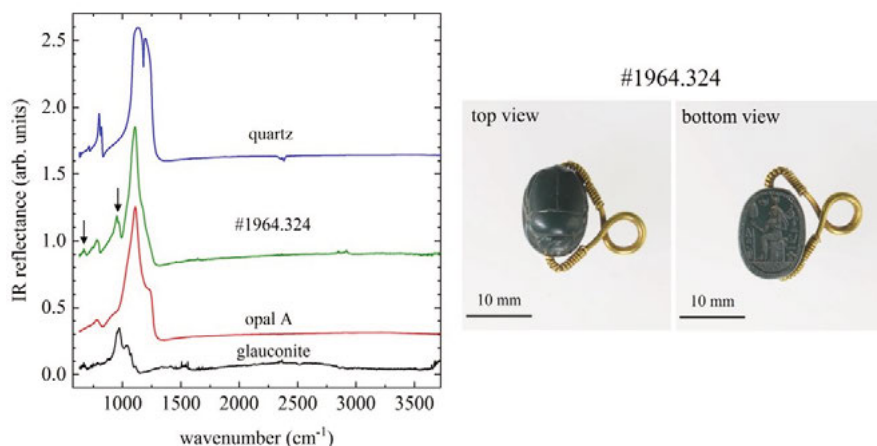
Fig. 4: Infrared reflectance spectrum of gem #1964.324 compared to reference spectra of quartz, opal A, and glauconite as well as photographs of the top and bottom side of the sample. The arrows in the plot mark the contribution of glauconite to the IR spectrum of gem #1964.324; spectra are vertically offset for clarity.

The comparison with reference IR reflectance spectra collected from quartz and opal A (amorphous $SiO_2 \cdot nH_2O$) reveals that the matrix is amorphous opal, i.e. this

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gem cannot be classified as jasper. Moreover, examination of a few green earth pigments via IR reflectance spectroscopy shows that the gem contains glauconite, having characteristic peaks at 960 and 668 cm^{-1} (marked by arrow in Fig. 4). It is worth noting that both opal A and glauconite are commonly formed as a result of marine sedimentary diagenesis, i.e. they may indeed appear together in a mineral assembly, which is fully consistent with the mineral phase identification via IR reflectance spectroscopy.

4 Conclusion

We demonstrate that:
– Classical gemmological approaches alone can be insufficient to properly identify the material of opaque engraved gems.
– Raman spectroscopy is a very efficient non-destructive method for immediate mineral-phase identification of opaque gems, based on literature data and existing spectral databases. Moreover, this analytical method has great potential in developing strategies for non-invasively determining the content of minor elements in the structure of layered silicates, e.g. serpentines and muscovite; such a determination would help to better characterize the writing support and, in turn, to verify the provenance of portable rock-based written artefacts.
– Infrared reflectance spectroscopy can be also useful for non-destructive material profiling of engraved gems, especially when the utilization of Raman spectroscopy is impeded due to the presence of pronounced and undesired photoluminescence background. In this case, however, it is advisable for researchers to select and measure suitable reference minerals or rocks by themselves, because the quality of the sample surface and the experimental conditions can considerably affect the total reflectivity, which interferes with the peaks generated by atomic vibrations.

For the study of written artefacts in general, close mineralogical analysis of gems is both necessary and highly advantageous. Apart from information about provenance – for which a large and internationally available database will have to be established – information about the quality of the stones as well as about their appearance adds to the description of the writing and the pictorial elements. Only a holistic approach of this sort renders it possible to understand not merely the gem and its engravings separately, but the written artefact as an undivided entity.

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Ralf Möller

Humanities-Centred Artificial Intelligence (CHAI) as an Emerging Paradigm

Abstract: This essay argues that there needs to be a shift in artificial intelligence, namely, a shift from the perspective of computation-oriented machine learning to the perspective of application-oriented machine training. With a training perspective on artificial intelligence rather than a learning perspective, issues raised by the humanities will become ever more important in the development of new artificial intelligence systems; from a training perspective, the goal is that intelligent systems act in ethical ways, solve tasks in trustworthy ways, and that system configuration be controlled by humanities researchers during a basic training phase. The central idea of Humanities-Centred AI (CHAI) is that intelligent systems, proven to be a useful support to humanities researchers in solving their humanities-research problems, will also be suitable for other application domains because the models used internally by these systems contain sufficient information about human culture. Humanities researchers can even actively shape these models, which can then be shared among agents and reused in different contexts. A prerequisite is that artificial intelligence moves away from offering so-called artificial intelligence methods for computer scientists and instead provide useful abstractions in the form of intelligent agents whose instruction or training is controlled by humanities researchers.

1 Introduction

Artificial intelligence (AI) is the science that studies the synthesis and analysis of intelligent systems as part of application systems and services. In AI terminology, intelligent systems are composed of agents.[1] Before we analyse what intelligent systems actually are, we must first examine this notion of an intelligent agent. Agents can be mere software systems or, e.g. humanoid robots equipped with respective hardware. From a technical point of view, the behaviour of human beings interacting with intelligent systems can, in principle, also

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1 Russell and Norvig 2020; Poole and Mackworth 2017; Shoham and Leyton-Brown 2012.

be abstracted as agent behaviour. As we will see in this article, the standard notion of computational correctness[2] applies to simple programs but neither to humans nor to computational intelligent agents.

To benefit from AI, humans communicate goals to agents, which, roughly speaking, then interpret and adopt goal specifications as precisely as possible. Then, agents fulfil respective goals as accurately as possible with a sequence of dedicated actions that agents compute by means of, for instance, planning algorithms,[3] while continuously checking whether the underlying goals for the planning process are still based on valid assumptions. To fulfil their goals, agents try to automatically acquire suitable models. While many AI proponents tend to say that agents acquire 'knowledge' and that they 'learn', basically what is accomplished is that models are built on the basis of sequences of inputs ('percept' sequences) that the agent receives or acquires from its host environment. Note that models used by an agent can be declarative, i.e. models can have a formal semantics and can be queried in various ways, or the models can be merely computational, i.e. they can be directly executed with specific parameter settings such that computational results are obtained which are required for fulfilling goals on the one hand and for interacting with humans in an anticipatable way on the other. Algorithms for answering queries with respect to a model often become 'inference' or 'reasoning' algorithms such that one can avoid mathematical formality. The old satirical saying, 'Do not anthropomorphise computers; they really hate that', is certainly applicable in this context. In order to keep the text of this article non-technical, we also use respective notions for discussing artificial intelligence in general and agents in particular, but we emphasize that quite simple, non-magical technical definitions of terms such as 'inference' or 'reasoning' can be given with reference to formal mathematical models.

Interestingly, when speaking about intelligent agents, it is indeed rather hard to avoid the terms 'knowledge' or 'learning'. Learning as a subfield of AI has developed tremendously in recent years due to advances in computer technology[4] as well as in mathematics.[5] While early learning approaches still relied on vast amounts of labelled training data (pairs of input and expected output for supervised learning), today even unsupervised learning is of enormous practical relevance, e.g. in building language models for processing text data in

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2 Dijkstra 1968; Hoare 1969.

3 LaValle 2006; Ghallab, Nau and Traverso 2016.

4 Soyata 2020.

5 Deisenroth, Faisal and Ong 2020.

various languages. Relevant features of data are no longer hand-crafted beforehand but are determined automatically during learning (learning of representations). Even one-shot or few-shot learning has become an aspirational research topic lately.[6]

Rather than focusing on single agents, we introduce the notion of an intelligent system. An intelligent system is a system that can be composed of one agent or a set of agents. In the latter case, a system is comprised of a mechanism that sets up the rules for agent cooperation. No matter what kind of intelligent system is used, it has become clear that the performance of intelligent systems of the future will heavily rely on well-selected data for building and operating a system. In the very near future, we will see a switch from technical issues of machine learning in computer science as they are prominently discussed now to the more general topic of systematic machine training, with a focus on the selection, preparation, and curation of appropriate teaching material for intelligent systems (and single agents) such that certain non-trivial tasks can be carried out successfully. Humanities research, e.g. in the area of philology, will become an important driving factor for AI applications that use natural-language processing technology, in which agent reasoning is language based.[7]

Example

Let us consider an information retrieval example in which we imagine an agent that can find relevant documents for helping a scholar solve a humanities research problem. The agent must be instructed about the problem-related field of expertise of the scholar. [...] The agent plans a sequence of actions (i.e. its own actions and the possible actions of the scholar) that provide the means for posing follow-up queries or for providing reinforcement feedback. The utility measure of the agent is assumed to be maximised if the scholar is satisfied with the (final) retrieval result.

We will see an interesting shift from today's engineering-based AI to a future Humanities-Centred AI because the notion of machine training will be dominant in the future, and new research areas in the humanities will emerge that deal with how to advise agents, e.g. information retrieval agents. Scholars will select training material (e.g. reference libraries) for agents and specify web-mining goals to prepare agents for specific tasks.

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6 Yao 2021.

7 MacCartney 2009.

Example

> For instance, a researcher might want to obtain scientific publications and data for a research project concerning cuneiform clay tablets but limit the publications to those that are already summarized and appropriately linked to relevant X-ray or CT data of clay tablets.

The vision is that a humanities scholar will educate a web-mining agent so that it can accomplish this task successfully. While building a model for the scholar's information-retrieval problem, the agent internally constructs so-called subjective content descriptions ('semantic annotations') of the documents in the reference library. The descriptions (or annotations) are subjective because the agent tries to describe both the reference library's content (e.g. with symbolic descriptions of entities identified in the text) and the model of the scholar's research problem provided by the reference library (i.e. for other scholars, different content descriptions might be generated). The reference library can be updated by the humanities scholar, and she or he can check whether the agent produces better answers than for previous (and hopefully future) information-retrieval queries. The better the reference library gets (and the more focused the string queries are), the better the agent is instructed about the nature of the research problem to be solved.

Well-organised machine-readable descriptions of, e.g. written artefacts and other humanities research topics will allow AI systems to reduce their present brittleness in communication with humans by anticipating at least some aspects of human thinking and behaviour.

Example

> The (symbolic) subjective content descriptions provide a (rough) representation of the knowledge of a certain domain from a subjective point of view.[8] Those subjective content descriptions that help solve research problems (indicated to the agent with reinforcement feedback) can then be used to generate a formal model of a problem domain via machine-learning techniques. The agent can then exploit this model to support other humanities scholars in the future. Providing a reference library for instructing an agent in a particular task therefore trains the agent in solving other problems as well. The better the reference libraries are composed, and the more that relevant problems are solved in co-operation with the agent, the better the agent is trained, and the better the services of the agent will become.

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8 Cf. Moretti 2016.

Only if training material is carefully selected by humanities researchers dealing with language and cultural artefacts in an appropriate way, will agents become trustworthy service providers. Agents that are trained by humanities researchers in the anticipated way, i.e. with the right literature at the right time, will also be enormously helpful for systematically constructing, e.g. chatbots to be used in application contexts that are completely different compared to the initial context of finding relevant documents for solving a humanities research problem as envisioned at the beginning of this example.

In the following paragraphs, we analyse some requirements for making this vision of Humanities-Centred AI a reality. In order to draw up a roadmap for investigating this topic, we need to delve a little bit deeper into AI as a field of research and its public perception.

2 On the self-conception of contemporary artificial intelligence

The essential assumption of AI is that agents are situated in an environment and that by perceiving this environment, agents can construct (or learn) a model of it (and possibly of other agents in that same environment). Agents act *rationally* by calculating optimal actions (or sequences of actions) from their local point of view, based on their current goals.[9] Computed actions, when executed, may exert an influence on the environment, the state of which must then be captured again by the agent so that it can continue to act optimally (cyclic interaction with the environment). Goals can be hierarchically structured and prioritised.

Example

Let us consider an agent playing chess (i.e. a chess program). The agent analyses the chess board, and, when it's the agent's turn, computes the best move by recursively speculating what the opponent could do, what the best move would be then, and so on. Note that because the search space is so immense that the agent can hardly find an optimal move for a complex midgame board position, the agent needs to cut the search short and make estimations about its winning chances in a particular situation. Once a

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[9] Eisenführ, Weber and Langer 2010.

move is selected, the agent executes the move (or just announces the move to the environment, which then executes the move). Chess is a simple agent scenario because every agent has perfect information about the state of the environment (the board), and all moves have deterministic effects. The assumption of perfect information being available, however, is not necessarily useful in most settings.

The acquisition of information about the environment can also include feedback regarding the choice of past actions by the agent, and this feedback may cause the agent to reassess its internal state and its planning for future action (reinforcement).[10] Sequential-decision theory solves the problem of determining the best action even when the state as well as the effect of actions are uncertain,[11] but theory assumes that both the distribution of events in the environment and all possible actions are known a priori, which is usually an inappropriate assumption in real-world settings. Over time an agent can estimate, e.g. the distribution of certain representative values for describing the environment, and the agent also has to conceive new actions on the fly (e.g. during a web-mining mission). When planning optimal actions, every agent is subject to the laws of complexity theory, i.e. the rationality of agents is quite limited, and not only under strict time constraints. In other words: optimal actions cannot necessarily be determined with available computational resources (time and memory). Since optimal actions can sometimes only be calculated approximately, it has to be accepted that the theoretically achievable goals of an agent are not always achieved or are only achieved in a delayed fashion.

The described form of system construction with situated agents, which from their local point of view act optimally in an environment, i.e. act rationally, forms the basis for an artificial concept of intelligence. An agent is considered intelligent if, through situated interaction with the environment, it achieves its goals in an unexpectedly short time (from the perspective of a human observer that interprets the agent's behaviour from the outside). Some formalisations of AI even require that goals be achieved in rather different contexts (or environments), based on abstract descriptions (a set of rules) that an environment provides to an agent, e.g. rules of different games such as Chess, Go, or Shigo. For each of these games, it has been shown that with reinforcement learning[12] a system can be indeed generated just from a description of the rules of the game

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10 Sutton and Barto 2018.
11 Hastie and Dawer 2010.
12 Sutton and Barto 2018.

(artificial general intelligence or general game playing).[13] Even more impressive is that generated systems can easily beat human players. It should be emphasised, however, that games are definitely very specific problems. The generated systems will almost always win against human players, but they cannot explain to a beginner how to become a good player, which clearly shows the limits of contemporary AI. Nevertheless from the analysis of solutions to very specific problems, general techniques for the analysis and synthesis of intelligent systems can indeed be derived.

We emphasize that the attribution of intelligence depends on the expectations of the human being who interprets the behaviour of computational agents.

Example

If, for example, a chess agent (or chess program) has the goal of winning 1000 games, and achieves this goal in a little more than 1000 games, 1010 games, say, and one does not expect it to achieve this goal after 1010 games, then one might call this chess program intelligent.

An information-retrieval agent that provides decent information-retrieval results with only few interaction cycles, when given a reference library and some form of query, would also be considered intelligent.

A pocket calculator, however, is expected to correctly calculate 1000 out of 1000 addition operations; therefore the calculator program is hardly ever called intelligent.

If people expect a program to always win or to always compute the correct result, then they tend not to call that program intelligent. Needless to say, system-performance expectations can certainly change over time.

2.1 Misunderstandings

In any case, the concept of intelligence is poorly defined without taking into account the situation in which an agent is working. It is also important to understand that the intelligence of agents only shows itself from the outside. That is, the intelligence of agents, which we humans read into their behaviour as software or hardware systems, is achieved with classical techniques of

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13 Genesereth and Thielscher 2015.

computer science. Classifying a computational method as an AI method does not really lead to deep insights. There are no intelligent algorithms or intelligent data. There are, however, intelligently developed algorithms and intelligently collected (or composed) data. But the latter tasks are accomplished by human experts. Although we often read it in the press, it does not make much sense to speak about the generation of an AI or the integration of an AI into a system. Using the term 'Intellectics'[14] would perhaps have been more appropriate for the scientific field of artificial intelligence.[15]

It is also important to understand that in AI the term 'learning' primarily refers to an agent building a model of its environment *at runtime*: i.e. the agent applies learning algorithms to data from its 'sensors' to better achieve its goals (besides exploiting reinforcing feedback from the environment). The use of learning techniques at the developmental stage of agents to generate an initial model or behaviour is nevertheless certainly possible, but using learning techniques in this way does not hit the core of AI and can also be understood as data science for the development of agent systems. Knowledge-based learning or model-based learning can be used at development time as well as at runtime.[16] Learning by using prior knowledge is indeed essential to reducing necessary training data, because for the vast majority of learning problems it is quite difficult to provide sufficient training data at runtime – a fact that is often discussed, but hardly really tackled today. With prior knowledge, it becomes possible to automatically structure the hypothesis space for possible learning outcomes, which is a necessary prerequisite for effective agents. Speaking in terms of 'educating an agent,' we see that training includes taking care of at runtime (not only at setup time) so that the agents learn the right thing. We could, then, extend the notion of machine training to ongoing machine training,[17] and the most appropriate sequence of training steps, to be defined by humanities researchers, definitely matters in this context.

A common misconception is to assume that in AI, learning (at runtime) is only relevant in relation to the models used (e.g. for improving functionalities such as the classification of images, recognition of objects, etc.). It is equally important that agents analyse their input data (perceptual data) in order to develop certain strategies to deal efficiently with the very limited resources,

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14 <http://www.intellektik.de> (accessed on 30 June 2021).

15 Hölldobler 2000.

16 Bishop 2013.

17 Continual learning also means that existing functionality which has proven to be beneficial is not overwritten by new learning activities.

with respect to time and space, for determining the best next action. With techniques such as automated machine learning (AutoML),[18] i.e. automatic algorithm configuration and parameterisation, very efficient strategies for processing sequences of percepts can be automatically generated or learned after a short training phase. There are application scenarios in which agents first process simple instances of a problem class (e.g. solving satisfiability [SAT] problems for Boolean formulas) in order to identify suitable strategies for solving harder problems from the respective problem class. Only after warming up can difficult instances of a problem class be tackled successfully.

Example

For instance, solving Sudoku problems might be reduced to solving the satisfiability of Boolean formulas (automatically derived to encode the original Sudoku problem). The encoding formulas have a certain structure, and initially solving easier Sudoku problems can help the solver adapt to the specific formulas and develop dedicated strategies to solve the satisfiability problem for Sudoku-specific Boolean formulas, such that more difficult Sudoku problems (resulting in more difficult SAT problems) can also be solved.

Without adaptation through simple problems, it may be that difficult problems cannot be processed at all with given time constraints without running into a timeout. Learning to perform inference strategies can be much more important in practical applications than learning functionality. This kind of learning scenario is also part of the training metaphor; one must be able to evaluate (using challenge tasks) whether an agent is ready for the next steps involving more complex tasks.

2.2 Applications

Agents are not explicitly modelled in the software in every application. In some applications, only parts of the cycle described above – perceiving, concluding, acting – can be recognised. It turns out that the AI perspective manifested in the agent metaphor has also produced generalizable principles that are useful for standard software development (e.g. learning a classifier for photogrammetric images).

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18 Hutter, Kotthoff and Vanschoren 2018.

Algorithms used to program systems by means of learning techniques are very popular. Nevertheless in current applications mostly only a part of the basic idea of artificial intelligence is explicitly reflected.

Example

For example, techniques of signal-level speech processing (perception) are useful for developing chatbots, which may have hardly any application knowledge defined in an explicit form and may hardly determine actions in an optimal way as described above, but which still provide useful services in web applications.

Audiological signal processing can be used in robots as well as in technical solutions for new hearing aids.

Techniques for the evaluation of, for instance, photogrammetric image data (perception) together with application knowledge implicitly integrated into the software make it possible to highlight critical areas in the image so that a new application can be set up to provide optimised support in making decisions (e.g. about whether an area is polluted or not).

It may be that only parts of the perceiving-concluding-acting cycle are manifested in the image-processing software or hardware. Nevertheless one can still speak of an AI application, i.e. an application of data-processing techniques developed in AI. This kind of scenario is an example of good old-fashioned AI, since technicians and computer science experts are still required in this context, a situation that we should try to overcome in order to make AI more useful to, e.g. humanities scholars.

2.3 Fears about AI?

Note that, unlike humans, intelligent artificial agents that have achieved high performance by interacting in a specific environment can be copied and can continue to learn and improve themselves in a different environment. Increasing the competence of agents by learning through interaction with an environment is a very interesting principle of application design. Learning at the time of system development is usually not enough. Whether a system created by means of learning techniques can be operated in a certain environment without continuous learning is a question that cannot be answered in general. Indeed, reality

is evolving, and without continuous adaptation the usability of systems created by means of learning techniques is certainly limited.

Fears about the results of the science of AI could very well originate from overestimating the efficiency of the aforementioned chain-letter-like development of the intelligence of agents, especially if one considers the inherently limited rationality of agents. The point at which systems emerge that are more intelligent than humans (however such intelligence could be measured) is sometimes called the Singularity.[19] The creation of intelligence, especially through the automatic combination of self-learning subsystems, is not a reality today, in particular because the rationality of agents is necessarily limited due to complexity considerations. The spontaneous use of a newly registered contact in an address book by a speech-based assistant, i.e. a functionality that already exists today, is not very impressive from this perspective. The correct pronunciation of names is also no witchcraft, due to the large amounts of speech data that are available today. Continuous learning must be organised, however, and it must be part of the planning for agent training. Thus, with the notion of machine learning changed to machine training, there is much more control about what kind of capabilities an intelligent agent will be able to achieve, such that misgivings of the kind introduced above can be addressed.

It must be made clear, however, that mass influence on people through intelligent agents is already a reality today, and without countermeasures, will become increasingly subtle so that democracies may even be put at risk. In addition, one must not confuse intelligence with human-compatible behaviour,[20] because the (unexpectedly) fast achievement of goals does not mean that the goals being set up independently by an agent are reasonable from a human perspective. If human control over setting targets in automatic systems is lost, the future might turn into a nightmare. The science of AI must concentrate its research on not only enabling the creation of systems that are correct in a certain sense and controllable, but also on creating systems that are provably human-compatible. It is rightly argued that agents must take into account not their own goals but the goals or preferences of people so that a positive benefit can be demonstrably achieved for the people involved in agent interaction. Initially uncertain about people's preferences and the goals supplied by humans, agents reduce this uncertainty through situated interaction. An agent should maintain permanent uncertainty about human preferences and goals in order to anticipate past mistakes and to enable adaptation to changing human preferences.

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19 Kurzweil 2005.
20 Russell 2019.

Expressions such as 'human-allied AI', 'human-aware AI', 'human-compatible AI' have been coined in order to capture these ideas.[21]

2.4 The ethics of AI as a field of science

Ethical questions related to research in the humanities play an important role in AI concerning the training perspective. For example, instead of understanding ethics simply by giving designers of systems moral guidelines formulated in natural language, AI offers the possibility of using formal ethics to enable intelligent agents to model moral action so as to estimate and weigh people's preferences. This idea represents an enormous gain in comparison with ethical approaches that are too short-sighted and applied only for system construction. The idea opens up important perspectives.[22] It is not only the designers of AI systems who must act according to ethical guidelines but also the constructed systems (agents) themselves,[23] and continuously educating those systems should systematically ensure moral action. Ethical behaviour of intelligent agents will only emerge if, when developing the mechanism of a system (environment and interaction of agents), it is taken into account that acting according to ethical guidelines is a profitable (or even dominant) strategy for each individual agent. To design such a mechanism is not easy, and agent training also matters. The AI research area 'algorithmic mechanism design'[24] investigates the basics of this design challenge. The area must be extended to take continuous machine training into account. Note that the approach of following ethical guidelines when designing systems is not wrong, but such an approach does not fully meet the needs arising from the potential of AI. Rational actions of agents must also comply with certain ethical guidelines. Other aspects relate to fairness, privacy, and security:[25] for example, the ability to determine whether or not particular data (such as the data of a particular person) was part of the training data, or at least was the basis for answering an enquiry, ought to be avoided. Techniques such as differential privacy[26] are highly relevant to trustworthy agent systems[27] and should be technically combined with ethical

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21 See also Kambhampati 2020.

22 Cf. terms such as 'value alignment' (Russell 2019).

23 Russell 2019.

24 Nisan and Ronen 2001; Nisan et al. 2007.

25 Kearns and Roth 2020.

26 Li et al. 2016.

27 Marcus and Davis 2019.

considerations. The consideration of privacy sets new research goals for artificial intelligence as a science.

An agent's objectives (goals) may be uncertain, and since objectives are reflected in the tasks assigned to an agent, its tasks exhibit uncertainties from the agent's viewpoint, too (and also from the human's viewpoint if the human is conceptualized as an agent). Thus, there is hardly any standard notion of correctness that is applicable to single agents. What can be analysed, however, is a system of agents interacting in some environment. Analysing a system of agents (i.e. a so-called mechanism) and examining whether a desired functionality is actually realised by such a system of agents is a central issue in the science of artificial intelligence. Rather than asking for formal correctness, the main question is whether a mechanism maximises social welfare understood as a (combined) measurement of global utility for all agents involved (or at least whether the mechanism provides a decent value for social welfare). A mechanism that maximises social welfare is called appropriate. Without a determination as to the appropriateness of a mechanism in a concrete case, intelligent systems simply might not be applicable in certain areas. It seems that this ethical issue of AI is sometimes neglected in practical applications. Humanities researchers should contribute ethical competence to discussions about appropriateness.

2.5 Perspectives

Research in the field of AI aims to identify the methods and techniques of computer science that are necessary for developing and analysing verifiably human-compatible intelligent agents. In order to produce intelligent agents, computer scientists have developed novel programming and modelling techniques such as probabilistic differential programming as a generalised view of deep learning. Probabilistic-relational fundamentals of modelling real-world systems, techniques of data analysis (data science, data mining), and optimising decision making on the basis of large amounts of data (possibly with web scaling) are just as fundamental for system creation in AI. New approaches such as imputative learning are intended to, among other things, solve problems related to acquiring models (= learning) from *incomplete* data. The results of these efforts can later be incorporated into, e.g. in-depth language comprehension, which is important for boosting the learning capabilities of agents. Computer scientists, however, can only partially contribute to agent learning, namely, with respect to the technical basis. What is required is a way to let humanities researchers act as machine trainers. This perspective constitutes a roadmap for a new view of AI.

3 Humanities-centred AI: A roadmap

While technology always evolves, it is important that, on the one hand, Humanities-Centred AI (CHAI for short) concentrates on an appropriate training interface such that AI with machine-training capabilities becomes effective for the humanities. On the other hand, computer scientists must adopt the right perspective from which to design trainable systems. In the following paragraphs, we will first analyse some traps that AI researchers have run into, and then describe the CHAI roadmap.

Let us assume that someone implements a system that can do something that humans can also do, e.g. play a shooter game. Further, for the implementation of the technical system, among other things, method X is applied. Let us then further assume that the resulting shooter-game system is quite close to human performance, maybe even better. A human being, here a human player, is assumed to be intelligent by definition, and therefore the technical shooter-game system is also called intelligent. Underlying this conclusion is a very old definition of AI: a system is intelligent if it does something for which a human (apparently) needs intelligence. Unfortunately, this definition has many pitfalls and is no longer suitable for defining the subject matter of AI as a science today.

3.1 First trap

In the above definition, method X becomes a so-called AI method if method X can be successfully used in an application context in which humans solve problems (e.g. playing shooter games, playing chess, as well as in other application contexts) in order to generate systems that can simulate, support, or replace humans. The temptation to talk about AI methods is particularly strong when one thinks that the technology behind a method is, in whatever vague way, analogous to the physiological processing of stimuli in humans, or that the technology can be seen as analogous to the human level of information processing (a level assumed to be high), or even that the technical behaviour is in some way reminiscent of human problem-solving behaviour. An example of the first analogy is the application of so-called neural networks, which, however, as a technology have become extremely distant from the physiological original over time and are actually purely mathematical in nature. But some people also use the expression 'AI method' for other seemingly cognitively analogous methods, such as the application of rule-chaining systems to the creation of so-called expert systems. Some people even think that the expression 'AI method' refers

to arbitrary architectures for solving problems for which humans need intelligence. This loose use of the expression 'AI method' leads to the second trap.

3.2 Second trap

If a developer applies method X, which she or he calls an AI method, to develop a system for application problem P, which many humans have never solved, cannot solve, or can solve only after a great deal of very specific training, then the developer often draws the erroneous conclusion that she or he is working on an AI problem, simply because she or he is applying a so-called AI method. The trap in this case is that a problem is classified by the solution method.

Example

An example is automatically parking automobiles without stopping other traffic. This is a problem that very few people can solve. Because one can solve the problem (in a rather poor way) with dedicated technical sensor devices, for which we do not find analogues in human beings, a researcher might claim to have solved an AI problem, but even if one of the so-called AI methods is employed, parking is still far from being an AI problem. A problem simply cannot be classified according to the solution method.

Let us consider another example. The analysis of multispectral images is an interesting application problem. The problem can be approached with methods that are also suitable for the development of intelligent game systems (such as Asteroids), i.e. with supposed AI methods, here perhaps the training of so-called convolutional networks (rather deeply cascaded, linear-filter operations, combined with respective nonlinear aggregations). But taking a method that is useful for an intelligent system and applying that method to solving a technical, image-interpretation problem does not mean that image interpretation is an AI problem; it is an (interesting and difficult) application problem.

3.3 Third trap

The system that is realized via the alleged AI method X, e.g. a function parameterized by techniques of algorithmic learning (i.e. a convolutional network in actual, final use, with all its concretely determined parameter values), is called artificially intelligent by some people. Oddly enough, some people even call the

system 'an artificial intelligence', or assert that 'an AI' has been created. Unfortunately, this way of thinking would require us to call every function intelligent (or even 'an artificial intelligence') if it was created with method X, called an AI method, which is absurd.

Traps of this kind can only be mitigated by not defining AI in human terms, but by focusing on the nature of the problems being solved.

A specific AI problem is actually to find algorithms for evaluating a percept and for determining actions so that the goals are achieved as completely and as quickly as possible over a long period of time, with the result that the agent can act rationally. Machine training, however, should be accomplished not by computer scientists but by domain experts. It should be noted that the laws of computer science apply to any agent (and to humans) no matter how training is organised: the computation time is not in every case sufficient for computing optimal actions (bounded rationality). If the agent, however, achieves its goals with unexpected speed, despite these intrinsic limitations, it is said to be intelligent. Now, a real AI problem is to enable domain experts to construct or generate such intelligent agents, without computer scientists or dedicated experts in machine learning being in the loop (the computer scientists or dedicated experts then deal with good old-fashioned, technical AI methods).

These kinds of real AI problems are studied in CHAI and are solved by whatever method. It is not the methods, techniques, or algorithms that distinguish AI in this context, but the problems solved, namely, real AI problems. The same consideration applies to other sciences: it is not problem-solving methods that define the science of physics, e.g. methods for solving differential equations, but rather the problems being solved (or phenomena studied).

Example

> For example, the aforementioned shooter game, seen as an agent, has the goal of winning 1000 out of 1000 games. The actions selected by the program (i.e. where to manoeuvre the spaceship depending on the situation, or whether to shoot) will contribute to achieving the goal.

If the agent achieves the goal frequently, it will, from the outside, be considered intelligent, unless it is expected to achieve the goal all the time. However, if the agent internally uses a function parameterized by evaluating a large set of input-output examples (i.e. an algorithmically learned function) that the developer generated, then it is not the function that is intelligent. The entire agent can be considered intelligent from the outside only if it exhibits the appropriate behaviour using the function. A simple set of learned, nested functions that

implement a convolutional network, for example, cannot be intelligent because the functions do not compute actions and do not interact with an environment at all, but are only (externally) applied and then return results. Nevertheless the functions can certainly make an agent that uses them behave in an intelligent way, according to the definition given above. The third trap is one that people fall into who do not distinguish between an internally used function and an agent. When people talk about creating 'an AI,' they usually (unconsciously) mean creating an intelligent agent. Unfortunately, in such cases no agent is generated, but only a simple function that cannot be intelligent; this situation again reflects the absurdity of speaking about generating 'an AI'.

Thus we see that the developer of an agent, not the agent itself, solves an AI problem. The agent solves an application problem – unless we build agents that construct agents. The former agents then also solve an AI problem. But we are not yet that far. Even so, by emphasizing the notion of machine training by domain experts via CHAI, we can avoid falling into the aforementioned traps.

Example

Although an agent that analyses multispectral images can be intelligent (it does its job quickly and really well), we have argued that it solves not an AI problem, but an application problem. It is not the analysis of a multispectral image that is an AI problem, but the development of the agent that can analyse these image data (correctly and quickly), by, e.g. quickly achieving its goal of correctly classifying 1000 out of 1000 multispectral images.

Image classification is just one example. Another task in which the agent can help is finding multispectral images for a specific research question (recommendation task). Another task could be to combine multiple images and spectra so that an added value is achieved. Training agents to support researchers in such tasks is out of reach these days, but would be very powerful. The knowledge required for such tasks could be gathered by first having the agent solve information-retrieval problems in the humanities.

The method for building the agent, e.g. a method for training a convolutional network, is therefore not an AI method, but a method for solving application problems. If a researcher operates as a computer scientist to train the network (and specifies the network architecture) but does not develop an agent, then the researcher in question is not working in AI, but in applied computer science. Working as a computer scientist in solving application problems is of course a worthwhile activity, but we should not refer to that activity as solving AI problems. Computer scientists working in CHAI develop AI technology that

allows domain experts (humanities scholars) to be involved in machine training for problem solving.

3.4 New developments: Abstractions rather than methods

Besides machine training, AI must develop techniques so that users can inform agents in an appropriate way about goals (or tasks), or even so that the agents can automatically determine goals in an appropriate way. Task solutions, in turn, must be communicated to humans by agents in an appropriate way. What does it mean to communicate in a way that is appropriate for humans? It means that AI supporting the machine-training perspective (and not only the machine-learning perspective) must also explore aspects of human information processing in order to meet the demands. Here again, a fundamental difference with statistics or the field of data science becomes clear: it is not only ongoing learning and (optimal) actions of agents that are added to the overall picture, but also the anticipation of human information processing and thus also of human knowledge. If these issues are irrelevant in a particular application context, then it is better to pragmatically speak of data evaluation, statistics, or – with an industrial twist – data science. From this perspective, the results of research in the humanities, e.g. in linguistics, philosophy, or cultural studies, are very relevant for AI.

Developing an agent, however, may very well take place via certain methods that have been or are being developed in the science of AI. These methods include the following: methods for correctly setting up learning machinery (e.g. ensuring independent and identically distributed data as preconditions of learning); methods for verifying the properties of models used by agents (e.g. discriminatory power determination); or methods for proving the appropriateness of an agent's actions in any situation (e.g. addressing ethical concerns). Such methods might then usefully be called AI methods. With AI methods, one solves AI problems (see above), not application problems.

Several questions arise:
–   Should humanities scholars solve AI problems?
–   Should humanities scholars work in applied computer science?

The answer to both questions is no. Humanities scholars are trained to solve humanities problems, not applied computer-science problems or even specific AI problems. If humanities scholars become applied computer scientists, the chances increase that they either cease to be good humanities scholars, or they

will acquire the necessary computer-science skills very late in their career and thus could hope to work effectively with their own graduates or even colleagues who do not have these skills. So overall effectiveness would suffer.

Now, what is the charm of AI anyway? What are the hopes associated with it? One hopes that humanities scholars will not have to solve applied computer-science problems in order to solve a humanities problem but will be able to define, with reasonable effort, agents' goals that will then solve the humanities application problems. The important question that this aspiration raises is:

– For which humanities problems can basic agents be provided, so that humanities researchers can define (or refine) the agents' goals with reasonable effort and the agents can solve the problem for the humanities researcher or in interaction with the humanities researcher?

The right question for designing an AI training scenario in the humanities is therefore:

– What would a humanities researcher need to know in order to be able to select agents, train them, and then appropriately define the goals for the selected agents?

Some relevant questions for AI research from the CHAI perspective are:

– How can agents be designed so that they can be trained by humanities researchers, such that the training improves solving a certain problem and progress can be properly evaluated by the trainer?
– Can AI system developers enable humanities researchers to define agent goals with reasonable effort and thus to solve humanities application problems themselves without having to become applied computer scientists?
– How can (pre-)trained models be found and exchanged?
– How can models that have been constructed for a certain task by training be used successfully for related tasks?

The goal of collaboration between AI scientists and humanities scholars should not only be the immediate solution of humanities application problems. The interaction of humanities scholars and AI scholars should also generate new agent types so that the goals of the agents that belong to the newly developed type are easier for humanities scholars to define and so that application problems in the humanities can be solved in a truly sustainable way (by humanities scholars). It is clear that humanities application problems will be used as examples throughout this work on new agent types. Nevertheless solving these application problems alone should not be the primary goal, because if it were, then

only short-term success is likely to be achieved. Involving natural scientists adds even more complexity to the overall picture.

AI as a science has yet to demonstrate that it can provide trainable agent types whose goals can be set by humanities researchers with reasonable effort, so that humanities application problems can really be solved by humanities scholars. The same deficit is even truer for collaboration with natural scientists. Learning-technology, assumed to be universally applicable, could help to specify functions used internally in an agent. But if an agent is to act and communicate with a human about achieving certain goals, this is just the beginning. Other techniques for specifying or aligning goals must be provided in a complementary fashion, keeping in mind that goals are almost always underspecified and must be specified as appropriate in the interaction. But if goals are to be communicated, then they can hardly remain implicit in the agent's design, as is still almost always the case in simple systems used today (see the comments on the agent for multispectral-image analysis).

3.5 Adopting a new perspective: From machine learning to machine training

As discussed at the beginning of this essay, there is potential for a shift from the technical issues of machine learning to the humanities issues of machine training (i.e. educating a machine), such that intelligent systems can solve tasks relevant for humanities research, are trainable by domain experts, solve tasks in a trustworthy way, and act in an ethical way. For all cases, humanities research provides the scientific background. A prerequisite is that we move away from focusing on so-called AI methods for computer scientists to providing abstractions in the form of intelligent agents and respective mechanisms for coordinating the agents, while supporting the view of machine training rather than machine learning.

Example

In our example concerning information retrieval, problem-specific documents will be carefully collected and then provided to an agent as a reference library so that domain-specific expertise is provided to the agent in a useful way in a preparatory training context. The agent can then try to find additional resources, either from its previous services or from other agents on the web. Thereafter, the agent can search for relevant publications on the web that match the query of a human. Based on feedback in the interaction cycle, which will have been anticipated by the agent during planning,

the agent can reason about its strategies for inferring the problem-specific information needed by the human researcher, and the agent can evaluate and adapt its provision of documents in the reference library, including the addition of subjective content descriptions to be used for information retrieval in that context.

Whether AI is already powerful enough to provide something useful in this sense is the ultimate question. I conjecture that AI scientists will have to keep working hard. But they at least understand the true AI problem that they need to solve, namely, supporting machine training by well-educated humanities scholars or natural scientists rather than supporting a technical focus on machine learning controlled by computer scientists only. If humanities as a field is going to exploit agent technology, and I have argued that it should, then humanities scholars ought to be involved in CHAI as early as possible so that they can derive a deep understanding of what the agent can actually achieve on the one hand, and provide important insights for AI researchers on the other; in the CHAI approach advocated here, these insights will concern a training perspective rather than a learning perspective.

Acknowledgements

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Stefan Thiemann

How Can Research on Written Artefacts Benefit from Collaboration with Computer Science?

Abstract: Research on written artefacts, particularly on manuscripts, was conducted long before digital methods were developed and computer technology became available for everyone. The use of methods from computer science for this research, however, adds a completely new level of possibilities. This article will discuss the various premises of this task and identify specific benefits for the field of the study of written artefacts.

1 Introduction

Computer science, which is the study of computers and computing, includes theoretical and mathematical principles, the study of algorithms, data structures, networks, modelling, and information science. The use of digital methods in the humanities is often called 'digital humanities' (DH) or 'e-humanities', which may refer either to enhanced or electronic humanities. DH is the systematic use of digital tools and methods in the research process, from word counting, language and image analysis, to complex databases. DH is often used as a synonym for humanities research in another form, but today the integration of computer science should be normal, not a separate part in the research process.

The use of computer science in the humanities is not new; it has a long tradition whose beginning is interesting in the context of the CSMC because it concerns research on texts that were transmitted in manuscript form, from the works of Thomas Aquinas. In the 1940s and 1950s, Roberto Busa (1913–2011), a Jesuit scholar, started to build a concordance to the extensive corpus of Thomas Aquinas, the Dominican monk, philosopher, and priest from Italy who lived in the thirteenth century.[1] To build the concordance, Busa probably used a printed version of Aquinas' writings. He searched for help to automate his work and found a partner in the computer company IBM. Together Busa and IBM started a long-term project of more than thirty years' duration, and in the 1970s a set of

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1 Busa 1980, 83–90.

fifty-six printed volumes of the *Index Thomisticus* was finally published with the help of digital methods. Busa continued to exploit the potential of digital methods, and the printed version was followed by a CD-ROM version in 1989 and an internet version in 2005, which is still available.[2] A comprehensive account of Busa's work can be found in the foreword written by him to the *Companion to Digital Humanities*.[3]

Beside all these developments and early adopters, in the last decades personal computers, especially since the late 1990s, have found their way into every researcher's office, with easy-to-use software and a direct connection to the growing internet. Scientists now have a lot of tools for their work and can imagine what might be possible, but they often lack knowledge about how to use all these things, and with growing opportunities the complexity grows too. Without the expertise of computer scientists, it is hard to fully exploit the potential of information technology in the humanities. This was the main reason for planning a close cooperation with computer sciences and specialists in data handling since the first considerations about starting research on manuscripts and written artefacts at the University of Hamburg. To understand what computer science and information technology can do for researchers, it is necessary to understand some fundamentals, clarify terms, and identify certain problems that still exist.

2 Research data

Data, or research data in general, are the 'material' used by scientists to do research. The type and expression of research data depend on the specific research field. In natural sciences research data are primarily numbers that come either from measurements taken with scientific instruments or from computer-model simulations. This type of research data is mostly born-digital, and it is more or less easy to handle, store, and process, beside the problem posed by enormous amounts of data.

Research data in the humanities, especially in research on written artefacts, are completely different. Real-life objects, stored in museums, archives, and private households or located in the landscape (e.g. inscriptions on rocks, graffiti

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2 <https://www.corpusthomisticum.org/it/index.age> (all URLs cited in this article were last accessed on 7 May 2021).
3 Busa 2004.

in urban space), are the material used by scientists. From these written arte-facts, photographs or three-dimensional scans are taken, and in addition de-scriptive texts and sometimes audio and video recordings are available. Re-search data in such cases have the function of documenting given objects, either partially or fully. But it is important to keep in mind that photographs and scans, as representations, are completely different from the originals themselves. The representations differ in size and colour, and, what might be more important, the haptic of the original is completely missing. Especially digital photographs offer the opportunity to be manipulated. It is possible to tune colours, enhance or lower the image contrast, zoom in or out, and add to or simply delete some-thing from the image. All this could be very helpful for research on such objects, but on the other hand there is a risk of misinterpretation or even forgery.[4]

For the use of digital methods, digital data are needed. But digital data are much more sensitive than the originals. The following quote from J. Rothenberg expresses the problem in a clear and very sharp way: 'Digital information lasts forever – or five years, whichever comes first.'[5] Many written artefacts are very old, but their digital representations may only last a few years.

Digital data depend on the longevity of storage media and the obsolescence of technology, hardware, and software.[6] Currently available computers have mostly no facility to read data from floppy disks, tapes, and CDs; even if it is possible to read the data, there is quite often no software to interpret them. Most of these data will be lost if no measures to maintain them are taken. It is possi-ble to read a fragment of an old manuscript; it is quite often impossible to inter-pret a fragment of digital data. The *Museum of Obsolete Media*[7] holds a collection of more than 700 obsolete media formats, from analogue media to data storage.

The aim is to store digital representations of real objects in a way that al-lows humans to access the stored information by their senses. The digital repre-sentations are stored in binary data (0 and 1) and are only marks on a physical medium such as a hard disk in a computer. To bring this data back to life, soft-ware is needed to interpret the archived information; the software must be able to interpret the stored data format, and the data must be completely available.

Binary code uses a two-symbol system, often known as 0 and 1, off and on, or false and true. Characters can be represented by a sequence of 0 and 1; for

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4 Dow 2009.

5 Rothenberg 1998.

6 Rosenthal 2010.

7 <https://obsoletemedia.org/>.

example an upper case 'A' is represented as '01000001'. On a hard disk or another storage medium, the character 'A' is stored as the above string of 0 and 1 via magnetism or patterns in CD-ROMs.[8] It is not wrong to compare this system with engravings on stone.

Well-organized research data management (RDM) is one part of the solution. In the humanities, RDM is a paradigm shift. Researchers in the humanities often keep their data for themselves; they are not used to sharing data or to storing data in central repositories, especially if such a repository is not specialized for their research field.

Comparable to collections in archives, digital research data have a lifecycle. They are

– created, which means measurements, digital photographs, scans etc.;
– processed; e.g. a digital photograph is taken in a special data format depending on the camera manufacturer; such RAW-data are processed into standard image formats such as TIFF or JPEG;
– analysed, with results that are dependent on the type of data analysis performed;
– archived, that is, the data are stored on a storage medium, or in a repository on the internet;
– accessible and reusable for new research projects.

Archives of physical objects have been well known for hundreds of years, and they are a resource for research in the humanities; digital archives are viewed more critically.[9] The enormous amount of stored data and the obsolescence of storage media and file formats remain challenges Professional archiving of digital research data is necessary, and the development of standards and regulations for the question 'What has to be kept for the future?' is still a desideratum.

3 Metadata

Digital research data alone are more or less worthless. They need some additional information called metadata.[10] Metadata are data about data. In other words, there are original data and there are data describing the original data.

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8 Binz and Schempp 2002, 85–103.
9 Milligan 2019.
10 Hare 2016.

Metadata are comparable to real objects with sheets of paper attached containing information about the objects.

But, avoiding any quicksand here, a distinction must be made between technical and descriptive metadata. Technical metadata are information about the file format, the file size, the encoding, etc. In general, this is what a computer scientist understands by the term 'metadata'.

Descriptive metadata are additional information about the data, such as content type, place of origin, date and time of production, persons involved, related events, dimensions, production methods, material, etc. Metadata of this type must be provided by humanities researchers themselves.

Both types of metadata are absolutely necessary. Some might know the meaning of '10.5, 11.1, 12.2' or 'A13-17/2', but nobody else in the world probably will. To understand these data, definitions such as 'temperature in degrees Celsius' in the first and 'shelf mark' in the second example are necessary. Another simple example in the context of manuscript research concerns the dimensions of an artefact. If only the information '10×2×3' is provided, it is impossible to know whether the numbers are given in millimetres or centimetres and which numbers refer to height, depth, or length; even if a photograph is available, it is in some cases hard to decide.

Providing well-formulated, adequate, and consistently structured metadata is quite important for long-term documentation as well as for analysis with digital methods.

4 Fuzziness and vagueness

For computer and software alike, fuzziness and vagueness remain real problems. Dates and calendar systems from all over the world and especially from former times provide one common example. If no information about the calendar system is provided in the metadata, it is impossible to compare dates across different calendar systems and perform comprehensive searches. The best practise here is to provide, in addition to the original date and calendar system, a normalized date. Terms such as 'approx.', 'before', 'later than', etc., as well as abbreviations in general, cause problems for using information technology, as do different spellings of names.

The computer or software does not know what a specialist in a research field knows and especially what is really meant by a particular notation. In the case of very specialized software for a limited research field, many problems might be avoided if only be one calendar system and one set of abbreviations

are used, but this is not always possible. To overcome this mess of fuzziness and vagueness, descriptive metadata must follow clear rules or standards.

5 Standards

Standards are the best way to keep each and every piece of information clear and comprehensible. As the computer scientist A.S. Tanenbaum has said: 'The nice thing about standards is that there are so many of them to choose from.'[11] This statement makes the important point that every scientific community has its own requirements for metadata and standards. The use of a standard can facilitate employing the methods of information science and interacting with other data providers.

On a more general level, the international DataCite Metadata Scheme[12] provides a minimum of metadata fields such as identifier, creator, title, author, year, etc. to describe research data, and this scheme follows the FAIR data principles (Findable, Accessible, Interoperable, Reusable).[13]

Before creating a new and very specific metadata model for a project, existing models and standards should be reviewed and tested. Each standard includes a commentary field, and in most cases it is a good solution to use an existing standard and add all individual items of data that are not specifically accounted for in the standard to the commentary field instead of developing a new standard.

Especially projects combining cultures with different writing systems and letters need a common, basic standard for defining characters and text elements in an interoperable way. The world-wide standard for this purpose is Unicode.[14] Beside all the criticism about the problems Unicode has with Chinese, Japanese, and Thai script, it still seems to be the best standard we have. Using Unicode avoids problems with different fonts and display problems in documents and on webpages. A character is only a number or a combination of numbers (e.g. diacritical marks) in this system, and a word is a sequence of numbers. Searches in such a system are only performed on the sequence of numbers; the search engine does not understand the meaning of the word or the complete text. The

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11 Tanenbaum 1988, 254.
12 <https://schema.datacite.org/>.
13 <https://www.go-fair.org/fair-principles/>.
14 <https://home.unicode.org/>.

character ä (Unicode: U+00E4) may be represented either as one character or as a combination of a + ̈ (Unicode: U+0061 + U+0308).

6 Artificial intelligence the problem solver?

Artificial intelligence (AI) seems to be a problem solver, and the acronym AI is widely used. In the research field of written artefacts, e.g. optical character recognition (OCR) and pattern recognition are used in combination with machine learning (ML). With some limitations, it is possible to use machine learning to simulate understanding a text. It is possible to train such a machine with a text corpus and then ask questions; the machine gives feedback, and a researcher marks the correct answer and so on. Pattern search after training the machine works very well, and it is quite helpful in dealing with large volumes of data. However, the combination of 'man and machine' can lead to sustainable performance improvements in research. The use of AI methods requires a solid expertise in this area, and the results need to be interpreted carefully.[15]

7 Legal problems and ethics

Working with the storage and presentation of digital data on the internet may lead to legal problems and questions of ethics. Using a photograph of a written artefact in a museum or archive, or even in a private house, requires permission or consent, and special permission is required to use it on the internet.

Today research funders expect research data to be as open as possible, e.g. in a repository accessible on the internet. Research data should be FAIR, as mentioned before. If the necessary permissions have not been granted, it is not allowed to store such photographs as open data in a research-data repository. In most cases even storing them as closed data is not allowed, given the complex copyright regulations. Even local regulations can cause problems. In more than one country, for example, it is not allowed to take photographs of cultural heritage or even buildings. The so-called freedom of panorama (FOP) is an often-neglected problem. A professional researcher has to take this in account.[16]

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15 The challenges with AI are extensively described in the article of Ralf Möller in this book.
16 Dulong de Rosnay and Langlais 2017.

Another more ethical problem is that providing information about valuable objects on the internet might carry the risk of theft. This is a problem with cultural heritage as well as with endangered plants and animals.

It is important to think about such problems and to think about the consequences for the use of digital methods; hidden data are not accessible for searches or any software operation on data in such repositories. This might result in conflicting goals because researchers want to combine information in a local repository with information from the internet.

8 Conclusion

The benefits of using computer science in research on written artefacts include:
– analysing more data at the same time;
– experimenting with variants and parameters;
– comparing images, patterns (e.g. by same writer);
– searching for patterns;
– automatic linking of data;
– providing data on the internet by means of virtual reality, computer vision;
– combining digital methods with measurements from laboratories;
– modelling data.

Everything said so far applies more or less to every research field and is not specific to research on written artefacts. The methods and tools are generic, sometimes with special adaptions.

Examples that combine scientific measurements and computer science include the multispectral imaging of a fragment of musical notation[17] and the virtual merging of two parts of a cuneiform tablet stored in different places.[18] In both examples all the research data are available as open data for further research, and visualization methods were used; via three-dimensional data, the two parts of the cuneiform tablet were printed as real objects again.

Specific software tools simplify and accelerate the work on large corpora of digitized written artefacts. The 'Visual Pattern Detection Tool'[19] can automatically recognize and allocate visual patterns such as words, drawings, and seals in a

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17 Shevchuk and Janke 2018.
18 Michel and Beyer 2020.
19 Mohammed 2021.

written artefact. The interesting question of whether different manuscripts were written by the same hand can be answered by the use of the 'Handwriting Analysis Tool'.[20] Both software tools support researchers with their work by giving indications; the final decision, however, lies with the researcher.

But there is more than one challenge in the interaction between humanities and computer science. Humanities research needs a kind of service (e.g. software development), but this is not the focus of computer science, and no research question deals with this area. Humanities scholars are in most cases not experts in computer science, and computer scientists rarely have any knowledge of the humanities. This leads to one of the biggest challenges, namely, communication between the two groups. For any success, both sides must precisely describe their needs and what is obviously possible; a clear research question is needed for a joint project. Then the use or development of a specific method from computer science makes sense and could be taken into consideration. The use of computer science should not be an end in itself or taken into consideration merely because it is common these days.

The problem of timing should also be mentioned. Both groups start their work at the same time because of the funding. But humanities researchers expect help and even results early in the project. The development of the computer science part comes often too late.

To conclude, let us return to the beginning. Busa decided to step into the use of computer methods because of the sheer quantity of documents. Without any computer support, he would not have been able to bring his project to a successful end. For IBM at that time, Busa's project was an opportunity to try out procedures and show the possibilities offered by computers outside the normal accounting departments. IBM and Busa both had a clear idea of what they need.

Despite all the progress and sometimes astonishing applications, especially on the internet, it must not be forgotten that software and the computer do not yet (and may never) understand the interpretation of words and texts. A very simple thought experiment can illustrate the situation. A person is confronted with a one-word question; the person will most likely ask what is meant because the question is not clear. Such a question, without sufficient information about the context or some additional metadata, is quite hard to answer in most cases. Entering a one-word question in the search slot of a search engine on the internet will provide many hits. The search engine does not ask questions; by using probabilities and extensive lists of synonyms, it will show documents in

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20 Mohammed 2018.

which synonyms are used instead of the exact search term. This looks like an intelligent machine, but in fact statistics, big data, and the ongoing process of human work are all operating in the background. On platforms such as Amazon Mechanical Turk,[21] people earn money by categorizing images, words, and objects and by building lists of synonyms. A specially programmed database, however, will not behave like internet search engines; such a database will only search for the exact search term and not for synonyms or variants.

This simple example demonstrates once more that one has to have realistic expectations about the use of computer science. So, do not shame a computer science expert who is unable to simulate the giants of information technology on the internet. In most cases the problem is not a lack of expertise but limitations of technology or resources.

The internet giants have ten thousand experts and nearly unlimited data in the background. In the last decade, Alphabet Inc., the mother of Google, has invested more than 6 billion US dollars in research and development. If we keep all this in mind, collaboration between the humanities and computer science is beneficial for both sides.

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21 <https://www.mturk.com/>.

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Camillo A. Formigatti
Notes on the Terminology for Print in Early Sanskrit Printed Books

Abstract: The present article deals with liminal material belonging to both the realm of manuscript as well as print culture. Early Sanskrit printed books provide scarce and ambiguous bibliographical information. The Sanskrit terminology used in their imprints is often obscure at best, if not unintelligible without having previous knowledge of the roles of the persons involved in the printing process. Conversely, a correct understanding of the Sanskrit terminology for print is necessary to assess the roles of the people involved in the printing activity. This article examines the Sanskrit terminology for print occurring in the earliest Sanskrit incunabula and lithographs, in order to shed some light on the publication process of early Sanskrit prints.

1 Introduction

Terminology for print in early Sanskrit printed books is seemingly a trivial subject, but in reality it might prove to be an important tool in the reconstruction of the cultural, social, and technological history of nineteenth-century South Asia. As is well known, in South Asia the production of manuscripts continued to thrive well into the twentieth century, alongside the diffusion of print. Printing presses were already known in South India in the second half of the sixteenth century, however the first Sanskrit book was printed in Kolkata in 1792. The diffusion of typography in nineteenth-century India is paralleled by the widespread diffusion of lithography as a means of reproduction of texts in a large number of scripts. So far little attention has been devoted, for instance, to Sanskrit lithographic material as compared to lithographed books in vernacular languages. Yet, as I will try to demonstrate, intriguing questions arise when we devote our attention to this type of material. Were the scribes active in the production of manuscripts for the manuscript market and readership different from the scribes who worked for lithographic printing presses or were they the same persons? Were the roles of those involved in these printing presses always neatly distinguishable or did they sometime overlap and for instance scribe, editor, and printer were one and the same? Where is the information provided in manuscript colophons found in lithographed and typographed books? Is it provided

in the same form or not, and why? The answers to these and other questions can be found only if we set out to fulfil the tedious task of reading the primary sources, i.e. the title pages, colophons, and other paratexts of early Sanskrit prints from South Asia[1].

After this short introduction, I provide the description of the primary sources analysed. In the third section I discuss the terminology for print as exemplified in the selected Sanskrit lithographs and incunabula described in the previous section, comparing it to the terminology found in colophons of South Asian manuscripts from different periods and areas. Finally, the fourth part of the article is devoted to some preliminary thoughts and conclusions based on the material examined.

2 Primary Sources

The material is presented here in chronological order starting with typography, the first printing technique introduced in South Asia by the colonial powers in the sixteenth century. Each entry consists of four parts: a short bibliographical note, the Sanskrit text, its English translation, and if needed, a short commentary. In the latter, only specific points related to the Sanskrit text or the English translation are dealt with, while more general issues related to print terminology and culture are discussed in § 3. The selection of volumes presented here is necessarily limited due to space constraints and access to the material itself. The worldwide situation caused by the pandemic greatly limited access to primary sources, forcing me to limit the selection to material I had already examined or that is available in the Bodleian Libraries. It is for this reason that some bibliographical information is less detailed than other, since I was able to consult some books only in electronic format. I beg the readers for forgiveness.

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1 The material considered in the present study corresponds to the following definition of Sanskrit print: 'any print containing a complete Sanskrit work, regardless of other features (such as the presence of a translation in another language), and printed in South Asia' (Formigatti 2016, 76).

2.1 Incunabula

2.1.1 Nāmaliṅgānuśāsana, Trikaṇḍaśeṣa, Hārāvalī, Nānārthaśabdakośa

Bodleian Libraries, Oxford: Sansk. 4.160 (Bābūrāma 1807b).
Published in Kolkata at the Sanskrit Press in 1807. Format: codex.

> [Title page]
> *śrīmadamarakṛtakoṣaḥ (!) puruṣottamakṛtatrikaṇḍaśeṣañ ca |*
> *hārāvalyabhidhānam medinīkarasya nānārthaḥ || 1 ||*
> *nagare kalikattākhye kolabrūk̥ sāhabājñayā |*
> *śrīvidyākaramiśreṇa kṛtasūcīsamanvitaḥ || 2 ||*
> *vedarttvaṣṭakalānāthasammite vikramābdake |*
> *mudrākṣareṇa vipreṇa bābūrāmeṇa lekhitaḥ || 3 ||*

> 1. The Dictionary composed by the Venerable Amara and the Supplement in Three Chapters composed by Puruṣottama, The Pearl Necklace, Medinī's Homonymyc [Dictionary].
> 2–3. In the city called Kolkata, at Mr Colebrooke's behest, [this book was] provided with indices by the venerable Vidyākaramiśra; published with movable type by the brahmin Bābūrāma in the year Vikrama calculated as Vedas (4) – Seasons (6) – Eight – Moon (1) (1864).

Is the singular *mudrākṣareṇa* instead of plural *mudrākṣarair* employed *metri causa*? This usage occurs also in § 2.1.2 and § 2.1.5. The English 'published' renders the Sanskrit term *lekhita*, as discussed in § 4 below.

2.1.2 Hemacandra's *Abhidhānacintāmaṇi* with *Anekārthasaṅgraha*

Bodleian Libraries, Oxford: Sansk. 4.159 (Bābūrāma 1807a).
Published in Kolkata at the Sanskrit Press in 1807. Format: codex.

> [Title page]
> *sānekārthanāmamālātmakaḥ koṣa(!)varaḥ śubhaḥ |*
> *candrapraṇītābhidhānacintāmaṇir maṇiḥ || 1 ||*
> *nagare kalikattākhye kolabrūk̥ sāhabājñayā |*
> *śrīvidyākaramiśreṇa kṛtasūcīsamanvitaḥ || 2 ||*
> *vedarttvaṣṭakalānāthasammite vikramābdake |*
> *mudrākṣareṇa vipreṇa bābūrāmeṇa lekhitaḥ || 3 ||*

> 1. The *Abhidhānacintāmaṇi* written by [Hema]candra, a pure jewel, best among dictionaries, together with the homonymic dictionary *Anekārtha[saṅgraha]*.
> 2–3. In the city called Kolkata, at Mr Colebrooke's behest, [this book was] provided with indices by the venerable Vidyākaramiśra; published with movable type by the brahmin

Bābūrāma in the year Vikrama calculated as Vedas (4) – Seasons (6) – Eight – Moon (1) (1864).

In stanza 3, the type for *mu* was not set and the printed text thus wrongly reads *drākṣareṇa*.

2.1.3 New Testament

Bodleian Libraries, Oxford: N.T. Sansk. d.1; 7 E 27; 45 F 18 (Carey 1808).
　　Published in Serampore at the Missionary Press in 1808.
　　Format: codex.

All three Bodleian copies of this printed volume are different. In N.T. Sansk. d.1, sent to the Bodleian in 1817, the gathering with the signature *kha* is in Hindi, not Sanskrit. 45 F 18 is an incomplete copy, lacking the title page in English, and is printed on a different type of paper with different dimensions than the other two copies; moreover, a note pasted on the inner side of the front cover states that the copy is bound in the original boards.

> [English title page]
> The / New Testament / of our Lord and Saviour / Jesus Christ / translated into the / Sungskrit language, / from the / Original Greek. / By the missionaries at Serampore. / Serampore, / 1808.

> [Sanskrit title page]
> *īśvarasya sarvvavākyāni / yan manuṣyāṇāṃ trāṇāya kāryyasādhanāya ca prakāśitaṃ ||*
> */ tad eva / dharmmapustakaṃ || / tasyāntabhāgaḥ | arthād asmatprabhutārakayiśukhrīṣṭa-*
> *viṣayakaḥ / maṅgalasamācāraḥ / yāvanikabhāṣāt ākṛṣya saṃskṛtabhāṣayā likhitaḥ ||*
> */ śrīrāmapure mudritaḥ || / 1808 ||*

> Every Sermon of the Lord. This is the Book of the Divine Law which was announced for the protection of the human beings and the betterment of their actions. The New Testament, i.e. The Gospel concerning our Lord and Saviour Jesus Christ. Translated from the Greek language and published in the Sanskrit language. Printed in Serampore. 1808.

Note the reduplication of consonants after *repha*, an orthographic feature peculiar of manuscripts. English 'Divine Law' renders *ad sensum* the Sanskrit term *dharma*. Moreover, the Sanskrit phrase *tasyāntabhāgaḥ* (lit. 'Its final section') corresponds to 'The New Testament' in the English title page, while 'i.e.' renders Skt. *arthād* in the sense of 'that is to say, namely'. Finally, 'Gospel' is the rendering of the Sanskrit term *maṅgalasamācāra*, which in its turn is a calque from the Greek εὐαγγέλιον, where the Sanskrit *maṅgala* corresponds to the prefix εὐ-

('good'), while *samācāra* to -αγγελιον ('tale, message'). This rendering is a peculiar choice, since the translators could have easily chosen a rendering more etymologically akin to the Greek original, using the Sanskrit prefix *su-* for Greek εὐ- and a Sanskrit term semantically closer to Greek -αγγελιον (< ἄγγελος), such as *śāsana*, *sandeśa* or *dūta*. (In fact, the 1845 Bengali translation of the Gospels is entitled *Susamācāra*, pointing to a more etymological rendering [Yates et al. 1845]). Interestingly, neither in the PW nor the pw the meaning 'news' is provided for *samācāra*; however, it is provided both in Wilson's (1832) and Apte's (1965) dictionaries. This fact is particularly relevant in the case of Horace Hayman Wilson's dictionary, for he was active as a scholar roughly in the same period when the Bible translations were made and his Sanskrit-English dictionary was first published in 1819. Unfortunately, in the lemmata of his dictionary Wilson does not provide the textual occurrences of Sanskrit terms. Nevertheless, it is tempting to assume that this meaning for *samācāra* might derive precisely from these translations.

2.1.4 Pentateuch

Bodleian Libraries, Oxford: N.T. Sansk. d.1; 7 E 27; 45 F 18 (Carey 1811).
Published in Serampore at the Missionary Press in 1811. Format: codex.

The Bodleian copy consulted lacks the added English title page, which in the Bodleian Libraries' online catalogue (SOLO) reads as follows: 'Pentateuch, translated into the Sungskrit language, from the original Greek [sic]. By the missionaries at Serampore.' (transcribed from the copies kept at Regent's Park College Library: Angus Library, Bib.18 and Baptist Missionary Society collection, Sanskrit 6).

> [Sanskrit title page]
> *īśvarasya sarvvavākyāni / yanmanuṣyāṇāṃ trāṇāya kāryyasādhanāya ca prakāśitaṃ ||*
> */ tad eva / ādyantabhāgātmakaṃ dharmmapustakam || / tasyādibhāgaḥ / mośahā*
> *prakāśitavyavasthā | yiśaraelarājyavivaraṇa | gītādipustakāni | ācāryyaiḥ prakāśitavākyāni*
> *| / etac catuṣṭayātmakaḥ || / tasyāntargatā mośahā prakāśitavyavasthā / ebaribhāṣāt*
> *ākṛṣya saṃskṛtabhāṣayā / likhitā || / śrīrāmapure mudritaḥ || / 1811 ||*

> Every Sermon of the Lord. This is the Book of the Divine Law which was announced for the protection of the human beings and the betterment of their actions, comprising the Old and New Testament. Its Old Testament: Genesis, Exodus, Leviticus, Numbers; to this Tetrateuch, the Deuteronomy is added. Translated from the Hebrew language and published in the Sanskrit language. Printed in Serampore. 1811.

The interpretation of the Sanskrit translation of the titles of the five books in the Pentateuch poses several issues. The expression *catuṣṭayātmakaḥ* ('having a fourfold structure; Tetrateuch') implies that we have to individuate four books between it and the term *ādibhāga* ('Old Testament').[2] However, since one of these books must be represented by the title *mośahā prakāśitavyavasthā*, its repetition after *catuṣṭayātmakaḥ* is rather puzzling, since it would mean that the books of Genesis and Deuteronomy were rendered with the same title. Moreover, even considering the fact that the translators were rendering the Hebrew Torah and not the Greek Septuaginta, it is difficult to explain the discrepancy between the Sanskrit translation and the original Hebrew titles of the books. Traditionally, the Hebrew titles of the books in the Pentateuch consist of the first significant words of each book and the beginning of Genesis is surely not 'the Rule announced by Moses' (Skt. *mośahā prakāśitavyavasthā*). The only Sanskrit rendering which is immediately understandable is *yiśaraelarājya-vivaraṇa* ('Exposition of the People of Israel') for Exodus, but the rationale behind all other Sanskrit titles remains a mystery to me.

2.1.5 Bhāravi's *Kirātārjunīya* with Mallinātha's Commentary (*Gaṇṭāpatha*)

Bodleian Libraries, Oxford: 5 Bharavi 2; Sansk. 2.35.
Niedersächsische Staats- und Universitätsbibliothek, Göttingen: Gretil e-library copy <http://resolver.sub.uni-goettingen.de/purl/?gr_elib-98> (Bābūrāma 1814). Published in Khidirapore (Kolkata) at the Sanskrit Press in 1814. Format: codex.

> [Title page, all elements centred]
> || *kāvyanāma* || / || *kirātārjjunīya* || / || *kavināma* || / || *bhāravi* || / ✳ / || *ṭīkānāma* || / || *gaṇṭāpatha* || / [*puṣpikā*] / || *ṭīkākāranāma* || / || *mallinātha* || / / ✳
>
> Title of the poem: *Kirātārjjunīya*. Name of the poet: Bhāravi. Title of the commentary: *Gaṇṭāpatha*. Name of the commentator: Mallinātha.
>
> [Flyleaf 1ʳ, imprint, all elements centred]
> || *atra kāvye sargasaṃkhyā* || / *aṣṭādaśa 18* || / ✳ / || *atra kāvye mūlaś-lokasaṃkhyā* || / *ekapañcāśadadhikasahasraṃ 1052* || / ✳ / || *atrārjjunasya kāvyanāyakasya pāśupatāsvalābhaḥ phalam˳* || 1 || / ✳

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2 On the various hypotheses of the existence of an independent Tetrateuch, see the introductory essay by Ska and Dominique (2006, 4–5).

Number of chapters in this poem: eighteen 18. Number of verses in this poem: one-thousand-fifty-two 1052. Resolution [of the story]: Arjuna, the protagonist of the poem, obtains Śiva's weapon.

[Flyleaf 1ᵛ, imprint, all elements centred]
|| śāke ṣaḍagnisaptendusammite vatsare śubhe || || śāke 1736 || / || candrādrivasubhūmāne vikramādityavatsare || / || saṃvat 1871 || / || bhūyugmadṛṣṭidharaṇīsaṃmite yavanābdake || / || san 1221 sāla || / || vedabhūmivasucandramāsana īsavīpramāna || / || māhajūna-kevā isācchapyogranthaparadhāna || / || san˳ 1814 īsavī | tāḥ 22 jūna || /

In the Śāka year calculated as Six – Fire (3) – Seven – Moon (1), an auspicious year. In the Śāka year 1736. In the Vikrama year calculated as – Moon (1) – Mountains (7) – Vasu gods (8) – Earth (1). Vikrama year 1871. In the Islamic year calculated as Earth (1) – Pair (2) – Eyes (2) – Earth (1). Year 1221 (?).Gregorian year calculated as Vedas (4) – Earth (1) – Vasu gods (8) – Moon (1). Gregorian year 1814. Day 22 June.

[Flyleaf 2ʳ, imprint, all elements centred]
nagare kalikattākhye śrīmallāṭanṛpājñayā |
śrīvidyākaramiśreṇa bāburāmeṇa dhīmatā || 1 ||
sambhūya śodhayitvātha kāvyaṃ ṭīkāsamanvitam˳ |
mudrākṣareṇa yatnena nyāsitaṃ sudhiyāṃ mude || 2 ||
vinā pariśramaṃ dhīrāḥ pāṭhayantu paṭhantu ca |
tadartham aṅkitañ caitat saṭikaṅ kāvyam uttamam˳ || 3 ||
|| saṃskṛtayantre khidirapure śrīmadanapālenāṅkitam˳ ||

1–2. In the city called Kolkata, at the order of the governor-general, [this] excellent poem with a commentary was corrected by the venerable Vidyākaramiśra together with Bāburāma, then sent to be carefully typeset with movable type for the delight of clever persons.
3. Disciplined persons should cause to recite and recite [it] without trouble; this supreme poem with its commentary was printed for this purpose.
Printed by the venerable Madanapāla at the Sanskrit Press in Khidirapore.

The Islamic date 1221 is wrong, since it corresponds to 1806 and not 1814 (= 1229 ᴀʜ).

2.1.6 *Tattva*s from Raghunandana Bhaṭṭācārya's *Smṛtitattva*

Bodleian Libraries, Oxford: Sansk. 1.9–11 (R. Bhaṭṭācārya [1830s]).
Edited by Bhabānīcaraṇa Bandyopādhyāya (1787–1848) and printed in Bengali script in Kolkata in the 1830s at the Samācāracandrikā Press. Format: *pothī*.

[Colophon]
mahāmahopādhyāyavandyaghaṭīyasmārtta śrīraghunandanabhaṭṭācāryakṛtam ekādaśītattvam idaṃ śrībhabānīcaraṇabandyopādhyāyena prayatnataḥ saṃśodhanapū-rvvakaṃ kalikātānagare samācāracandrikāyantreṇa mudrāṅkitaṃ

The *Ekādaśītattva* composed by the venerable Raghunandana Bhaṭṭācārya, *mahāmaho-pādhyāya* and revered expert on law; this [book] was revised/edited by the venerable Bhabānīcaraṇa Bandyopādhyāya with care and then printed in the city of Kolkata at the Samācāracandrikā Press.

2.1.7 *Bhāgavatapurāṇa* with Śrīdharasvāmin's *Bhāgavatabhāvārthadīpikā*

Bodleian Libraries, Oxford: 4.5.3. Bhag. 35 ([Bhāgavatam with Śrīdhara's commentary] 1830).
Edited by Bhabānīcaraṇa Bandyopādhyāya (1787–1848) and printed in Bengali script in Kolkata in Śāka 1752 (1830 CE) at the Samācāracandrikā Press. Format: 2 volumes, *pothī*.

[Colophon]
śrīmadṛṣivedavyāsaproktaṃ śrīmadbhāgavataṃ śrībhabānīcaraṇabandyopādhyāyena prayatnato bahubudhaśodhitaṃ pakṣaśaradharādharadharāśākīyavaiśākhasyaikatriṃ-śadvāsare kalikātānagare samācāndrikāyantreṇāṅkitaṃ |

The venerable *Bhāgavata*[*purāṇa*] told by the venerable seer Vedavyāsa, very cleverly edited by the venerable Bhabānīcaraṇa Bandyopādhyāya with care, printed in the city of Kolkata at the Samācāracandrikā Press in the thirty-first day of the month Vaiśākha of the Śāka year Wings (2) – Arrows (5) – Mountains (7) – Earth (1) [i.e. 1752].

2.1.8 *Bhāgavatapurāṇa* with Śrīdharasvāmin's *Bhāgavatabhāvārthadīpikā*

Bodleian Libraries, Oxford: 4.5.3. Bhag. 4 (Bhāgavatapurāṇa 1860).
Printed in Mumbaī by Gaṇapata Kṛṣṇājī in 1860. Format: *pothī*, 13 original tomes bound in 4 volumes.

[Colophon]
*yathādhvanīnaḥ sthapuṭaṃ prayān pathaṃ cirāya naijaṃ pratipadyate kliśan ||
tathā viśuddhaṃ pratipadya pustakaṃ budho 'dhigacchaty adhigamyam āspadam || 1 ||
ato budhaiḥ sūkṣmadṛśā vidheyā sā paustakī śodhanikātiyatnāt ||
sāhāyyakṛddattavivekadṛgvaco manobhirāmākṣaramālikāṃcitā || 2 ||
tat prastutaṃ bhāgavatīyapustakaṃ nirīkṣamāṇau kṛtalakṣaṇān stuvaḥ ||
kṣetraṃkaropābhidhanāśikasthagoviṃdasadvaidyatanūbhavo 'nyaḥ || 3 ||
revadaṃḍāpurīvṛttilabdhadharmādhikāravān ||*

harijotramahādevaḥ śodhaṃ cakre yathāmati || 4 ||
kṛṣṇabhūgaṇapatyākhyamudrāyaṃtrālaye 'male ||
tattanūbhavakānhobābhidhena viduṣāṃ mude || [5]
dvidiggajādrikumite raudrābde śālivāhake ||
mārge puṇye 'grahāyaṇyāṃ mudritaṃ mudrikākṣaraiḥ || [6]

1. Like a traveller walking on a rugged path after long reaches his own [path] experiencing affliction, so a clever man reaches the aspired authority after having studied a correct book.
2. Therefore intelligent men ought to use this slender-looking booklet — a curled little garland pleasing the sight, speech, and mind thanks to the discernment provided by those who helped — in the serious effort of correcting it.
3. Beholding its excellent characteristics, the two of us praise the aforementioned little book on the Bhāgavata: Kṣetraṅkara, another son of the venerable teacher Govinda who resides in Nāśika.
4. Harijotramahādeva, who obtained authority on *dharma* [i.e law?] etc. through service in the village of Revdanda corrected [this book] to the best of his knowledge.
5–6. His son Kānhoba printed [this book] with movable types in the spotless typographical house Kṛṣṇabhūgaṇapati for the pleasure of the learned, in the Śaka year Two – Elephants of the Quarters (8) – Mountains (7) – Earth (1) [i.e. 1782], the Jovian year Raudra, in the auspicious month Mārga.

This colophon consists of stanzas in different metres: stanza 1 is in the Vaṃśastha metre, stanzas 4–6 are in the Anuṣṭubh metre, while stanzas 2 and 3 consists of a peculiar mixture of different metres (verse 2a is in the Upendravajrā, verse 2b and 3cd in the Indravajrā, 2c and 3a in the Indravaṃśa, 2d and 3b in the Vaṃśastha).

2.2 Lithographs

2.2.1 Bhojarāja's *Campūrāmāyaṇa* with Lakṣmanasūri's Sixth Chapter

Bodleian Libraries, Oxford: 5 Bhoja. Campu. 3 (Campūrāmāyaṇa 1848).
Printed in Pune in 1848. Format: *pothī*.
Bodleian Libraries, Oxford: 5 Bhoja. Campu. 2 and Sansk. 2.25 (Campūrāmāyaṇa 1852).
Printed in Pune in 1852. Format: *pothī*.

[Colophon]
kāvyālaṃkāraśālāsthadvitīyaguruṇā svayaṃ ||
bhojīyacaṃpu(!)ṣaṭkāṃḍī śodhiteyaṃ yathāmati || 1 ||
khasaptasapteṃdumite* śāke puṇyākhyapattane ||
yatnataḥ pāṭhaśālāyām aṃkiteyaṃ śilākṣaraiḥ || 1 ||

khasaptasaptemdumite] 5 Bhoja. Campu. 3; *vedāśvasaptemdumite* Bhoja. Campu. 2 and Sansk. 2.25

1. The second guru in residence of the Society of Poetical Research edited himself Bhoja's Campū[Rāmāyaṇa] in Six Chapters to the best of his knowledge.
1. Carefully lithographed in the Vedic School (*pāṭhaśālā*) in the city of Pune in the Śāka year calculated as Sky (0) – Seven – Seven – Moon (1) [i.e. 1770] / Vedas (4) – Horses (7) – Seven – Moon (1) [i.e. 1774].

These three copies were all printed in the same place, however the manuscript for 5 Bhoja. Campu. 3 was written by a different scribe four years before the manuscript for the other two copies. The colophon of 5 Bhoja. Campu. 3 begins on fol. 74ʳ2, while the colophon of 5 Bhoja. Campu. 2 and Sansk. 2.25 on fol. 73ᵛ7.

2.2.2 *Śrīmadbhāgavatacūrṇikā*

Bodleian Libraries, Oxford: 4.5.3. Bhag. 5a (Śrīmadbhāgavatacūrṇikā 1850).
Published in Mumbaī by Viṭṭhala Sakhārāma Agnihotrī in 1850. Twelve fascicules, each containing one chapter (*adhyāya*), bound in one volume; each fascicule foliated separately, colophon in the last fascicule. Format: *pothī*.

[fol. 9ᵛ15]
mumbākhyapure dvijavaryasakhārāmasūnunā sudhiyā ||
svīyaśilāyaṃtro[16]*pari viṭṭhalanāmnāgnihotriṇā tvarayā || 1 ||*
dvikaturagasaptabhūmitaśāke sādhāraṇābdakāśvayuji ||
graṃtho <'>yaṃ vidvajjanasahāyataḥ pūrṇatāṃ nītaḥ || 2

In the city of Mumbaī, the learned Viṭṭhala Agnihotrī, son of the eminent Brahmin Sakhārāma, brought quickly to completion this book in the Śāka year calculated as Doublet (2) – Horses (7) – Seven – Earth (1) [i.e. 1772], in the month Āśvin of the Jovian year Sādhāraṇa, thanks to the support of knowledgeable individuals.

2.2.3 Jaiminī's *Aśvamedhaprākṛta*

Bodleian Libraries, Oxford: (IND) 11 F 1 (Jaiminī Aśvamedha prākṛta 1850)
Probably printed in Mumbaī in the 1850s, unidentified publisher. Format: *pothī* (various foliations).

[chapter 96, fol. 4ʳ12]
|| śake satrāṃśe ekūṇahāttarīṃ || plavaṃganāmasaṃvatsarīṃ || graṃtha chāpilā śiḷāyaṃtrīṃ || viśvavāthasuteṃ gaṇeśeṃ [13] || 1 || yādṛśaṃ pustakaṃ dṛṣṭvā tādṛśaṃ

likhitaṃ mayā || yadi śuddham aśuddhaṃ vā mama doṣo na vidyate || 1 || [14] || cha || || cha || || cha || || cha ||

Lithographed in the Śaka year seventeen sixty-nine, in the Jovian year called Plavaṅga, by Gaṇeśa, son of Viśvanātha. In the same form as I saw the manuscript, I have written [a copy]; if something is correct or incorrect, it is not my fault.

2.2.4 Jaiminī's *Aśvamedha*

Bodleian Libraries, Oxford: 4.3.2. 43 (Bāpūsadāśivaśeṭha 1850).
Printed in Mumbaī by Bapu Sadashiv Shet Hegiste in 1850. Format: *pothī*.

[fol. 125ʳ4]
sadāśivasuto bāpur hegiṣṭhety upanāmakaḥ aśvamedhaṃ mohamayyām ujjahāra śilāmaye 1 svīye yaṃtre śucau śukle ravau kāmatithau [5] tathā śāke netrādrimunibhūmite \1772/ saṃpūrnatām agāt 2 śubhaṃ bhavatu cha cha cha cha

Bapu son of Sadashiv, nicknamed Hegisthe, removed the delusion (?), brought to completion the *Aśvamedha* in his own lithographic press in the hot month [i.e. Āṣāḍha or Jyeṣṭha], in the bright half, on Sunday, in the lunar day of Kāma, in the Śaka year Eyes (2) – Mountains (7) – Sages (7) – Earth (1), i.e. 1772. Let there be bliss!

2.2.5 *Bhāgavadgītā* with Śrīdharasvāmin's commentary *Subodhinī*

Cambridge University Library 834:1.a.85.54 (Bāpūsadāśivaśeṭha 1861).
Printed in Mumbaī by Bapu Sadashiv Shet Hegiste in 1861. Format: *pothī*.

[fol. 105ʳ12]
samāpto <'>yaṃ graṃthaḥ śrīkṛṣṇārpaṇam astu [13] heṃ pustaka bāpusadāśivaśeṭha hegiṣṭe yāṇī āpalyā śilāchāpakhānyāṃta chāpaloṃ muṃbaī ṭhikāṇa hanumān˛ gallī śāke 1783 durmanināmasaṃvatsare

This volume is completed. Let [it] be an offer to the Venerable Kṛṣṇa! This book was printed by Bapu Sadashiv Shet Hegiste [= Bapu, the son of Sadashiv] in his lithographic press, Mumbaī, Hanuman Lane, in the Śāka year 1783, in the Jovian year named Durmati.

2.2.6 Kamalākarabhaṭṭa's *Śūdrakamalākara*

Cambridge University Library 834:1.a.85.44; Bodleian Libraries, Oxford: Sansk. 1.47 (Kamalākarabhaṭṭa 1861).
Printed in Mumbaī in 1861. Format: *pothī*.

[fol. 94ʳ6]

heṃ pustaka, vedaśāstrasaṃpanna rājamānya gaṇeśabāpūjīśāstrī mālavaṇakara āṇi
rājaśrī kailāsavāsī viṣṇubāpūjīśāstrī vāpaṭayā [7] *ubhayatāṃnīṃ bhāgīteṃ chāpaleṃ ase ||*
śake 1783 durmatināmasaṃvatsare || mārgaśīrṣe māsikṛṣṇapakṣe ravivāsare idaṃ
*pustakaṃ samāptam ˌ || *[8] *trināgasapteṃdumite śake muṃbākhyapaṭṭaṇe || yatnataś ca*
gaṇeśena aṃkito <'>yaṃ śilākṣaraiḥ || 1 || || cha || cha

This book was published by Ganeshbapuji Shastri Malvankar and Late Vishnubapuji
Shastri Bapat. This book was finished in the Śaka year 1783, in the Jovian year named
Durmati, in [the month] Mārgaśīrṣa, in the dark half of the month, on Sunday. In the Śaka
year calculated as Three – Serpents (8) – Seven – Moon (1), Gaṇeśa carefully lithographed
this [volume].

2.2.7 Rāmakiśora Śarmā Bhaṭṭācārya's *Mudrāprakāśa*

Bodleian Libraries, Oxford: 45 F 27 (R. Ś. Bhaṭṭācārya 1867).
Printed in Vārāṇasī at the Siddhavināyaka press in the Ḍhuṇḍhirāja Gaṇeśa
temple in Vikrama 1924 / Śāka 1789 [1867 CE]. Format: *pothī*.

[Title Page]
*|| śrīkāśīviśvanāthapurī me ḍhuṃḍhirājagaṇeśa ke pāśa dāū agniho | *[1ʳ2] *trī ke yahāṃ*
siddhavināyakayaṃtra me mudrāprakāśa chāpāgayā dhuravin chāpa[1ʳ3]*nevāle se*
likhāviśeśara upādhyā saṃ. 1893 pha.sū. 10 śukravāsare.

The *Mudrāprakāśa* was printed at the Siddhavināyaka press at the place of Dau Agnihotrī
near the Ḍhuṇḍhirāja Gaṇeśa temple in Vārāṇasī, the city of Śiva, by the printer Dhurvin,
[after] it was written by the scribe Viś[v]eśara Upādhyāya in the [Vikrama] year 1923, in the
bright half of the month Phalguna, on Friday.

[Colophon, 20ᵛ7]
saṃvat 1924 || śāke 1789 || caitrakṛṣṇa 5 caṃdravāsare || śubhaṃ bhūyāt ||
maṇibaṃdhayutau kṛtvā prasṛtāṃgulikau karau kaniṣṭhāṃguṣṭhayugale | militvāṃtapra-
sārite jvālinīnāma mudreyaṃ vaiśvānarapriyaṃkarī 1 || samāptaś cāsau graṃthaḥ || śrīr
astu śubhaṃ

In the Vikrama year 1924; in the Śaka year 1789; in the dark half of the month of Caitra, on
Monday. Let there be bliss! If the wrists are joined, the hands with fingers stretched, the
couple of little finger and thumb is conjoined and stretched to the end, this is the *mudrā*
named Jvālinī, producing joy for all mankind. And this volume is completed. Let there be
prosperity, bliss!

The Bodleian copy belonged to Monier-Williams, as attested by his ex libris
pasted on the internal front cover and a note in pencil on fol. 1ʳ ('Most respect-
fully presented to Professor Monier Williams Esq. by his most obedient Paṇḍit(!)

Bihárí Chaulie of the Benares College 19/1/76 Benares'). The Wellcome Library copy (shelfmark: Sanskrit litho 112) was printed in the month Pauśa; moreover, according to the bibliographical description on the Wellcome Library catalogue, its title page/imprint is identical to the Bodleian copy only up to the words *mudrāprakāśa chāpāgayā*, while the text that follows differ considerably: *vaṃsīdhara miśra chāpanevālā māna jisai lenā hoya usai ḍhuṃḍhirājagaṇeśa ke pāśa dāū agnihotrī ke dukāna para milaigā*.

2.2.8 Yogivaryyavipra Rājendra's *Aṣṭāṅgaśuddhi*

Bodleian Libraries, Oxford: Sansk. 3.151 (Rājendra 1860).
Place and publisher not identified, publication date between 1860 and 1880.
Format: *pothī*.

> [Colophon]
> *vidyodayo nirākuryād avidyātimiraṃ sadā ||*
> *sahasrāṃśur ivāśeṣaṃ mudrākiraṇarājibhiḥ || 1 ||*
>
> 1. May the rise of knowledge completely dispel the darkness of ignorance, as if it was the sun with his thousand rays, thanks to the beaming lines (*kiraṇarāji*) of print (*mudrā*)!

3 Terminology

The glossary lists the terms in Roman alphabetical order; each term is followed by the references to its occurrence in the texts presented in § 2. I have checked the meanings of each term as provided in the following Sanskrit dictionaries (see Abbreviations below):
– Wilson 1832.
– Böhtlingk and von Roth 1855.
– Böhtlingk 1879.
– Monier-Williams 1899.
– Schmidt 1928.
– Apte 1965.
– Mayrhofer 1986.
– Nachtrags-Wörterbuch des Sanskrit.

Wilson's dictionary is particularly important for our purpose insofar it was prepared and published in the same period and cultural environment of the

typographies in which the earliest Sanskrit books were printed. As a methodological rule, I consider the meanings provided in the PW, the pw, Schmidt, and the NWS as last instances, since they all provide the occurrences of a term (with the only exception of the pw), while Wilson, the MW, and Apte do not.[3]

3.1 Printing

aṅkita
[2.1.5–7, 2.2.1, 2.2.6] 'Printed'. The past participle passive of the verb *aṅkay-* (denominative from *aṅka*) denotes something curved or bent (for instance, a hook or any curved part of the human body), thus including any type of written sign. Occasionally it is used as a synonym of *mudrita*, however it mostly denotes any type of printed text, regardless of the kind of technology employed. Accordingly, it is often further defined, as in the compound *mudrāṅkita*, 'printed typographically', or in the expression *aṃkito 'yaṃ* [scil. *granthaḥ*] *śilākṣaraiḥ*, 'this [book] was lithographed' (lit. 'this [book] was printed by means of lithographic characters').

mudrā (*mudrita*)
[2.1.1–6, 2.1.8, 2.2.8] '(Typographic) print'. The term *mudrā* and its derivatives are the standard terms used in Sanskrit to denote print and print technology in general. As in the case of most Sanskrit terms related to writing, the etymology points to a Persian origin (Mayrhofer 1986, s.v.).[4] A comprehensive discussion of the various meanings of *mudrā* related to writing technology is provided by Falk (1993, 299–301). Its primary meaning related to print technology is 'seal' or 'stamp', extending also to any kind of sign or symbol created by means of the seal or stamp itself (in particular, *mudrā* is closely connected with the sphere of coinage). The shift towards the specific meaning of 'typographic print' is explained in detail in § 4.

mudrākṣara (*mudrikākṣara*)
[2.1.1–2, 2.1.5, 2.1.8] 'Type, movable type'. The compounds *mudrākṣara* and *mudrikākṣara*, lit. 'stamp-character', is used in opposition to *śilākṣara*, 'stone-

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3 Since the MW is the most used Sanskrit-English dictionary, and the glossary in this article is Sanskrit-English too, this choice might seem counter-intuitive to non-Indologists; the rationale behind it rests on the considerations Roland Steiner put forward in a recent article (Steiner 2020).

4 On the foreign origin of Sanskrit terms pertaining to writing technology see Falk (2009).

character', and can thus be safely understood and translated as 'movable type'. See also § 4.

mudrāṅkita
[2.1.6] See s.v. *aṅkita*.

nyāsita
[2.1.5] '(tasked to be) typeset (?)'. In the material examined here, this term occurs only in the imprint of the 1814 edition of Bhāravi's *Kirātārjunīya*. In this context its meaning is dubious and rests ultimately on the interpretation of other terms occurring in the same imprint. It is a past passive participle from the causative form of the verb *ni-as*, meaning 'cause to lay or put down', and if our understanding of the other terms is correct, then the most probable meaning of *nyāsita* must relate to the typesetting process, as explained in § 4.

yantra (*mudrāyantra*, *mudrāyantrālaya*, *śilāyantra*)
[2.1.5, 2.1.6, 2.1.7, 2.1.8, 2.2.2, 2.2.3, 2.2.4, 2.2.7] 'Printing press'. The Sanskrit term *yantra* denotes any mechanical device, therefore it is often further defined, occurring in expressions such as *mudrāyantra*, 'typographic press', *śilāyantra*, 'lithographic press', and other similar compounds.

śilākṣara
[2.2.1, 2.2.6] 'Lithographic character' and, by extension, 'lithography'. See also s.v. *aṅkita*.

3.2 Editing and publishing

ākṛṣya
[2.1.3, 2.1.4] 'To translate'. This term occurs only in translations of the Bible and might be considered a calque from the English 'translate' (or even directly from the Latin *transferre*, where *ā-* = *trans-* and *kṛṣ-* = *ferre*). However, since Apte provides the meaning 'to supply a word or words from another rule or sentence' (albeit without listing any occurrence), it could be that *ākṛṣ-* in Sanskrit could already have meant 'to translate'. It is worth noting that any form or derivative of the verb *anu-vad* (such as the causative gerund *anuvādya* or the substantive *anuvāda*) would have been more straightforward Sanskrit renderings of the English "translation", and probably also more intelligible for Bengali (and Hindi) native speakers.

likhita / lekhita
[2.1.1–4, 2.2.3, 2.2.7] 'Composed / commissioned for composition'. The verb *likh-* means 'to scratch' (Mayrhofer 1986, 3.58, s.v. *rikháti*) and by extension 'to engrave, inscribe, write, paint'. It occurs in colophons of manuscripts invariably denoting the scribe as opposed to the author of the text. If author and scribe coincide, as in the case of autographs, usually the two aspects of creating the text and writing the manuscript are clearly distinguished in the colophon, with a form of verbs such as *kṛ-* or *vi-rac-* describing the act of composing the text, while *likh-* the material act of writing the manuscript.[5] On the other hand, it seems that *likh-* was occasionally used also with the meaning 'to compose', as explained in detail in § 4.

śudh-
[2.1.5–8, 2.2.1, 2.2.3] 'To correct, emend'. Already in the manuscript tradition derivatives of this verbal root are used as standard terms to denote correcting, emending, and similar activities. In the material examined here the following forms occur: *śuddha, viśuddha, śodha, śodhita, śodhanikā, śodhayitvā, saṃśodhana*. The term *śodhanikā* is a curious *hapax* which occurs alongside another hapax, *paustakī*; both terms are simply diminutives, respectively from *śodhana* and *pustaka*, and their meaning is clear from the context.

3.3 Terminology for dates

īsavī
[2.1.5] In the imprint of the 1814 edition of Bhāravi's *Kirātārjunīya* the date is provided in four different calendars: Śāka, Vikrama, Islamic, and Gregorian. The term used to indicate the Gregorian is Hindi *īsavī*, not attested in Sanskrit dictionaries. It is the adjective derived from Hindi *Īsava*, 'Jesus'.

°*mite* / °*saṃmite* / °*māne*
[2.1.1, 2.1.2, 2.1.5, 2.1.8, 2.2.1, 2.2.4, 2.2.6] 'Calculated; measuring'. The past participle passive of the verbal root *mā* (with or without a preverb) often occurs at the end of compounds expressing the year with chronograms (*bhūtasaṅkhyā*). They are used in the sense of 'measured, calculated as; measuring (°*māne*)'. Similar expressions occur rarely in colophons of Sanskrit manuscripts written

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5 See for instance Formigatti (forthcoming).

before the eighteenth or nineteenth century,[6] but are very common in both type-set and lithographed printed books.

4 A few preliminary conclusions

Albeit limited in scope, the material examined above allows us to make a first important observation: in order to understand the correct purport of terms having an apparently well-known meaning, we have to be alert to the cultural context in which they were employed. The most striking example is *mudrā*, the Sanskrit term for print par excellence. Among other meanings, the PW provides also 'type, wooden type' ('Type, Holztype'), pointing to a passage from the *Khaḍgamālātantra* as quoted in the *Śabdakalpadruma*, in which the term *mudrā* occurs alongside other terms denoting different types of writing technologies. Moreover, under *mudrālipi* the PW points to a similar passage from the *Vārāhītantra*, quoted again in the *Śabdakalpadruma*. In the latter, the two passages are quoted one after another:

> *pañcadhālipyantargatalipiviśeṣaḥ | chāpāra akṣara iti bhāṣā | yathā, —*
> '*mudrālipiḥ śilpalipir lipir lekhanisambhavā |*
> *guṇḍikā ghuṇasambhūtā lipayaḥ pañcadhā smṛtāḥ |*
> *etābhir lipibhir vyāptā dharitrī śubhadā hara ! ||*'
> *iti vārāhītantram ||*
> '*lekhanyā likhitaṃ viprair mudrābhir aṅkitañ ca yat |*
> *śilpādinirmmitaṃ yac ca pāṭhyaṃ dhāryyañ ca sarvvadā ||*'
> *iti khaḍgamālātantram ||*

> [*Mudrā*] A kind of script included in the fivefold scripts; 'printed character' in vernacular; like [in the following passages]:
> 'Five kinds of scripts are traditionally recognised: script by means of a seal/stamp, script by means of a stylus, script originating from a reed-pen, script in the sand, script made by woodworms. The prosperous Earth is covered with these scripts, o Śiva!'
> (*Vārāhītantra*)
> 'What is written by Brahmins with a reed-pen and printed by means of a seal/stamp, as well as formed with a stylus and so on, should always be recited and worn!'
> (*Khaḍgamālātantra*)

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6 A notable exception is for instance Cambridge University Library MS Add. 2318, a Jaina manuscript of the *Śabdānuśāsanalaghuvṛttyavacūri* written in 1472 Vikrama, i.e. 1415 CE (<https://cudl.lib.cam.ac.uk/view/MS-ADD-02318/32>).

The NWS provides two meanings for *mudrālipi*, 'incised letter; impressed letter' and simply 'a kind of script'. The first meaning refers to the glossary in Murthy's *Introduction to Manuscriptology* (Murthy 1996), while the second meaning refers to Edgerton's *Buddhist Hybrid Sanskrit Dictionary*, which provides a reference to the *Mahāvastu*, where the term occurs in a passage listing a series of scripts (Senart 1882, vol. I, 135). In this list, in many cases the names of the scripts are rather obscure and it is not immediately clear according to which criteria they are grouped (or even if they are meaningfully grouped at all). *Mudrālipi* occurs between the terms *lekhālipi* and *ukaramadhuradaradacīṇahūṇāpīrā*. As Senart notices, the first part of the latter compound is corrupt, and the French scholar suggests to read either *uttarakurudarada°* or *uttarakurumagadhadarada°* instead, pointing to the parallel well-known list of scripts in the *Lalitavistara*.[7] Unfortunately, *mudrālipi* is not included in the latter list, therefore even accepting Senart's emendation, we cannot establish with certainty with which scripts *mudrālipi* might be grouped in the *Mahāvastu*. Senart suggests to translate it as 'l'écriture des sceaux' ('the script of seals'), however noting that *mudrālipi* seems to denote a particular use or form of a script, like in the case of *lekhālipi*, which he translates as 'l'écriture épistolaire' or "l'écriture cursive" ('the script of letters', i.e. 'the cursive script').[8] I believe we might understand the purport of the rather elusive term *mudrālipi* if we go back to the passages quoted in the *Śabdakalpadruma*. As we have seen, Senart understands *lekhālipi* as a definition of the informal cursive script employed for letters, and consequently under *mudrālipi* he probably understands a specific style of script used for seals and stamps. However, the passages from the *Vārāhītantra* and the *Khaḍgamālātantra* clearly mention different writing instruments rather than different script styles. Most probably, *guṇḍikālipi* and *ghuṇalipi* refer respectively to the practice of writing ephemeral texts in the sand and to the meaningless forms created by insects when eating into palm leaves and wood.[9] As to the first three types of scripts

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7 'Les noms *ukara madhura varada* sont sûrement corrompus; il paraît permis de les corriger, d'après l'analogie du *Lal. Vist.*, en *uttarakurudarada* ou peut-être en *uttarakurumagadhadarada*' (Senart 1882, vol. I, 483).

8 'Une autre [catégorie] est celle des épithètes qui paraissent désigner des emplois ou des formes particulières de l'écriture *lekhālipi* "l'écriture épistolaire", c'est-à-dire "l'écriture cursive", *mudrālipi* "l'écriture des sceaux"' (Senart 1882, vol. I, 484).

9 The term *ghuṇalipi* in the *Vārāhītantra* refers to a well-known anonymous Sanskrit proverb, quoted for instance in Yaśodhara's commentary to the *Kāmasūtra*: *yad avijñātaśāstreṇa kadācit sādhitaṃ bhavet | na caitad bahumantavyaṃ ghuṇotkirṇam ivākṣaram ||* (Dvivedī 1891, 2); 'If a person ignorant of scientific treatises sometimes accomplishes something, this should not be extolled, for it is like a character perforated by a bookworm [in a manuscript]'.

mentioned, *lekhanilipi* and *śilpalipi* refer to characters created by means of the two most common instruments used to write on different types of palm-leaf, while it is safe to assume that *mudrālipi* refers to characters stamped on any kind of surface by means of a seal or stamp, not exclusively for reading purposes, but also for ritual or even merely decorative purposes. In the light of these considerations, the meaning 'type, wooden type' provided in the PW is too narrow and, above all, anachronistic for the occurrences quoted. In fact, *mudrā* could hardly refer to movable types (regardless if made of metal or wood), for even though the Portuguese introduced typography on the Indian subcontinent as early as the sixteenth century, initially this technology was employed almost exclusively by Westerners. The first printing presses run by Indians date to the beginning of the nineteenth century (Ross 1999, 118; Rocher and Rocher 2012, 73–75) and most probably it is only during this period that *mudrā* first starts to denote specifically typographic print and movable types. This observation is underpinned by the use of *mudrākṣara* in opposition to *śilākṣara* to distinguish books printed typographically from lithographed books.

The terms *likhita/lekhita* represent another case in which a careful consideration of the cultural context is fundamental for the correct understanding of the term itself. Occasionally, in printed books the verb *likh-*, lit. 'to write', is seemingly used in the sense 'to compose', a meaning not listed in the dictionaries. In the first stanza of the *Kāvyaśikṣā* by the the thirteenth-century Jaina author Vinayacandrasūri, the verb form *likhāmi* ('I write') is clearly used as a synonym of *vi-rac-* or *kṛ-*. Since this form occurs in a stanza, we must first rule out the possibility that the author chose *likh-* only due to metrical reasons. Indeed, he could not have used the unmetrical form *viracayāmi*, but he could have easily used *karomi*, metrically equivalent to *likhāmi*. Hence, we can suppose that the author purportedly chose to use *likh-* in the sense of 'to compose' (Shastri 1964, 1).[10] The shift towards this meaning is clear in later texts and manuscripts, for instance in the *Śikṣāpatrī*, a sacred text of the Svāmīnārāyaṇa Sampradāya, consisting of a series of moral precepts composed by Sahajānanda Svāmī, the *sampradāya*'s founder. The Bodleian Libraries hosts a particularly important manuscript of this text, MS. Ind. Inst. Sansk. 72, venerated as a relic

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10 *natvā śrībhāratīṃ devīṃ bappabhaṭṭiguror gira(ā) | kāvyaśikṣāṃ pravakṣyāmi nānāśāstranirīkṣaṇāt* || 1 || *vidvanmānitayā naiva [naiva] kīrti[pralobhanāt] | kin tu bālāvabodhāya śāstrād enāṃ likhāmy aham* || 2 || ('Bowing before the Venerable Goddess Bhāratī, at the instance of the teacher Bappa I teach the Instruction about Poetry, based on the examination of various treatises. With respect for the learned and not out of the allurement of fame, but for the instruction of the beginners according to the science [of rhetorics], I write (i.e. compose) this [Instruction about Poetry].')

by the Svāminārāyaṇa community 'for it is said to have been presented to Sir John Malcolm, the governor of the Bombay Presidency from 1827 to 1830, by Sahajānanda Svāmī, the Svāminārāyaṇa Sampradāya's founder who is also venerated as the *iṣṭadeva*, or chosen deity' (Chag 2016, 170). MS. Ind. Inst. Sansk. 72 is a composite and multi-text manuscript, containing the *Śikṣāpatrī* with the Gujarati commentary (*ṭīkā*) by the author's pupil Nityānanda Muni, as well as Dīnanātha's *Nārāyaṇamunistotra*, Śatānanda's *Rādhākṛṣṇāṣṭaka*, and a Gujarati hymn by Muktānanda Muni. Interestingly, in the final rubrics and in one of the two colophons of this manuscript we notice an oscillation between the two meanings in the use of *likh-*. For the sake of clarity, I provide here only the parts of the final rubrics and of the colophon which are relevant to the present discussion.[11]

First codicological unit, final rubric of the *Śikṣāpatrī*:

> *iti śrīsahajānaṃdasvāmilikhitā śikṣāpattrī samāptā.*

> The *Śikṣāpattrī*, composed (*likhita*) by the Venerable Sahajānandasvāmi is concluded.

Final rubric of the commentary and colophon:

> *iti śrīsahajānaṃdasvāmiśiṣyanityānaṃdamunilikhitā śikṣāpattrīṭīkā samāptā ||* [...] *śikṣāpattrīṭīkā saṃpūrṇā || lekhakanīkaṃṭhānaṃdamuni || śubhaṃ bhavatu ||*

> The commentary on the *Śikṣāpattrī*, composed by Nityānanda Muni, disciple of the Venerable Sahajānaṃdasvāmi, is concluded. [...] the commentary on the *Śikṣāpattrī* is completed. Scribe: Nīkaṇṭhānandamuni. Let there be bliss!

Second codicological unit, final rubrics of Dīnanātha's, Śatānanda's, and Muktānandamuni's hymns:

> *iti dīnānāthabhaṭṭaviracītam* (!) *śrīnārāyaṇamunistotraṃ saṃpūrṇaṃ �⸟ ||*
> *iti śrīśatānaṃdaviracitaṃ śrīrādhākṛṣṇāṣṭakam saṃpūrṇaṃ ||*
> *iti muktānaṃdamuniviracitaprārthanāṣṭakasaṃpūrṇasamāptaṃ* (!) *||*

> The Hymn to the Venerable Nārāyaṇamuni, composed by Dīnānātha Bhaṭṭa, is completed. The Eightfold [Hymn] to the Venerable Rādhā and Kṛṣṇa, composed by the Venerable Śatānanda, is completed.
> The Eightfold Prayer, composed by Muktānanda Muni, is completed and concluded.

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11 Full transcriptions are provided in Chag (2016, 206–8).

As expected, the verb form used in the final rubrics to denote the composition of the hymns is *viracita*. On the other hand, the form *likhita* is used in the case of the *Śikṣāpatrī* and its Gujarati commentary, without distinguishing the role of the authors, Sahajānanda Svāmī and Nityānanda Muni, from that of the scribe, Nīkaṇṭhānanda Muni. Both codicological units were written in the 1820s, so we have to consider the possibility that the use of *likhita* as a synonym for *kṛta* or *viracita* is due to the influence of the English language expression 'written, i.e. composed'. On the other hand, the term *likhita* in the meaning 'composed' is attested also in Bengali.[12] Notably, the Bengali translation of the four Gospels mentioned in § 2.1.3 is titled *Mathi, Mārka, Lūka, Yohana likhita Susamācāra*, 'The Gospels written (i.e. composed) by Matthew, Mark, Luke, John' (Yates et al. 1845). Turning our attention to the books printed in Bengal, a further source of confusion – or maybe of confirmation – comes from the imprint of the 1807 edition of the *Nāmaliṅgānuśāsana* and other lexica in which, according to C. Vogel, the causative form *lekhita* (lit. 'caused to be written') means 'typeset'[13]. However, this translation of *lekhita* does not take into account Bābūrāma's role in the publication. This term occurs also in the imprint of the 1814 edition of Bhāravi's *Kirātārjunīya*, where however the term denoting the typesetting process is most probably *nyāsita*. Moreover, in this book the imprint clearly states that the printer was a certain Madanapāla, therefore Bābūrāma could hardly have been the typesetter. In the task of correctly understanding terms such as *lekhita*, in my opinion we face two related issues. The first one is that in the period examined, English technical terminology for printing and publishing was translated with Sanskrit terms related to manuscript production. The second issue is that publishing as practised nowadays implies the separation of publishing house and printing press, while Bābūrāma's Sanskrit Press fulfilled both tasks. These two facts render our understanding of *lekhita* (and other terms) more difficult, since we have to know more about Bābūrāma's role in order to be able to settle for a translation.[14] As we have seen above, *likhita* might mean 'written' in the sense of 'composed', therefore I suggest that in this context *lekhita* does not merely suggests that Bābūrāma had the book typeset, but that he supervised the whole composition – or if we prefer, preparation – of this

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12 '*likhita* a. written [...]; composed; not verbal or oral' (Biswas et al. 1980, s.v.).

13 'Its [i.e. *Trikāṇḍaśeṣa*'s] editio princeps is contained in a collection of four Koṣas (Amarasiṃha's Nāmaliṅgānuśāsana, Puruṣottamadeva's Trikāṇḍaśeṣa and Hārāvalī, Medinī-kara's Nānārthaśabdakośa) prepared at the instance of H.T. Colebrooke, provided with indices by V. Miśra, and type-set by B. Rāma in Kalikatta, s. 1864 [1807/08]' (Vogel 2015, 54, n. 116).

14 On Bābūrāma and his role in the Sanskrit Press see Formigatti 2016, 103–104, Rocher and Rocher 2012, 41, 74–75, 124, 139, 167, and Kopf 1969, 115, 118, 120, 147.

specific edition. In other words, he oversaw the whole publication process, his role being rather that of today's publishers.[15] Accordingly, I would argue that in this context the closest approximation for *lekhita* in English is 'published'.

Finally, the Sanskrit translations of the Bible represent the most conspicuous case of the influence of the publishers' cultural background on the publication process. Apart from the use of *likhita* once again in the meaning of 'composed' or 'published', it is maybe the Sanskrit term chosen to render the concept of translation that ironically reveals the most how deeply the missionaries' classical cultural heritage influenced their translation choices, as explained in § 3.2, s.v. *ākṛṣya*.

Let us now go back to the questions asked in the introduction and see if we can give an answer to at least some of them, obviously bearing in mind that the limited sample of printed material examined here cannot possibly allow us to provide any conclusive answer. In most cases, it is possible to distinguish the roles of those involved in the printing activity. Interestingly, it seems that roles were more neatly distributed between different individuals in typographic presses than in lithographic presses (cf. §§ 2.1.5 and 2.1.8). Apparently, in the latter the same person occasionally fulfilled more than one role. For instance, although the colophon of the 1850 edition of the *Jaiminyaśvamedhaprākṛta* is admittedly ambiguous, it seems that the printer Gaṇeśa might also have written the template manuscript – unless the last stanza was inserted by an anonymous scribe, after all it is a traditional scribal formula found in countless manuscripts (cf. § 2.2.3). Unfortunately, as in the case of manuscripts, the lithographs examined often provide only partial information in their colophons and do not allow to draw any positive conclusion about lithographic book production. Moreover, much like in manuscripts (and unlike in typographically printed books), such information is often provided not in Sanskrit, but in a vernacular language. All this is not surprising, since lithography is a printing technique so close to manuscript culture that some scholars have dubbed it a means for mass manuscript production. On the other hand, the first typographic presses were run by

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15 'I searched an earlier version of the book [i.e. Rocher and Rocher 2012], which I was forced drastically to abridge, but I did not find anything on Madanapāla. I took him to be the printer. Bābūrāma was the owner of the press, thus the "publisher". Vidyākaramiśra and some others were pandit commentators and, I guess, [bad] "editors" [...] After Colebrooke came to Calcutta, he used him [i.e. Bābūrāma] to catalog and manage his large and still growing library of copied manuscripts. His management talents must have impressed Colebrooke enough that Colebrooke put him in charge of the printing press I am convinced Colebrooke financed, though there is no document to attest to it.' (Rosane Rocher, personal communication, emails of 11/11/2020 and 17/01/2021).

Westerners and Indian pandits together, printing for a readership consisting mostly of British civil servants, accustomed to Western printed books. More interesting is perhaps to notice that sometime lithographs shift to the title page elements which in manuscripts are usually found in the colophon, as in the 1867 edition of the *Mudrāprakāśa* (§ 2.2.7). This lithograph is interesting also because of the discrepancy of the printing date between the copy held in the Bodleian Libraries and the copy held in the Wellcome Library. Regrettably, an explanation of the reason behind this discrepancy – as well as several other aspects of Sanskrit print culture – can be explained only with a more thorough study, which goes beyond the scope of this small contribution.

Abbreviations

Apte	Vaman Shivaram Apte, *The Practical Sanskrit-English Dictionary*, 1965.
PW	Otto von Böhtlingk and Rudolf von Roth, *Sanskrit-Wörterbuch,* 1855.
pw	Otto von Böhtlingk, *Sanskrit-Wörterbuch in kürzerer Fassung*, 1879.
Mayrhofer	Manfred Mayrhofer, *Etymologisches Wörterbuch des Altindoarischen*, 1986.
MW	Monier Monier-Williams, Ernst Leumann and Carl Cappeller. *A Sanskrit-English Dictionary*, 1899.
NWS	*Nachtrags-Wörterbuch des Sanskrit.*
Schmidt	Richard Schmidt and Otto von Böhtlingk, *Nachträge zum Sanskrit-Wörterbuch in kürzerer Fassung von Otto Böhtlingk*, 1928.
Wilson	H. H. Wilson, *A Dictionary in Sanskrit and English*, 1832.

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Marco Heiles

Media Systems and Genre Conventions in Transition: A German *Priamel* Booklet from Nuremberg, *c.* 1490

Abstract: The manuscript Cod. Donaueschingen A III 19 of the Badische Landes-bibliothek Karlsruhe is a very thin booklet of six leafs in quarto format. It was written by a professional scribe in Nuremberg around 1490. The booklet is titled *Priamel red* ('*Priamel* speech') and contains a collection of gnomic texts in Early New High German. The materiality and content of the manuscript reveal it as a special product of a book market that was increasingly dominated by print and in which handmade books became niche products. The later entries and dele-tions in the manuscript make it clear that the sexually explicit texts in the col-lection experienced a distinctive reception and provoked reactions. The dele-tions of the sexually explicit passages could indicate that the texts were initially created for a specific, presumably purely male, readership, and that this reader-ship was to be expanded.

1 The manuscript Cod. Donaueschingen A III 19 as a material object

The manuscript Cod. Donaueschingen A III 19 of the Badische Landesbibliothek Karlsruhe is a very thin booklet of six leaves of 18.8 × 13.7 cm.[1] It is made of three sheets of paper without watermarks.[2] Although its contemporary version con-tains entries from six different hands, the manuscript was originally made by a single scribe ('hand A'). The outer double leaf of the booklet was originally

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1 Digital images of the manuscript are provided by the Badische Landesbibliothek Karlsruhe: <https://nbn-resolving.de/urn:nbn:de:bsz:31-37635>. A detailed description of the manuscript by Nicole Eichenberger is published in Manuscripta Mediaevalia, <manuscripta-mediaevalia.de/dokumente/html/obj31577229>.
2 The chain lines of the paper run horizontally. The original sheets must have had a size of at least 27.4 × 37.6 cm and therefore had most probably chancery format (32 × 45 cm). Cf. Needham 1994 and Needham 2017 or use the Needham Calculator, <needhamcalculator.net>, provided by the Schönberg Institute for Manuscript Studies.

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blank except for a title indication 'Priamel red' ('Priamel speech')[3] on fol. 1[r]. This leaf was used as a cover with a title page. The four inner leaves were written by 'hand A' with 19 gnomic poems. The individual texts consist of 4 to 14 rhymed verses and are separated only by blank lines. There are no initials, rubrics, headings or other book decorations. 'Hand A''s script is a Bastarda, a cursive late Gothic book script without calligraphic ambition. The writing is clearly legible, but a crossed-out verse on fol. 2[v] (Fig. 1), which was written down twice, and a misplaced word in text no. 4,[4] show that the scribe did not work very carefully.
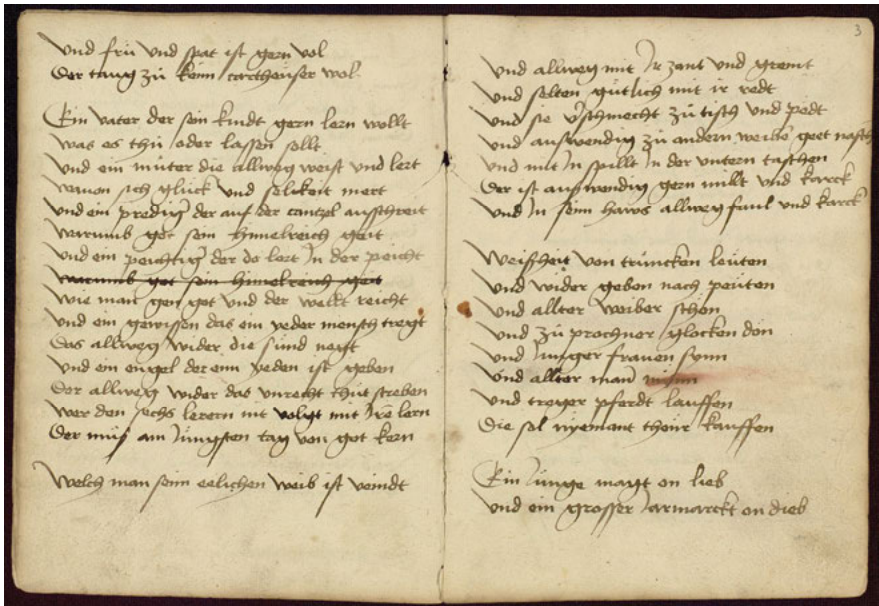
Fig. 1: Karlsruhe, Badische Landesbibliothek, Donaueschingen A III 19, fols 2[v]–3[r]. CC-BY Badische Landesbibliothek.

The booklet was donated in 1868 together with another one (Cod. Donaueschingen A III 20) to the Fürstlich Fürstenbergische Hofbibliothek Donaueschingen

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3 All translations in this article are by the author (Marco Heiles). All sites mentioned in this article were last accessed on 24 November 2020.

4 The end of this *Priamel* reads: *der ist außwendig gern milt vnd karck / vnd in seim haus allweg faul vnd karck*. The first *karck* must be emendated to *starck*. Cf. Kiepe 1984, 77.

by the Augsburg antiquarian bookseller Albert Fidelis Butsch. The codex Donaueschingen A III 20 was written by the same scribe and has the same format.[5] It contains a *Fastnachtsspiel* (carnival play) *'Das Fest des Königs von England'* ('The Feast of the King of England') by Hans Rosenplüt (*c.* 1400–1460). The traces of the old binding show that both booklets were temporarily bound together in one codex. However, these two booklets are not the only ones we know by this scribe.[6] In the Codex Germ. 13 of the Staats- und Universitäts-bibliothek Hamburg, ten of these booklets are bound together, all of which have survived with their covers and title pages.[7] Two of these title pages even have price indications: *iij creutzer* ('3 kreuzer').[8] So, these booklets were obviously produced on stock and for sale. They have been preserved only because they were subsequently bound into codices. In three other composite codices, the covers and titlepages were either removed or overwritten.[9] Altogether 31 book-lets are preserved. Those that show watermarks can be dated to *c.* 1472–1490.[10] All contain texts created in Nuremberg: *Priamel*, *Fastnachtsspiele* (carnival plays), *Mären* (verse narratives) and *Minnereden* (discursive verse texts on love), mostly by Hans Rosenplüt. Since the manuscripts were also written in a North Bavarian / East Franconian writing idiom, we can assume that they were pro-duced in Nuremberg.

During the active time of our scribe, Nuremberg was one of the largest and economically most important German-speaking cities and a European centre of long distance trade, banking and metal and weapons production.[11] In the sec-ond half of the fifteenth century, its population grew from *c.* 20,000 (1450) to

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5 Digital images: <digital.blb-karlsruhe.de/urn/urn:nbn:de:bsz:31-37656>. Description by Nicole Eichenberger in Manuscripta Mediaevalia <manuscripta-mediaevalia.de/dokumente/html/obj31577242>.

6 Cf. Simon 1970, 15–17; Kiepe 1984, 176; Horváth and Stork 2002, 122–123.

7 Digital images: <resolver.sub.uni-hamburg.de/kitodo/PPN1665269499>.

8 Hamburg, Staats- und Universitätsbibliothek, Cod. germ. 13, p. 69 and p. 153.

9 Nuremberg, Germanisches Nationalmuseum, Hs. 5339a (*c.* 1472); Vienna, Nationabibliothek, Cod. 13711 (*c.* 1487/1489); Wolfenbüttel, Herzog August Bibliothek, Cod. 18.12 Aug. 4° (*c.* 1487/1489). Cf. Kiepe 1984, 175–177.

10 Cf. Kiepe 1984, 175–177. These dates should be checked again. Kiepe's palaeographic dating and his interpretation of the development of the writer's writing as a linear process partly contradicts the watermark dating (as he even remarks himself, Kiepe 1984, 334), which is methodologically more secure and reliable. In the older studies (Simon 1970, 15–17), however, not all watermarks of the manuscripts were accurately identified. With our current resources, this would certainly be possible. On the method cf. Schmitz 2018, 76–83.

11 On Nuremberg in the fifteenth century: Diefenbacher and Beyerstedt 2012; Williams-Krapp 2020, 34–194; Adams and Nichols 2004.

c. 28,000 inhabitants (1497).[12] The town was dominated by a small patrician upper class, who obstructed the political participation of the mass of craftsmen and also attempted to control the cultural life of the city. The literacy rate in Nuremberg was high and a broad middle class was able to send its children to German and Latin schools. In the 1470s and 1480s, Nuremberg developed into the most important publishing centre for German prints after Augsburg (Fig. 2).[13]
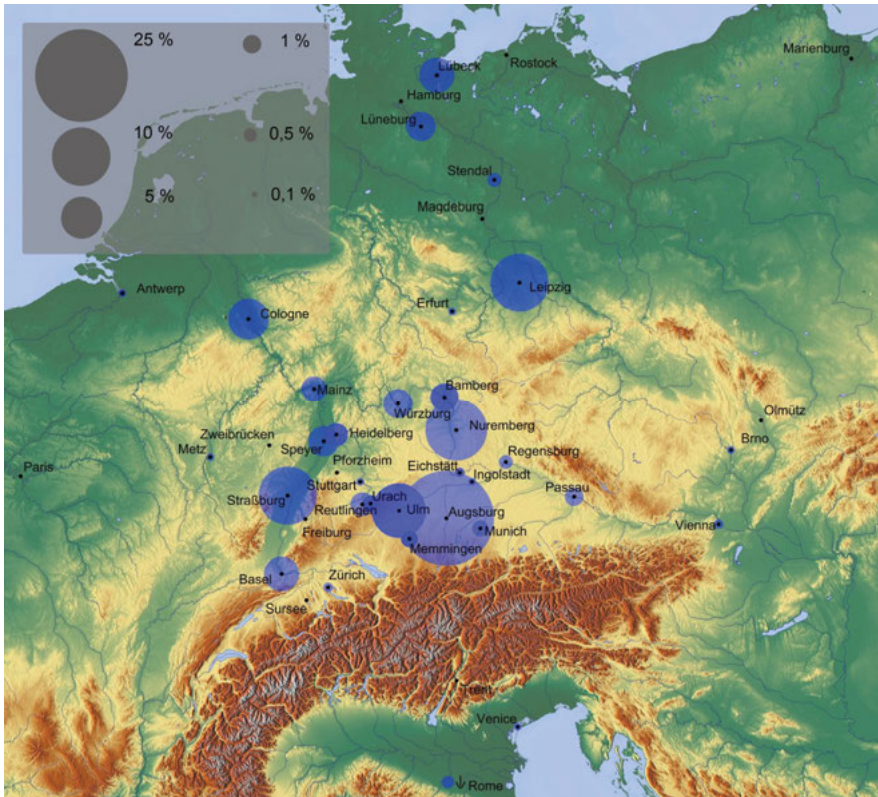
Fig. 2: Production of prints in Germany between 1481 and 1490 per city, number of editions in percent of total production. CC-BY-SA Marco Heiles.

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12 Cf. Stadtlexikon Nürnberg, Bevölkerungsentwicklung: http://online-service2.nuernberg.de/stadtarchiv/objekt_start.fau?prj=verzeichnungen&dm=Stadtlexikon&ref=1348.
13 Cf. Heiles, Marco (2011), Topography of German Humanism 1470–1550, https://topography-german-humanism.artesliteratur.de/Topography%20of%20German%20humanism%201550-1470%20-%20maps%20-%201.html; Heiles 2010.

During this period, at least three and up to nine different printing workshops were simultaneously in operation in the city.[14] In addition, at least two workshops printed xylographic block books in the 1470s.[15] Apart from Anton Koberger's huge manufactory business specializing in long-distance trade,[16] the Nuremberg book commerce was characterized by small printing shops that were often active for only a few years. At the same time, the importance of scribes for book production decreased. The registers of new citizens show that the number of new scribes moving to the city rose continuously until *c.* 1470, only to fall rapidly in the following three decades.[17]

Compared with other surviving German manuscripts of the late fifteenth century, the manuscript Cod. Donaueschingen A III 19 is an exceptional object for three reasons:

(1) Manuscripts of such brevity (6 leaves) are only very rarely handed down. We must assume that the loss rate of these small unbound booklets was much higher than that of bound codices. According to the figures we know for the survival of fifteenth-century prints, we can expect a loss rate of 99% or higher.[18]

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14 Cf. Typenrepertorium der Wigendrucke: <tw.staatsbibliothek-berlin.de/queries/officequery. xql?place=N%C3%BCrnberg>; Diefenbach 2003.

15 Hans Sporer and Friedrich Creussner, cf. Merk 2018, 141–144; Kremer 2003.

16 Cf. Bangert 2019, 91–94; Sauer 2017.

17 While 23 scribes became citizens of Nuremberg in the 1460s, there were only 14 in the 1470s, nine in the 1480s and finally only two in the 1490s. Cf. Kiepe 1984, 149–154 with Table 1.

18 The loss rates of fifteenth-century books cannot be reliably calculated and (due to the contingency of transmission) from the calculated loss rates should not be deduced to the originally existing number of books of individual places, periods or even persons. Information is provided by the known run numbers of individual incunabula prints (European prints with movable type published up to 1500). However, loss rates of incunabula prints vary greatly depending on genre, language and format. For individual editions the values are between 50% and 100%. The German calendar of Johannes Regiomontanus printed in Nuremberg in 1474 (GW M37472), for example, was printed 1,000 times and only 25 copies have been preserved, which corresponds to a loss rate of 97.5% (numbers according to Eric White's database of fifteenth-century print runs, <www.cerl.org/resources/incunabula/main#e_white_researching_print_runs> and the Gesamtkatalog Wiegendrucke <gesamtkatalogderwiegendrucke.de/docs/M37472.htm>). Neddermeyer 1996, 27–28 calculates a loss rate of 95% for the entire incunabula production in Europe and estimates a loss rate of 93% for European manuscripts of the fifteenth century. For prints of small format (octavo) or with a small number of sheets (< 80 leaves) he calculates a survival rate of 1,2% respectively 1,3%, and for vernacular prints of all formats a survival rate of 1,1% (Neddermeyer 1998, I, 75–78; II, diagram 5). However, Neddermeyer does not even include completely lost print editions in his calculations. Examples for completely lost editions of small format prints are mentioned by Dondi 2020, 587–589. Cf. Trovato 2014, 104–108.

The fifteenth-century booklets known to us are, with a few exceptions,[19] preserved only because they (like Cod. Donaueschingen A III 19) were at some point bound into a codex and preserved as such by an institution.

(2) Cod. Donaueschingen A III 19 was produced by a professional scribe on stock for the book market and not on behalf of a client. We also know the approximate prize of the booklet. This is a extraordinary setting of manuscript production[20] in the German-speaking countries of the fifteenth century and there are rarely any known comparable cases. Diebold Lauber's workshop, active in Alsace between *c.* 1420 and *c.* 1470, is a prominent exception. The so-called Lauber workshop, however, consisted of many different actors, writers and illuminators, who worked mainly together in the production of large illustrated codices.[21] While Lauber's handwritten book advertisements also suggest the production of small manuscripts comprising of only one quire, these have not survived.[22] But, the capital required and the entrepreneurial risk of a cooperative business model for the production and distribution of large codices (be it in manuscript or in print) must have been much higher than in the one-man business of our anonymous scribe. His business model is rather comparable to that of block book printers, whose products are of a similar format (but different in genre),[23] or that of the Nuremberg craftsman poet Hans Folz, who (in his main profession a barber) self-published his works from 1479 to 1488 with his own typographic printing press with woodcut illustrations.[24] Folz's prints contain the same text genres as the booklets of the anonymous Nuremberg writer. With their products in the lower price range, both Folz and our writer must have aimed at the same group of buyers. As figures from Venice show, where the transmission situation was much better than in Nuremberg, book prices fell enormously as a result of the spread of letterpress printing in the 1470s and

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19 See for example: Berlin, Staatsbibliothek, Hs. 384a–384i (<handschriftencensus.de/3311>) or Nuremberg, Germanisches Nationalmuseum, Historisches Archiv, Bestand Deutsches Reich, Fragen und Antworten über das Freigericht (Wilshörst) 1408/1428 (<ha.gnm.de/objekt_start.fau?prj=HA-ifaust&dm=Historisches+Archiv&ref=31518>). These notebooks also only survived as part of a larger collection. Cf. Heiles 2018, 453–455; Schwob 2004, 51.
20 My use of terminology ('setting of manuscript production', 'patterns of visual organisation') is strongly influenced by the Centre for the Study of Manuscript Cultures in Hamburg. See Wimmer et al. 2015.
21 A list of manuscripts is provided by the project 'Diebold Lauber digital': <wirote.informatik.uni-leipzig.de/mediavistik/handschrift/uebersicht>. On Laubers workshop see Fasbender 2012.
22 On Lauber's production of smaller books without illumination see Achnitz 2012.
23 On the genres of blockbook printing see Merk 2018, 15–22.
24 Cf. Klingner 2010, 47–65; Huey 2012, 1–32; Rautenberg 1999.

continued to fall in the 1480s and 1490s.[25] Smaller prints, such as primers for first-time readers (containing the alphabet, the most important prayers and some psalms), could already be purchased in the 1480s for the equivalent of everyday goods such as 'a chicken, or "an excellent eel", or a packet of sugar'.[26] The price of three kreuzer (= 12 pfennig), as stated in Hamburg Cod. germ. 13, is also an affordable one. In 1480–1494 Nuremberg, three kreuzer was the prize of 1,5 litres of wine or *c.* 1,6 kg beef.[27] If we compare the prize for one booklet with the daily wages of building craftsmen for 1480–1494, which in summer was two meals and *c.* 24 pfennig (equivalent to 6 kreuzer), we can see that our scribe had to sell at least three booklets a day to have a comparable income, after subtracting the cost of paper and ink.

(3) The Cod. Donaueschingen A III 19 and the booklets handed down in the Hamburg Cod. germ. 13 make use of a pattern of visual organisation of books whose development is closely connected to the development of early book printing and which we usually know from prints only: the title page. Initially printed books always began on the first page of the first quire, as it was also the case in manuscripts. From the 1470s onwards, however, printers began to increasingly leave the first page or first folio of the print blank (Fig. 3).[28] By the end of the 1480s, the pattern of the title page had fully evolved: a page separated from the text contained information for the identification of the text, often supplemented by illustrations and less often by information about the production (printer, place, date).[29] Of the prints produced in German-speaking countries between 1486 and 1490, 73% already had a title page, while additional 13.5% started with one or more blank pages.[30] The development in Nuremberg, where Hans Folz first printed title pages in 1482, runs parallel to that in Germany as a whole.[31] The fact that our scribe adapted that new developed pattern of printed books for his manuscript booklets in *c.* 1490 shows, how strongly this type of manuscript production was influenced by printing.

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25 Cf. Dondi 2020.

26 Dondi 2020, 587.

27 For prizes and wages in Nuremberg see Dirmeier 1984, 212, Table 35.

28 Cf. Rautenberg 2008, 34–38; Rautenberg 2004, 12–14.

29 Rautenberg 2004.

30 Cf. Herz 2008, Fig 1.

31 Cf. Herz 2008.
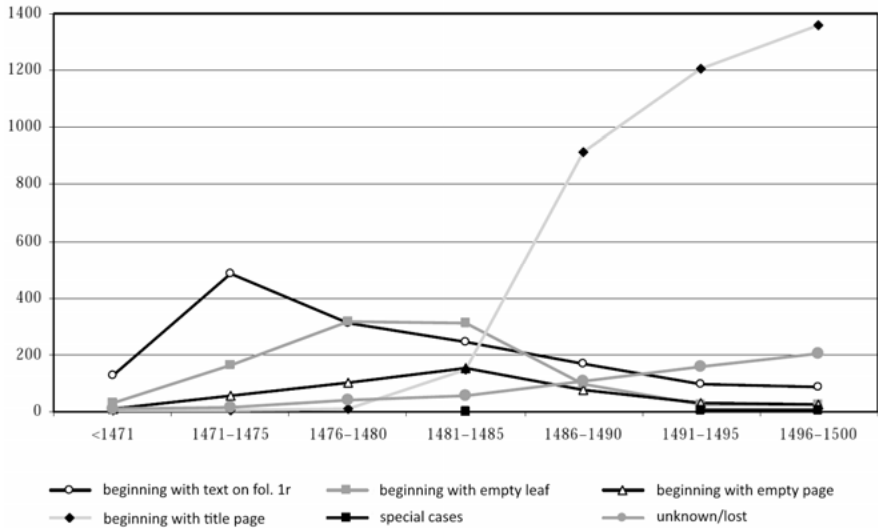
Fig. 3: Patterns of the beginning of books printed in Germany, 1460–1500, total numbers of prints (Source: Rautenberg 2008, Fig. 6). Frau Rautenberg hat der Veröffentlichung in diesem Beitrag (und unter CC BY NC ND) zugestimmt.

2 Manuscript content and social context

The Codex Donaueschingen A III 19 belongs to a very rarely transmitted manuscript type of the fifteenth century. It is a single-quire codex with secular popular literature in German and was produced by a professional scribe for the Nuremberg book market, *c.* 1490. This scribe produced this kind of unpretentious and undecorated manuscripts on stock. He found himself in competition with typographic printing and its mass production, which influenced both his price design and the layout of the books. However, his products are distinguished from the print production of his time by content and by diversity. Only a fraction of the handwritten preserved *Mären*, *Minnereden*, *Priamel* and carnival plays were printed (or preserved in prints) at all. While *Mären* were printed in the fifteenth century by at least 13 printers in six cities,[32] *Minnereden* are only preserved in six editions before 1500, three of which alone were printed by Hans

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32 Cf. Fischer 1983, 241–242. The database Brevitas-Wiki gives a list of 21 *Mären* printed before 1500: <wiki.brevitas.org/index.php?search=gw+%2B+M%C3%A4re%2FVersnovelle>. The study of the printing tradition of *Mären* is still a research desideratum.

Folz in Nuremberg.[33] Out of the *Fastnachstspiele* only three are preserved in prints from this time.[34] All three were composed by Hans Folz, two were also printed by him. The oldest surviving printed collection of *Priamel* was printed by Johann Schöffer in Mainz as late as 1508.[35] From the time before, only four or five xylographic single-sheet prints with one or two *Priamel* or *Priamel*-like texts preserved (Fig. 4).[36] This means that the anonymous Nuremberg copyist supplied his customers with literature that did not exist in print and never became popular in printing.

The manuscript Donaueschingen A III 19 is titled '*Priamel red*' ('*Priamel* speech').[37] A *Priamel* is a poem, usually in rhymed couplets, in which different circumstances are described in parallel linked sub-phrases, which in the last concluding part of the poem are connected in such a way that the common ground (*tertium comperationis*) of the sequence becomes pointedly recognizable.[38] This structure can easily be detected in an example like text no. 5 in the collection copied by 'hand A' (see Fig. 1):

Weißheit von trùncken leüten	The wisdom of drunkards,
vnd wider geben nach peüten	and the returning after the exchange,
vnd alter weiber schön	and the beauty of old women,
vnd zù prochner glocken dön	and the sound of broken bells,
vnd junger frauen synn	and the intelligence of young women,
vnd alter mann mÿnn	and the sex of old men,
vnd treger pferdt lauffen	and the running of sluggish horses,
die sol nÿemant theür kauffen.	should nobody buy dearly.
(Fol. 3ʳ, no. 5)	

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33 Klingner and Lieb 2013, vol. 2, 149–162; Klingner 2010.

34 Ridder, Przybilski and Schuler 2005, 243.

35 *Hierin in disem büchleyn. Findt mã vil gũter reymen feyn. Manchẽ seltzam gũtẽ schwanck. Lustig zuhoeren bey dem weinßtranck*, Mainz: Johann Schöffer, 1508 [VD16 V 1004; USTC 662698]. See Kiepe 1984, 376–378.

36 No. 1: *Wer sũcht jn eym kvttrolff glas genß*, Nuremberg?, *c.* 1460–1470, *c.* 280 × 200 mm. Exemplar: Munich, Bayerische Staatsbibliothek, Xylogr. 88. Digital images: <mdz-nbn-resolving.de/urn:nbn:de:bvb:12-bsb00083140-5> (see Pfister 1986; Griese 2000, 179). No. 2: *Sälig ist der man den sein hand nert*, Upper Germany, 1475 (?), 256 × 390 mm (see Schreiber 1928, 54, no. 2895; Kiepe 1984, 110, 392, no. 25). No. 3: *Wer eehalten dinget vmb grossen lon*, Nuremberg (?) 1480–1490, 390 × 283 mm (see Schreiber 1927, 125, no. 1990; Kiepe 1984, 19–20, Fig. 3, 397, no. *82). No. 4: *Dis sein die zehen eygenschafft des alter*, Augsburg or Lake Constance 1482, 240 × 347 mm (see Schreiber 1927, 57, no. 1881, Kiepe 1984, 405, 423). No. 5: *O Mensch bedenckh allzeit dein noth*, Nuremberg (?), sixteenth century (?), 280 × 385 mm (see Schreiber 1928, 54, no. 2895; Kiepe 1984, 35 and 414).

37 Cod. Donaueschingen A III 19, fol. 1ʳ.

38 Cf. Dicke 2007. On the genre characteristic, see Williams-Krapp 2020, 63–66; Gerhardt 2007, 7–30.

From Middle High German times (*c.* 1150–1350), only *Priamel*-like quartrains (*Priamel-Vierzeiler*) are known, especially from Freidank (d. 1233) and in Hugo von Trimberg's *Renner* (between 1296 and 1313). Longer *Priamel*-like constructions without rhyme have first been circulating since the beginning of the fifteenth century, inter alia in student's manuscripts.[39] However, the *Priamel* did not develop into a genre until the middle of the fifteenth century in Nuremberg. Although the tradition is mainly anonymous, the majority of *Priamel* and their development are today attributed to Hans Rosenplüt.[40] The *Priamel* appeared in diverse media. The *Priamel* in Cod. Donaueschingen A III 19 obviously present themselves as reading texts. However, the inclusion of *Priamel* in carnival plays shows that they can also be used as recitation texts.[41] Further, *Priamel* are also epigraphically used for house inscriptions,[42] and the large format and type of script of most xylographic *Priamel* broadside prints also indicate that they could be presented as wall posters.[43] The *Priamel* is, however, as Christoph Gerhard puts it: 'usually literature from existing literature and not a testimony of spontaneous orality'.[44]

From the 19 texts written by 'hand A' in Cod. Donaueschingen A III 19, 13 follow the *Priamel* structure described above (nos 1–6, 14–19). According to Kiepe, six of them belong to the oeuvre of Hans Rosenplüt (no. 1–6).[45] The other texts in the collection are also characterised by enumerations and sequences, and are therefore *Priamel*-like. Three of them are orations of the revue-like carnival play *Wettstreit in der Liebe*[46] ('Competition of Love') (nos 8, 9, 11), spoken there by different characters. No. 10 could be an otherwise not transmitted variant of the same or a similar play. No. 12 is a *Reimpaarspruch*, a gnomic poem in four verses. The title of the booklet, '*Priamel* speech', tells us that the contemporary concept of *Priamel* was broader than our modern scholarly definition.

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39 The unrhymed *Priamel Alder an weyßheit* is for example transmitted in the student or academic manuscripts Munich, Bayerische Staatsbibliothek, Clm 671, fol. 117v; Munich, Bayerische Staatsbibliothek, Clm 641, fol. 72r; and Lübeck, Stadtbibliothek, Ms. hist. 8° 1a, fol. 238r. See Heiles forthcoming.
40 See Kiepe 1984, 45–53.
41 Cf. Gerhardt 2007, 29.
42 Cf. Hohenbühel-Heufler 1883.
43 Cf. the measurements of the prints nos 2–5 listed above in n. 36. Cf. Griese 2000, 179–184.
44 Gerhardt 2007, 12: '[...] in aller Regel Literatur aus bereits bestehender Literatur [...] und kein Zeugnis einer spontanen Mündlichkeit'. See also Gerhardt 2007, 12–30.
45 Cf. Kiepe 1984, 348–349.
46 Edition in Keller 1853, 132–137 (no. 16).

Table 1: Texts written by 'hand A'

no. 1	*Ein schreiber, der lieber tanczt vnd springt*	*Priamel*	12 verses
no. 2	*Wer gern spillt vnd vngern gillt*	*Priamel*	8 verses
no. 3	*Ein vater, der sein kindt gern lern wollt*	*Priamel*	14 verses
no. 4	*Welch man seim eelichen weib ist veindt*	*Priamel*	8 verses
no. 5	*Weißheit von trúncken leüten*	*Priamel*	8 verses
no. 6	*Ein jünge magt on lieb*	*Priamel*	8 verses
no. 7	*Die geÿer vnd die hüner arn*	*Priamel*	6 verses
no. 8	*Mein lieb liebt mir so fast*	verses from carnival play	8 verses
no. 9	*Mein fraw liebet mir so ser*	verses from carnival play	8 verses
no. 10	*Ewer lieb ist meiner nit gleich*	verses from carnival play (?)	8 verses
no. 11	*Mein lieb liebet mir für schnecken*	verses from carnival play	4 verses
no. 12	*Es ist ein gemeiner sit*	*Reimpaarspruch*	4 verses
no. 13	*Kein grösser narr mag nit werden*	*Priamel* (with diverging structur)	10 verses
no. 14	*Ein schweigender schüler*	*Priamel*	6 verses, no rhyme
no. 15	*Poßheit vnd grindig pader*	*Priamel*	4 verses
no. 16	*Wenn man ein einfeltigen betreügt*	*Priamel*	4 verses
no. 17	*Wann das ein weiser eins narren spott*	*Priamel*	4 verses
no. 18	*Ein man, dem er vnd güt zú fleüst*	*Priamel*	4 verses
no. 19	*Wenn ein reÿcher ein armen verschmecht*	*Priamel*	4 verses

'Hand A' did not write the texts of Cod. Donaueschingen A III 19 down in a random order, but followed a (conscious or unconscious) scheme. This can firstly be seen in the form of the texts (Table 1). The booklet begins with seven elaborate *Priamel* of 8 to 14 verses, followed by excerpts from the carnival play and ends with five *Priamel* of 4 verses. But there is also a thematic order. The booklet begins with a *Priamel* about the behaviour of priest candidates. A list of negative examples tells the reader how a good priest would act:

Ein Schreiber der lieber tanczt vnd springt	A scribe who would rather dance and hop
dann das er in der kirchen singt	than sing in the church,
vnd lieber vor der metzen hoffirt	and rather flirt with the town whore
dann das er eim priester zü altar ministrirt	than serve a priest at the altar,
vnd lieber in heimlich winckel schlüff	and rather slink in hidden corners

dann das er gen predig lüff	than run to sermon,
vnd lieber dry tag pulenbrief schrib	and rather write love letters for three days
dann das er ein stünd zü vesper blib	than spend one hour at vespers,
vnd lieber auf der gassen schwantzirt	and rather stroll in the streets
dann das er in den püchern stüdirt	than study in books,
wann auß eim solchen ein frommer priester würt	if such a person becomes a good priest,
so hat in got mit grossem glück angerürt.	then god has touched him with great
(Fol. 2ʳ, no. 1)	blessing.

The following texts deal with morally correct and socially compliant behaviour in a similar way. In no. 2 negative habits are listed that prevent one from becoming a good Carthusian monk (*der taug zü keim cartheüser wol*),[47] and in no. 3 positive habits are listed that one should consider if one does not want to be rejected by God on Judgment Day. *Priamel* no. 4 deals with the husband's behaviour towards his wife:

Welch man sein eelich weib ist veindt	The man who is hostile to his wife,
vnd allweg mit ir zant vnd greint	and always fights and yells with her,
vnd selten gütlich mit ir redt	and seldom speaks well with her,
vnd sie verschmecht zü tisch vnd pedt	and despises her at the table and in bed,
vnd auswendig zü andern weibern geet nasch[en]	and goes nibbling away at other women,
vnd mit in spillt in der vntern taschen	and plays with them in the lower pocket,
der ist außwendig gern milt vnd karck [emendate: stark⁴⁸]	this man likes to be generous and mean [strong] away from home,
vnd in seim haus allweg faul vnd karck.	but is always lazy and mean in his house.
(Fols 2ᵛ–3ʳ, no. 3)	

Less focused on morality, the following texts warn against foolish behaviour. They foster a mutual understanding of social judgements and communicate everyday knowledge in the form of stereotypes. *Priamel* no. 5, already quoted above, shows this clearly: drunken people lie, old women are ugly, young women are stupid and old men impotent. No. 6 adds: Young women have lovers, big fairs are full of thieves, Jews are rich, young men are brave, etc. Using examples from the animal world (in old barns there are mice, in old furs there are lice, and old billy goats have beards), these characteristics are given as part of the

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47 Cod. Donaueschingen A III 19, fol. 2ᵛ.

48 Cf. Kiepe 1984, 77.

natural order (*naturlich art*).[49] In this way, the *Priamel* are expressing an essentialist world view in which one's 'nature' determines one's behaviour.

Whereas couple relationships and love were previously one topic among others, no. 7 now deals with sex, specifically the (naturally determined) sexual lust of women and prostitutes.

Die geyer vnd die hüner arn	The vulture and the red kite,
die sperber die nach wilpret farn	and the sparrowhawk hunting wild game,
vnd der wolff auf wildem gefert	and the wolf on wild scent,
vnd hüngerig votzen auf ersen hart	and hungry pussies on hard asses,
gemein weiber in ainer rayß	and prostitutes in an army train,
die essen nichts liebers dann fleisch.	they all like nothing better than meat.
(Fol. 3ᵛ, no. 7)	

Thematically, the statements from the *Fastnachstspiel* follow on from this. These thematise the language of love. The texts parody love confessions by presenting social misconduct (the extreme libido of a woman in no. 8, or the extravagance of a man in no. 9) or by using distorted rhetorical figures (no. 11). A sexual joke (no. 12)[50] and a *Priamel* about fools who are so addicted to their wives that they do not notice their adultery (no. 13) close this group of texts about love and sexuality.

The last five *Priamel* give again negative examples of social misconduct. Key words in this section are *teufel* (devil) and *weißheit* (wisdom). The devil marks the sin. Human behaviour is judged here in Christian moral categories. The didactic aim of these texts is the avoidance of sin and the attainment of eternal salvation.

Poßheit vnd grindig pader	Malice and scruffy barbers,
spiler vnd grosse lieger	gamblers and great liars,
wucherer vnd geitig pfaffen	usurers and greedy priests,
die sechs hat der teufel beschaffen.	this six were created by the devil.
(Fol. 5ʳ, no. 15)	

The wisdom and its counterpart foolishness represent a second, pragmatic value system. The didactic aim here is to avoid stupidity and errors that lead to the loss of social prestige or energy.

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49 Cod. Donaueschingen A III 19, fol. 3ᵛ.

50 Es ist ein gemeiner sit / das der zers vnd der schmidt / Allwegen müsen stan / So sie zů der arbeit süllen gan 'It is a common custom that the blacksmith and the dick always have to stand while working'.

Wann das ein weiser eins narren spott
vnd ein frommer sich gesellt zů pöser rott
wer das den zweien wol an legt
derselb kein weißheit in im tregt.
(Fol. 5ᵛ, no. 17)

When a wise man mocks fools,
and a pious man gets into bad company,
he who thinks well of the two
carries no wisdom in himself.

Wenn ein Reycher ein armen verschmecht
vnd wenn ein greiff ein mücken vecht
vnd wenn ein keyser pöse müntz schlecht
die drey haben sich selbs geschwecht.
(Fol. 5ᵛ, no. 19)

When a rich man rejects a poor one,
and a griffin catches a gnat,
and an emperor strikes bad coins,
the three have weakened themselves.

In the collection of Cod. Donaueschingen A III 19, the *Priamel* is presented as a jocular didactic genre, which takes up discourses on the role of the clergy, on the behaviour of man and woman (especially in couple relationships), and on sin and stupidity. The range of social roles mentioned in the texts reveals that they were written in and for an urban society: peasants and nobles, village life or life at court play no role. The *Priamel* is instead situated in the city: we encounter scribes (no. 1), priests (no. 1, 2, 15), Jews (no. 2, 6), Carthusian monks (no. 2), preachers (no. 3), confessors (no. 3), drinkers (no. 3), prostitutes (no. 7, 14), smiths (no. 12), students (no. 14), judges (no. 14), chefs (no. 14), barbers (no. 15), gamblers (no. 15) and usurers (no. 15); the settings are streets (no. 1), churches (no. 1–3) and fairs (no. 5); people read books (no. 1) and write love letters (no. 1).

The texts of the Cod. Donaueschingen A III 19 function as a source of self-understanding to a middle-class urban audience. They convey a simple morality of conformism and are used to set the readers apart from the lower clergy and the socially marginalised and deviant (gamblers, drinkers and adulterers). The texts are written from a male perspective and also address solely a male audience. Women get devaluated and portrayed as sexually demanding, and permissive, and as objects of male control.

The texts contained in Cod. Donaueschingen A III 19 fit into Werner Williams-Krapp's description of the literature composed in Nuremberg by Hans Rosenplüt and his successors as 'Literatur der Mittelschicht' (middle class literature). Hans Rosenplüt (*c.* 1400–1460) can indeed be credited as the author of most of the texts in that manuscript.[51] Rosenpüt's oeuvre is extraordinarily extensive: due to the circumstances of transmission, his authorship is often not

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51 On Hans Rosenplüt see Griese 2019; Williams-Krapp 2020, 49–66; Simon 2004; Glier 1992a and 1992b.

explicitly documented, but at least 25 poems and songs, seven *Mären*, 140 *Priamel* and 55 carnival plays can be ascribed to him or his close circle. Rosenplüt acted as a poet only in addition to his daily artisan work, as he was a professional metalworker.

The buyers of the manuscript booklets of the scribe of Cod. Donaueschingen A III 19 can also be assumed to be mainly from the same middle class. However, the circle of buyers and recipients went also beyond the Nuremberg craftsmen. We know for example that Claus Spaun, the first owner of manuscript Wolfenbüttel, Herzog August Bibliothek, Cod. 18.12 Aug. 4°, was a wealthy merchant in Augsburg.[52]

3 Additions and deletions: the life of Cod. Donaueschingen A III 19

After 'hand A' produced the *Priamel* booklet Cod. Donaueschingen A III 19, at least five more persons worked on the manuscript and left traces (see Fig. 5 below).[53] These can be divided into two basic categories: (1) entries with and (2) entries without a recognizable connection to the rest of the text. Group (1) can be further differentiated into (1.1) additions of entire texts, (1.2) comments, (1.3) repetitions and (1.4) deletions. All entries in this first category indicate that the text of the manuscript has been read and engaged with. They can provide information on the purposes for which the manuscript was used and on the understanding of the texts. The entries in the second category, such as library stamps, page numbers, shelf marks and unconnected texts and notes can also be used to draw conclusions about the history of the object and the milieu and mindset of past owners.

The later entries in the manuscript are more numerous at the beginning and the end of the manuscript. Their chronological order can only be approximated. All additions are palaeographically dated to the first half of the sixteenth century.[54] The oldest additions are probably those of 'hand E'. These were written on

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52 According to Augsburg's tax lists, he was wealthy around 1500, before he became financially impoverished, probably as a result of bankruptcy in 1505. Cf. Fischer 1983, 189–190; Ott 2010.

53 Fig. 5 is available online in full resolution: http://dx.doi.org/10.17613/v6y5-2770 (accessed on 04 December 2020).

54 See the description by Nicole Eichenberger <www.manuscripta-mediaevalia.de/dokumente/html/obj31577229>.

fols 2ʳ and 5ᵛ on the lower margin and supplement the text of 'hand A' with stylistically and thematically similar texts, short *Sprüche* of few verses. The first *Spruch* refers to the topic of the good priest from no. 1 and no. 2.

> *An dye füeß getretten* Stepping on the feet
> *ist auch gepetten.* is also praying.
> (Fol. 2ʳ)

The sexually explicit *Sprüche* on fol. 5ᵛ supplement no. 7, 8 and 12 and convey an equally misogynous image of women as sexual objects.

> *Dorfft der jung vnd mocht der allt* If the young man was allowed and the old man could,
>
> *So het kain fraw jrer fůdt gewallt.* no woman would have control over her vagina.
> (Fol. 5ᵛ)

> *Wer herein get,* Whoever goes in
> *vnd jm sein maúl offen stet* and has his mouth open,
> *Der kaúff ein pfembert pirnen* should buy pears for a penny
> *Vnd stoß den czers in di diernen etc.* and push the penis into the girl.
> (Fol. 5ᵛ)

'Hand F' comments twice on the last *Spruch*. Only one of the comments is still readable. It can be understood as affirmation: *thue im* ('do him').

The entries by 'hand B' on fol. 6ʳ, probably made a little later, are also supplements with stylistically similar *Sprüche*. This is most obvious in the case of the last entry, a *Priamel-Vierzeiler*:

> *Der teufel vnnd vnglickh* The devil, and misfortune,
> *vnnd alter weiber tückh* and the guile of old women
> *Reitten offt manichen man* often ride many a man
> *das er nit für sich khomen khan.* so that he cannot make progress.
> (Fol. 6ʳ)

Further entries by 'hand B' are found on fols 1ʳ and 1ᵛ. The entries on fol. 1ʳ may be *probationes pennae*. One repeats the title ('*Priamel* red'), another one breaks off after a few words.[55] The *Spruch* on fol. 1ᵛ is an antipapistic statement.

Fol. 2ᵛ was otherwise only used for *probationes pennae*. These repeat the text by 'hand B' and the beginning of *Priamel* no. 1. The hands of the *probationes pennae* cannot be distinguished with certainty: it is possible that it was

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55 *Der hund der lag jnn der ...* ('The dog lay in the ...').

only one hand, although four different styles of writing can be distinguished ('hands D¹–D⁴').

Today, the largest part of the title page is filled with addenda by 'hand C'. These were probably already added before those by 'hand B'.[56] 'Hand C' wrote extracts from Ovid's *Ars amatoria* in a humanistic script. The choice of the text passages and of the captions by the writer reveals an interest in the concept of authorship.[57] A connection between this piece of humanist scholarship and the anonymous German texts of the other hands is not evident.

However, the most interesting subsequent 'entries' are deletions. These can also be understood as a kind of commentary. The person who crossed out the texts has read them and did not agree with their messages or wording. This 'editor' did not want others to read these texts. His or her aim was to prevent the further distribution of these passages. However, since a red pen was used for this purpose, reading is not physically prevented. It is only clearly marked which parts should not be read.

The deletions follow, as in many other manuscripts, two different patterns: theologically questionable and sexually explicit texts were deleted.[58] The first pattern leads to the deletion of the text that devaluates prayer on fol. 2ʳ, which had been added by 'hand E'. All other deletions follow the second pattern. This applies to the two other entries of 'hand E' on fol. 5ᵛ, as well as to the texts no. 5, 7, 8 and 12 of 'hand A'. Passages in which *zers* ('penis'), *votze / fudt* ('vagina') or *minn* ('sex') directly name the genitals and the sexual act are deleted. Also, those passages that use similes or metaphors to do so (no. 7, 8). Only the metaphor 'playing in the lower pocket' (no. 3) has not been deleted. It may not have been understood as a sexual innuendo or might have been overlooked.

The direct, explicit speaking about sexuality is, however, an essential feature of the *Priamel* genre. We encounter it in late medieval German literature as well in *Märe*, *Minnerede*, *Fastnachtspiel* and in many short poems (*Sprüche*).[59]

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56 This is indicated by the position of the text *Der hund...*

57 Excerpts from Ovid, *Ars amatoria*, Book III, under the following headings: *Famam Poëtæ appetunt* ('The poets desire fame') (v. 403-414), *Poëtica ars facit ad bonos mores* (v. 539-542) ('The art of poetry gives good customs'), *Aliud* ('another') (v. 545–546), *Poetæ diuino afflati spiritu.*) ('Poets inspired by the divine spirit') (v. 549–550). Verse numbers according to Albrecht 2003.

58 Examples are given in Heiles 2018b, Heiles 2018a, 194–203; Heiles 2014; Gerhardt 2007, 21 n. 43; Kruse 2000; Kruse 1996, 74-75.

59 Cf. Heiland 2015; Grafetstätter 2013, 35–37; Classen and Dinzelbacher 2008; Gerhardt 2007, 12–21; Erb 1998; Müller 1988.

Research literature consistently describes this type of speaking as obscene.[60] However, this prevents a real analysis and historic deconstruction of the phenomenon. As a scholarly category, the term 'obscenity' is useless. The use of the term *obscene* either only expresses that the scholar is disturbed by this kind of speaking, or only assumes a speaking taboo and a disturbed audience; in most cases without being able to prove that.[61] The scribe of Cod. Donaueschingen A III 19 however, was obviously not disturbed by the sexually explicit language of the *Priamel*, nor was the buyer or the later hands 'E' and 'F', for whom particularly these texts were interesting and provoked affirmative reactions. Only at a certain point in time, the manuscript must have come to a reader who no longer appreciated the genre conventions. Remarkably, such censorship also affected the oldest known *Priamel* print (see Fig. 4 below). There two verses were deleted, in which the words *fotzen* ('vaginas'), *ersen* ('arses'), *hoden* ('testicles') and *zersen* ('penises') are mentioned. This phenomenon could not be explained solely by a (possible) long time distance of reception and an altered general zeitgeist, but also by a concrete alteration in the circle of recipients at a time when the genre conventions were still quite unchanged. It is possible that sexually explicit speaking and writing was only normal and possible in a certain social milieu. But the decisive factor was probably less an aspect of class or economic wealth than an aspect of gender. Our reading of the texts copied by 'Hand A' has already shown that they were written by and for men, who distinguish themselves through devaluation not only from socially marginalized groups, but also from women and clerics. In this context, the clerics who live as celibates can certainly be understood as belonging to a separate gender identity. A change of ownership to a person from one of these two groups could have been the reason for the deletions. In one of the few meta-expressions made at the beginning of the sixteenth century about the censorship of sexually explicit language, women and clerics are mentioned as the very groups of recipients for whom texts were edited in this respect. In his 1512 edition of the writings of Heinrich Seuse (1295/1297–1366), the printer Johann Otmar explains that the word *Mynn*, which has undergone a change of meaning from 'love' to 'sex',[62] is replaced by *Lieb* ('love') in his edition:

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60 Descriptions of Rosenplüt's texts as obscene are for example given by Williams-Krapp 2020, 60, 63 and Glier 1992b, 230–231. *Minnereden* with sexually explicit language and topics are regularly labelled as obscene by Klingner and Lieb 2013, vol. 1, 30, 186,1008, 1019, 1097.

61 Marcuse 1984, 55; Gerhardt 2007, 88; Fährmann 2002; Erb 1998, 403; Müller 1988, 23; Janota 1982.

62 Cf. Heiles 2018a, 200–202 with no. 701, 703; Schnell 2007.

Nåmlich das wort ‚Mynn' vnd des geleichen, das da yetz zůdisen zeitten nit togenlich noch zymlich, sonder schampar vnnd ergerlich ist zůnennen oder zůlesen (vor auß den frawen vnnd gaistlichen rainen personen), hab ich gewendt in das wort ‚Lieb', das da allen menschen, frauwen vnnd mannen vnerschrockenlich on ergernuß zůlesen ist.[63]

I have changed the word *Mynn* and suchlike, which at this time is not to be spoken or read as virtuous or decent, but as shameful and annoying (especially to women and spiritually pure persons), into the word *Lieb* which is readable to everybody, women and men, without fright or annoyance.

This does not mean that explicit speaking about sexuality among women or clerics was not possible or customary at all, but rather testifies to a male discourse that did not allow them to use explicit language and edited texts accordingly.

The hypothesis of the non-clerical male readership being able to speak explicitly about sexual matters should be further examined. This also raises the question of why especially the genres in which explicit speaking about sexuality is possible (*Priamel, Märe, Minnerede, Fastnachtspiel*) are printed so little, and whether there is a connection between these two phenomena. If we want to understand more precisely how zeitgeist, media use, genre conventions and user circles change in the transition from the late Middle Ages and Early Modern Age, between the manuscript culture of the fifteenth and the printing culture of the sixteenth century, more studies on written artefacts (manuscripts, prints and epigraphs) are still needed.

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[63] *Diss buch das da gedicht hat der erleücht vater Amandus genant Seüß*, [...] Augsburg: Johann Otmar 1512, fol. ccxviii[r] [VD16 S 6097], according to the exemplar kept in Munich, Staatsbibliothek, Res/2 P. lat 1430 <daten.digitale-sammlungen.de/bsb00018923/image_359>.

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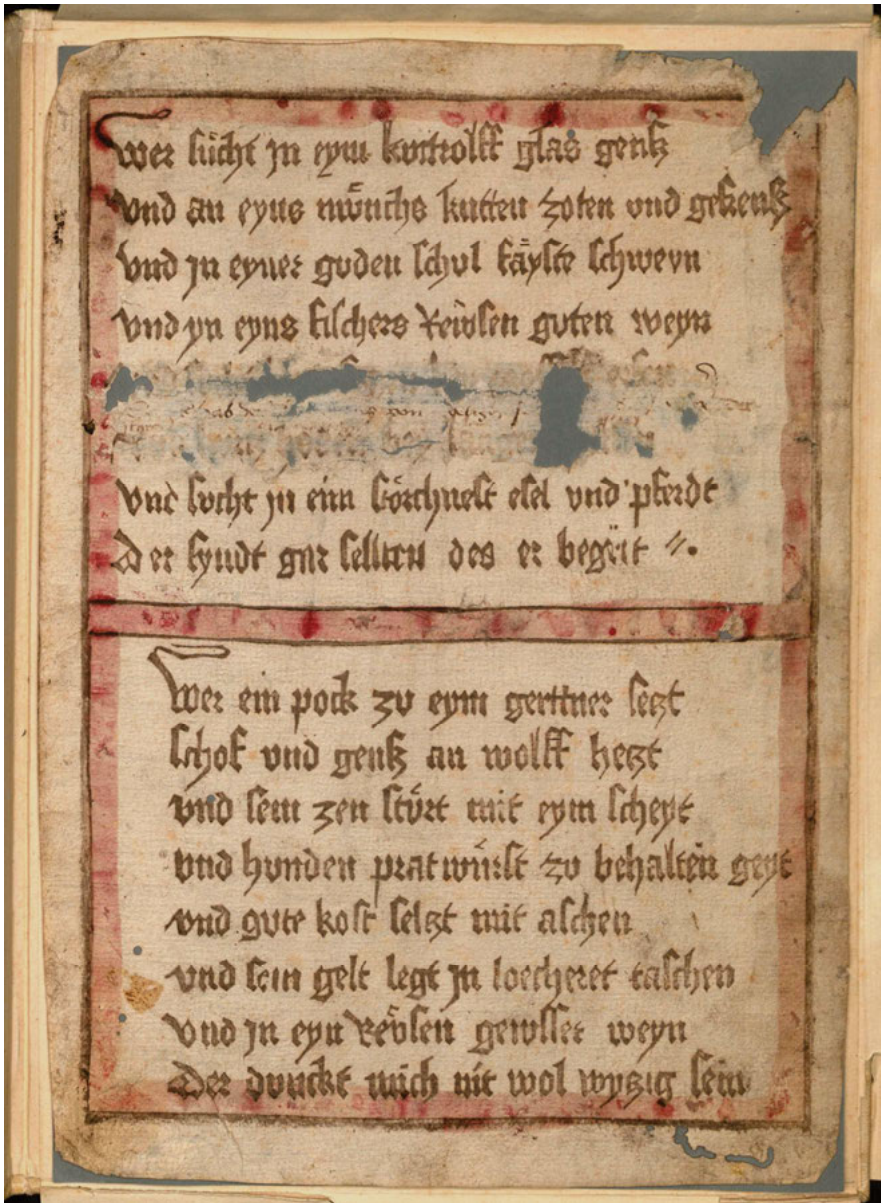
Fig. 4: Xylographic Print of two *Priamel*. Nuremberg?, *c.* 1460–1470. Munich, Bayerische Staatsbibliothek, Xylogr. 88. CC BY-NC-SA (courtesy of Bayerische Staatsbibliothek).
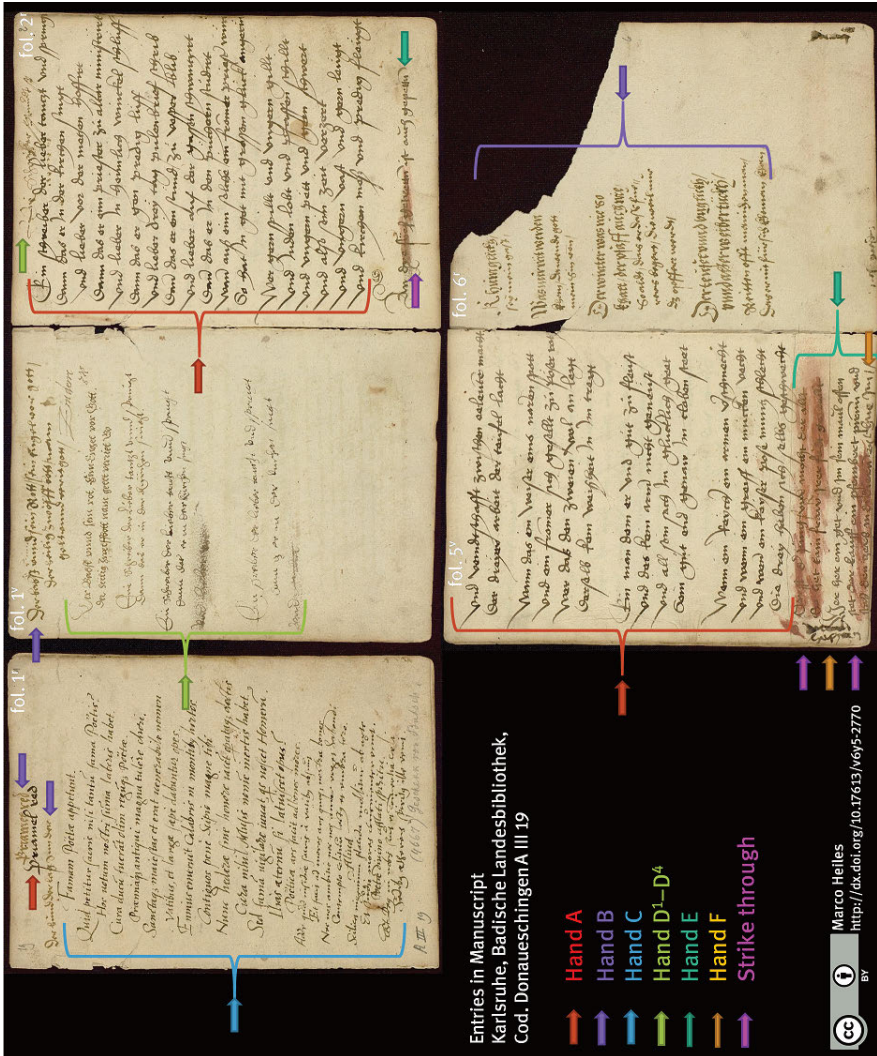
Fig. 5: Entries in Cod. Donaueschingen A III 19. Images of the manuscript by the Badische Landesbibliothek Karlsruhe: <https://nbn-resolving.de/urn:nbn:de:bsz:31-37635> (CC BY 4.0). Online version of this image: <http://dx.doi.org/10.17613/v6y5-2770>.

Shamil Jeppie

About a Manuscript on Tea Found in Timbuktu, Mali: Mamma Haidara Collection, MS 125, *Tārīkh al-shāy fī 'l-Maghrib*

Abstract: This article reflects on the simultaneity of manuscript and print cultures in Northwest Africa and the relationship between them, challenging the conventional idea of progress from one form of textual reproduction to another. In particular, the article examines the movement between print and manuscript worlds as reflected in a text, which was discovered in a Timbuktu collection, about the subject of tea. In addition to appealing to this particular text as an invitation to future work on the relationship between the two processes of storing the written word, the article illustrates the possibility of using the collections in Timbuktu to write about the history of consumable goods.

1 Introduction

Tea is now widely consumed in the Maghrib and large parts of West Africa, and one thinks especially of Mauritania, Senegal, Mali, and Niger in this regard. The extensive daily consumption of tea might seem like a thousand-year-old tradition with local roots. As historical research has shown, however, tea arrived relatively recently – sometime during the eighteenth century – with the expansion of European merchant capitalism and the increasing incorporation of Northwest Africa into this commerce. In some parts of urban West Africa, the widespread use of tea began only in the post-Independence period and has increased since the turn of this century, when tea began to arrive directly through an expansive network of small traders from mainland China.

On one of my exploratory trips to Timbuktu in the early 2000s, I was told about a text that had the terms 'history' and 'tea' in its title. Our project was allowed to make images of this manuscript, which was quite a rarity at the time, and the digital copy made then is the basis for this article.[1] This manuscript, Timbuktu, Mamma Haidara Collection, MS 125 (1,71), *Tārīkh al-shāy fī 'l-Maghrib*

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1 It does reflect some confidence in me, my team, and our work on the materials at Timbuktu that we were allowed to make a digital copy of the manuscript.

تاريخ الشاي في المغرب, has seven folios. The cover page gives the item number and the title (reproduced in the title of this essay) and reports the dimensions of the paper without indicating the units of measurement (13.5 × 20.9 for the cover and 9.9 × 18.3 for the manuscript itself). I did not encounter the catalogue entry for this work until much later. It conforms to the details on the cover page and as part of the text, right at the end, reports the name of the author as Ibn ʿIṣām al-Ribātī and the number of folios (*al-awrāq*) as four (04).[2]

In many of the manuscripts in the field, or in the catalogues of the Timbuktu collections, no composition or copying dates are recorded. It is often impossible to determine when a text was first written or when it was copied. The paper is, of course, revealing, and this particular text is on paper that was once lined but is now faded, which indicates that the paper is modern, a twentieth century product. But the date of the paper might just tell us when a copy of the work was made; the work itself might have been written at an earlier date. A copy could have been a means of conserving a work whose paper was disintegrating or whose text was becoming illegible, but there could be, of course, multiple other reasons why a copy of this work was made. So this manuscript on fading, factory-made, lined paper probably from a French mass-market paper manufacturer, could have reached Timbuktu anytime during the twentieth century. The apparent absence of a date or author's name initially led me to believe that the manuscript was copied from another source, rather than being an original composition. I shall return to the dating of the manuscript and the work later in the article.

As indicated above, I was eventually able to identify this item in the Mamma Haidara catalogue, which had then recently been published.[3] This manuscript is unusual in the existing catalogues of Timbuktu collections, which list large numbers of works that deal with law and grammar, poetry and legal opinions, and other normative subjects. These catalogues do not, I believe, reflect the actual holdings of the collections. The coverage of the catalogues is rather due to a decision made by their sponsor-publisher and by others who were involved in the publication of the catalogues. Some limit had to be set on what could be included, so a version of the classical Islamic corpus in the local iteration of Timbuktu was decided upon.[4] Based on numerous visits to many different family collections there, which into recent times were and probably still remain uncatalogued and unstudied, I have the impression that such collections

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2 Mammā Ḥaydara 2000, vol. 1, 71 (item no. 125).
3 Mammā Ḥaydara 2000.
4 Hall and Stewart 2011; Jeppie 2017.

contain a greater variety of materials than is reflected in their listings, especially the published ones.[5]

Such were the limitations of the tools at the beginning of this century. The intervening decades have seen continuing efforts to improve the apparatuses for working with the manuscripts, albeit in highly unpredictable circumstances. Long periods of optimism, such as from the time when military rule ended in 1991 to the insurgency of 2011, have been followed by intense outbursts of instability, and we are still living through such a moment. So one has to work with what is available in such circumstances and subject to the limitations of time and funding. But even the 'normative Islamic' texts can, of course, be read for other kinds of information, such as social or gender history.[6] However, to have found a manuscript that so explicitly falls into the field of social history is unique, especially when histories of consumption were coming into vogue.[7]

2 Overview of the manuscript's contents

What follows is not a translation of the text but a précis:

The inhabitants of the Maghrib are tea drinkers whether they live in cities or are nomads. They drink at all times of the day and also on special occasions. While tea is enjoyed in the Maghrib, it is in fact far from its place of origin in the East, that is, in China, India, and Russia, where there are millions more people.

According to the author, tea arrived in the Maghrib about a century and a half before his time. It first appeared in 1208 AH (1789 CE), during the reign of Sultan Sīdī Muḥammad bin ʿAbdallāh. In Gibraltar there lived an English medical doctor, William Lempriere (in the manuscript written as follows: وليم لمبرير), who was well known for his expertise.[8] The author cites a book by one Dr Bernard Louis (برنار لويز), but this is a rather generic name, and my searches have yielded no author who wrote anything of relevance to the Maghrib or about the history of tea.

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5 The CSMC initiative in Bamako, currently still underway, might change this picture by showing that there are more works than simply what is required for a good Islamic education.

6 See, for instance, Mathee 2011.

7 Krieger 2009; Schivelbusch 1992.

8 William Lempriere (d. 1834) was the author of, among other works, *A Tour from Gibraltar to Tangier* (1791 and subsequent editions) in which he described his activity as a medical doctor to the Moroccan Sultan and his household. Lempriere encountered tea-drinking there and did not himself introduce it.

When the Sultan, who had a sick son, was in Marrakesh, he invited William Lempriere to come and look at the state of his son's health. The doctor had a supply of tea with him which gave him the energy to work tirelessly. The Sultan was initially hesitant about the legality of this drink but allowed its use as a medication. *'Ulamā'* were also consulted about the drink's permissibility. When the son's health improved, a celebration was held and tea was served. Since that time tea became famous, first inside the court and then outside among all classes.

The English, Portuguese, and Dutch merchants who had long-established trade relations with China and India supplied tea to the Maghrib. Sugar was supplied by traders from Germany, Austria, and France.

In conclusion, the author asks, did the Maghrib know the mint plant before the arrival of tea? Nowhere else is mint mixed with tea, which has tremendous health benefits. This is where the manuscript comes to an end.

There is no point in attempting to correct any of the information in this work. There was indeed such a visitor as William Lempriere who wrote a travelogue and met the Sultan and his family and acted as their medical doctor during his visit. Lempriere encountered tea-drinking there, but he did not himself introduce tea to his hosts. In the travelogue, Lempriere gives some impression of the ritual of taking tea – sitting for at least two hours when taking it, for instance – and he briefly describes the arrangement of the teacups on a little table during the ritual. According to Lempriere, tea was always taken with mint and plenty of sugar. Being served tea is 'the highest compliment that can be offered by a Moor; for tea is a very expensive and scarce article in Barbary, and it is only drank by the rich and luxurious.'[9] The author of the work transmitted in our manuscript, however, could not have read the book of Lempriere. Instead our author probably heard about Lempriere and his book through an oral tradition that gave such a version of the English doctor's sojourn.

3 From manuscript to print and back again

When I returned to the tea manuscript much later, I realised that there was a missing folio; once I found it among our collection of images, I read what amounted to a colophon that was probably added later:

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9 Lempriere 1804, 212.

> This history of the first appearance of tea in the Maghrib was taken from the newspaper *Al-Sa'āda*, which was published in *Ribāt al-fātiḥ* (Rabat), as no. 8.096; Saturday *Jumādā al-akhīra* 1370, corresponding to 10 March 1951; and the newspaper is 48 years old.[10]

In this reproduction of the title, the word 'tea' is spelled *al-tāy* not *al-shāy*, reflecting the local pronunciation.

This manuscript was therefore copied from a newspaper. A Moroccan broadsheet (four sheets in total) arrived in Timbuktu, and at least this article was reproduced from it. The article covers less than half of page two. The title page is devoted to reportage on Moroccan and world politics; then follow two pages of cultural topics, including this article on tea. Beside the article on tea is an article on poetry and a short story by the Egyptian writer 'Abd al-Qādir al-Māzinī. The piece on tea was not 'plagiarized', inasmuch as the article bears the name of its presumably Rabat-based author (al-Ribātī). Although the manuscript gives full details about its source, this information is not reproduced in the catalogue. Unfortunately, the copyist left no signature, and we do not know if the copy was commissioned or why it was undertaken, apart from the seemingly interesting narrative about a significant item of daily consumption. Whether the person responsible for this manuscript copied the newspaper article within the same month or year that it appeared, or did so many years later, remains unanswerable.

Instead of dismissing the manuscript because of its sheer lack of originality, we ought to consider that as a handwritten, that is, *manual* (not mechanical) reproduction the manuscript points to the significance of the article's subject. But the manuscript has larger implications too. Walter Benjamin's insight, to summarise all too briefly here, that with mechanical reproduction (such as lithography and printing) an art object loses an *aura* that it had when and where it was created, is pertinent. His famous essay deals mainly with the rising prevalence of photography and especially film as media, but it opens with a more general discussion of 'mechanical reproduction'. In our example, however, an aura was possibly bestowed precisely through *manual reproduction*; in a way, the reproduction became an 'original'. If not at the time then certainly in the years to come, as this and other manuscripts were re-encountered and rediscovered, there was an emanation of a kind of mystery around them.[11] A

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10 *Al-Sa'āda: jarīda yawmiyya 'akhbāriyya* أخبارية يومية جريدة :السعادة, 10 Māris 1951 (1 Jumādā 'l-akhīra 1370).

11 'Man kann diese Merkmale im Begriff der Aura zusammenfassen und sagen: Was im Zeitalter der technischen Reproduzierbarkeit des Kunstwerks verkümmert, das ist seine Aura' (Benjamin 1989, 353).

further and equally important implication is that this move *from print to manuscript* goes against the grain of the standard narratives about the inevitability of texts moving from the handwritten to the printed word. Was it a unique case, or can we find other examples from the region of published materials being turned into manuscripts?

Printing arrived in Morocco during the 1860s amidst some ambivalence about it from the Sultan. There is evidence that there was even outright objection to it from the rulers.[12] But when materials began to be produced and printing became legal, its acceptance quickly spread. The earliest newspapers appeared in the early nineteenth century and were issued by Spanish and French interests; Arabic newspapers began to appear only in the late 1880s. By the 1950s, Morocco had a range of newspapers in French and Arabic, with nationalist parties having their own newspapers despite the protectorate officials' attempts at limiting their production and circulation. *Al-Sa'āda,* however, was an Arabic broadsheet positioned against the nationalist movement; it had started in Tangiers in 1904 with official funding from the French and with a pro-French editorial policy, and it ran until the end of 1956.[13] It is worth noting that this French-backed newspaper is the source for the article that was copied in Timbuktu. Could it be that no other newspaper was allowed into the French-controlled territories even into the 1950s? The protectorate authorities did attempt to censor publications and monitor the circulation of printed materials by intercepting the mail and by other means. Printed materials arrived in Timbuktu soon after they began to be produced in Morocco. Materials that left the Moroccan protectorate for the neighbouring colonies to the south (*Afrique-Occidentale française*) were in all probability monitored by the colonial administration and its military and postal outposts in the territories, including at Timbuktu. Publications that entered French-controlled territory, especially works written in Arabic and directed at Muslims, were regularly recorded, along with descriptions of the works' assumed ideological orientation, and published in lists for the purpose of official monitoring.[14] The colonial postal service conveyed newspapers, manuscripts, and books throughout the colonial and protectorate territo-

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12 'Abd al-Razzāq 1990; for an Arabic version based on this thesis, see 'Abd al-Razzāq 1996.

13 *Al-Sa'āda* ran from 1904 until 1956 as a pro-French mouthpiece, often with expatriate Lebanese editors. As such, it was probably allowed to circulate much more freely than other, independent newspapers which were critical of French rule.

14 See Aix-en-Provence, France, Archives nationale d'outre-mer, 19 G 24 & 25, Contrôle des livres en Arabe. This is a list of Arabic newspapers and periodicals that came into Dakar and Bamako etc. between April and June of 1922.

ries, which enabled it to keep an eye on the movement of materials through the postal system.[15]

4 How tea reached Timbuktu, the Maghrib, and West Africa

Tea consumption in the Maghrib, Sahara, and Sahel seems genuinely embedded in the habits and practices of town-dwellers such as those who lived in Timbuktu. That a manuscript such as this one should turn-up in a Timbuktu collection is thus a testimony to the acceptance, consumption, and value of tea. The history of tea-drinking in the region has been examined by various scholars, and they in turn have drawn on European travellers who observed the custom.[16] While in the interior and amongst certain groups – such as the semi-nomadic 'Moors' mentioned by Lempriere – there is a long history of tea-drinking, elsewhere it is a recent practice. There was an opinion that tea travelled to the interior from the Atlantic coast, but there is little evidence in support of this theory. It is far more likely that the leaf came to Timbuktu from what is today Morocco.[17] It remains to be seen how early we ought to date the arrival of tea; a thorough search through the Timbuktu collections might yield some clues. For instance, did somebody in Timbuktu or the surrounding region ask for a *fatwa* on the legality of tea from a scholar there? At this point we can only report that by the 1820s the French explorer René Caillié had already encountered tea-drinking, since he heads a section of a chapter relating to his reception in the town of Jenné as follows: 'Usage du thé, du sucre et de la porcelaine'.[18]

For the broader region, we can rely on the essay by Diawara and Röschenthaler, which covers the literature in European languages on the history of tea or tea varieties throughout the larger region, from Tangier to Timbuktu.[19] The authors begin with an observation about the recent arrival of green tea in the Malian capital, Bamako, and in other towns in the country, though it had been used for far longer by the 'Moors' of the hinterlands, in the Sahara, and in

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15 See, for instance, Dakar (Senegal), Direction des Archives du Sénégal, Série J, Postes et Télécommunications; versement no. 3 1911/1950. Serie O covers the period to 1911.

16 In the 1950s, there was an exchange among researchers on this subject; the literature is well covered in Diawara and Röschenthaler 2012.

17 Leriche 1951.

18 Caillié 1830, vol. 2, 223–224.

19 Diawara and Röschenthaler 2012.

areas such as Timbuktu. Green tea became 'a common drink only in the last couple of decades', and this is partly due to the growth in direct imports from China. The authors allude to the cultivation of tea in Mali during the 1960s, but the product of this effort is seen as inferior to what is imported. The essay is intended as an ethnographic study of the consumption of a commodity and broadly supports the argument for a 'diffusion gradient' in which tea is first used by the aristocracy then filters down to other classes. For example, in the Maghrib tea was first used as a medicine, then as luxury, and then as a drink taken by virtually everyone. Sugar was also a luxury, used first in a large cone-shaped form, then, when tea consumption spread, it was added to tea as granules or small cubes. Generally speaking, tea-drinking spread from city to countryside, but in this case the path led from the nomads through the countryside to city. The essay is a useful overview of the historical literature, and it sketches the outlines of the commercial networks that probably brought tea to the region. In addition, the article reports the words for 'tea' in the languages spoken there; the local words are all largely versions of the Chinese word for 'tea' transmitted through Arabic or French.

Any writing on the subject of tea in the Maghrib and adjoining territories cannot afford to ignore one work which is still only in Arabic; its title in translation would be *From tea* [*shāy*] *to atāy: Custom and history*. The title (من الشاي الى الأتاي) refers to the two different ways of saying 'tea': one with the letter *shīn* and the other, more local and widespread in the region of Northwest Africa, with the letter *tā'* (*al-atāy*), which is used, for example, in works written in the Berber language of Amazigh. This work, edited by two Moroccan scholars, 'Abd al-Aḥad al-Sabtī and 'Abd al-Raḥmān Lakhṣāṣī,[20] is a major anthology that brings together a variety of genres of writing, including oral and song texts as well as a selection of images. The two scholars have compiled an impressive range of Arabic texts about tea from its earliest mention. Around 130 extracts of varying length are presented with brief introductions to each and full details on the sources. An extensive interpretive essay preceding the collection of sources periodises tea's presence in the Maghrib, its place in popular culture, and its relation to other beverages, particularly in more recent decades with the expansion of cold soft drinks.

The vast majority of the documentation pertains to the Maghrib and comes from the late eighteenth to end of the nineteenth centuries – since this is the period when tea consumption really spread.

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20 Al-Sabtī and Lakhṣāṣī 2012.

The anthology opens with the oldest-known Arabic text about tea, dating to 851 CE, by an unknown author. The first known Arabic author is al-Birūnī, who mentions tea in a work that dates to 1025 CE. Following the introduction, the anthology is organized in four sections: witnesses and reports, ornaments and accompaniments, benefits and harms, poetry and songs dealing with tea, with each section adopting a more or less chronological order. The sections contain extracts from traditional histories, chronicles, memoirs, travellers' reports by Europeans or Maghribis, archival sources, correspondence, and legal opinions (*fatāwā*) on the subject of tea.

Poetry in praise of tea is presented throughout, with numerous poems coming from various regions; some of the poems are quite short, such as a two-line poem against tea, while others are quite long, such as the early court poem written in 1746 by the physician of Sultan Ismail. Three extracts of poems from Mauritania are included. Poetry in Amazigh ('Berber') is translated into Arabic, and in such cases the original is given in the Appendix.

The Appendix also contains a series of documents the provide information about the importation of tea during the late nineteenth century; while the figures are revealing, even more so is the extensive list of tea merchants.

The indefatigable scholars who produced this trove of research did not include newspaper coverage of tea except for the odd advertisement and other images of tea-drinking from the press; so neither the *al-Sa'āda* article nor, of course, its manuscript copy made in Timbuktu at an unknown date are included in the anthology.

Last but not least, there are manuscripts, mainly poetry, about tea in Timbuktu collections. According the catalogues of CEDRAB (Centre de documentation et de recherches Aḥmad Bābā, since renamed by the acronym Iheri-Ab), there were at least fifteen such poems in its holdings at the time of the publication of the relevant catalogues. For a fuller treatment of the subject, it will be necessary to examine all those manuscripts, bearing in mind some of the issues raised here.[21]

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21 Catalogue of Ibn 'Āli et al. 1995-1998: *Qaṣīda fī madḥ al-atāy (al-shāy)* by Mawlūd b. Aḥmādī; no. 934, vol. 1, 277; *Manẓūma fī madḥ al-atāy (al-shāy)* – unknown; no. 922, vol. 2, 162; *Manẓūma fī madḥ al-atāy (al-shāy)* – unknown; no. 2053, vol. 2, 208; *Manẓūma fī dhamm al-atāy (al-shāy)* – Muḥammad Ayyūb; no. 2267, vol. 2, 284; *Manẓūma fī madḥ al-atāy (al-shāy)* – 'Uthmān b. al-Ḥājj b. Bello al-Anūkandrī; no. 2327, vol. 2, 304; *Manẓūma fī madḥ al-atāy (al-shāy)* – Abūbakr b. Ḥammād al-Anūkandrī; no. 2332, vol. 2, 306; *Manẓūma fī madḥ al-atāy (al-shāy)* – 'Abdullāh b. Aḥmad al-Sūqī; no. 2678, vol. 2, 425; *Manẓūma fī madḥ al-atāy (al-shāy)* – Maḥfūẓ b. Bay; no. 2762, vol. 2, 456; *Qaṣīda fī madḥ al-atāy (al-shāy) wa sharḥuhā* – unknown; no. 3017, vol. 3, 17; *Qaṣīda fī madḥ al-atāy (al-shāy)* – 'Īsa b. Muḥammad b. al-Mawlūd

5 Conclusion

Making copies was an integral part of the activities in a manuscript culture because there was no other way of material reproduction. Memorization was possible, but that was intangible and highly individual. A copy of a text could be shared and read and re-read and copied again. So a manuscript was produced by an author, and then there was the prospect of one or more copies – all handwritten and each reflecting an attempt at faithful representation of the original text as well as having its own idiosyncrasies. With the coming of print technologies to the places which had long and rich handwriting traditions, there was very often a struggle over the reception and use of this technology. In general the trend was that works moved from manuscript to print. Apart from the delightful subject of tea as a topic of writing, this essay raises the question of another possibility, the movement from print to manuscript. Is this a unique and rare case or was the practice more widespread in the region? More cases of this kind would be worth looking for.[22]

One approach to such material would be to dismiss print-to-manuscript texts as unoriginal and derivative. But this approach ignores a range of questions that might illumine attitudes towards print culture, and towards attempts to conserve the craft of manuscript copying, even as the seeming inevitability of print blows like Saharan sand through a tradition buries it in the past. There is no evidence of a Luddite reaction to the presence of printed works in Timbuktu and similar settings in the Sahara. Indeed there is evidence that print was accepted, at least among some involved in the manuscript world. Yet the manual production and reproduction of works persisted, and there are still a handful of practitioners of the craft; of course others can simply take the fruits of these practitioners' labour to the photocopier, and now anyone can just scan them with the ubiquitous cell phone.

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b. Muḥammad b. Abībakr b. al-Ṭālib; no. 3130, vol. 3, 65; *Qaṣīda fī madḥ al-atāy (al-shāy)* – unknown; no. 3206, vol. 3, 99; *Qaṣīda fī ḥilya al-qahwa* – unknown; no. 3208, vol. 3, 100; *Qaṣīda fī ḥilya al-atāy (al-shāy)* – unknown; no. 3210, vol. 3, 101; *Qaṣīda fī madḥ al-atāy (al-shāy) wa sharḥuhā* – ʿĪsa b. Muḥammad b. al-Mawlūd b. Muḥammad b. Abībakr b. al-Ṭālib; no. 3784, vol. 3, 341. With thanks to Ebrahim Moos for confirming items in the catalogues when I did not have access to them.

22 I would like to thank Mauro Nobili for reminding me of texts he has encountered that went from print to manuscript, including versions of the chronicle *Tārīkh al-fattāsh*.

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Sabine Kienitz

From Mouth to Ear to Hand: Literacy as Recorded Orality in Nineteenth- and Early Twentieth-Century German Courts

Abstract: This research is situated in the legal context of contentious jurisdiction in Germany during the nineteenth and early twentieth centuries. By exploring the transcription of court proceedings (*Gerichtsprotokolle*), the article addresses the relationship between orality and literacy. Research on the production and use of court records shows that these two modes of communication were co-constitutive; the written word had to be retranslated into the spoken word in order to effect the agency of written artefacts as legal documents. The article reflects on the performativity of writing and the legal status of shorthand as part of rationalisation and modernisation of legal procedure, and deals with the obstacles which orality posed to literacy in the simultaneous acts of speaking, listening, and writing.

The relationship between orality and literacy is still crucial for the study of manuscript cultures. Researchers have tended to assume a fundamental change to this relationship that resulted in a shift of authority from the spoken to the written word.[1] Yet the voices favouring a concept of reciprocity are increasing.[2] In historical research on legal systems, the thesis that writing was the key element of social and cultural development seems to remain unchallenged. According to Jack Goody, writing was a prerequisite for both the codification of law and the record keeping of jurisprudence. Hence, he argues, 'written evidence in courts is characteristically given greater truth-value than oral testimony. This was so from the beginning'.[3] According to Goody, a fundamental shift took place from the mouth to the hand, and beyond that from the ear to the eye. In his view, 'reading permits a greater distancing between individual, language and reference than speech, a greater objectification which increases the analytic potential of the human mind'.[4]

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1 Ong 1987; Benne 2015, 27, 581; Vismann 2011, 98–111.
2 Benne 2015; Gardey 2019, 36–37.
3 Goody 1986, 152.
4 Goody 1986, 142.

It is uncontroversial that literacy is an essential component of bureaucratic technique in governance and regimes of power. A problem arises, however, when Goody primarily addresses the genre of *Gerichtsprotokoll* ('transcription of court proceedings') under the aspect of writing. This approach neglects the impact that orality actually had in the legal setting, and continues to have to the present today. Therefore, I would like to pursue the thesis that the judiciary is one of the few contexts in which orality and literacy have been systematically interconnected.[5] It was the legal system where these two modes of communication existed in a largely interdependent and co-constitutive form. One could even assert, more precisely, that it is in the courtrooms of contentious jurisdiction that orality has remained a mandatory precondition for literacy. At the same time, this very literacy is retranslated into orality again in order to effect the agency of written artefacts as legal documents. This process raises questions about how manuscripts created by legal courts were produced and used in concrete terms. How was the process of writing those transcripts organised? Who wrote and under what conditions? What is the legal status of these court records? What changes took place, when, for example, shorthand was implemented in court? Beyond these questions about the performativity of writing and the practices involved in the writing process, we ought to consider the role of orality more closely by taking into account the objectives, conditions, and obstacles which orality poses and the respective practices that intertwined the spoken and the written word, namely, the simultaneous acts of speaking, listening, and writing.

In order to address these questions from a historical perspective, and to understand the characteristics of written artefacts as an outcome of the aforementioned practises, I will first look at the formal legal requirements. A larger framework, examining the connection between orality and literacy by comparing the differences between national legal systems, both within Europe and beyond, would be desirable.[6] However, the topic proves to be considerably complex. Therefore, as a first step I will roughly outline the German conditions in the nineteenth and early twentieth century. Second, I will address orality and the specific modes of speaking and their institutional setting in German courts:

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5 Gensler 1821, 12–18.

6 Mittermaier 1845 provides a valuable overview of the importance of oral and written legal evidence and the national peculiarities in certain areas, including some of the German states (Baden, Bavaria, Holstein, Prussia, Saxony, Schleswig, Württemberg), some European countries (Belgium, England, France, Greece, Hungary, Ireland, Italy, Portugal, Scotland, Switzerland), North America, and Brazil.

How was orality practised? What were the specific conditions and problems? And to what extent is orality accessible in the written record at all? As a third point, and instead of a linear reconstruction of history, I will illustrate the peculiarity or even the interdependence of the written and spoken word at court by referring to the vigorous debate about the introduction of stenography into German courtrooms of contentious jurisdiction. These conflicts in the nineteenth century allow us, on the one hand, to gain insight into earlier practices at court, which served as arguments for modernisation at the time. On the other hand, and this is the fourth point, these conflicts also deal with the legal issues of writing in court, that is, with changes in organisation and argumentation. One of the main questions refers to the status of shorthand records as fully valid and reliable documents, or, more precisely, to their agency as originals that provided legal certainty.

1 Recording orality at court: The German legal framework

Research dealing with the production and use of manuscripts in justice, jurisprudence, and legal practice is obviously important because the legal system as a whole is of great social and cultural significance. Moreover, this is a key area in which scholars have assumed that the written word took and even maintained precedence at a very early stage.[7] Accordingly, they argue that the spoken word lost its significance in view of the predominance of a specific mode of juridical literacy concerning law and written testimony. This argument assumes that a legal system dependent on inquisitorial trials[8] was fundamentally based on the exclusive use of written evidence. A closer look at the conditions in the German states beginning in the early nineteenth century, however, reveals that

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7 Goody 1986, 127–170; Gardey 2019, 54–58; Vismann 2000.

8 In the German context, the term *Inquisitionsprozess* (inquisitorial trial), and the concept underlying it, date back to Roman law and were based on the following principle: *quod non est in actis, non est in mundo* ('What is not recorded does not exist'). Here the position of the prosecutor and the judge were identical. The files were produced in a non-public proceeding only by the judge-cum-prosecutor, and the documents then had to be passed on to legal academic scholars outside the court or to a competent tribunal for decision-making (Zopfs 2018). See also Bennecke, Beling 1900, 258; Eser 2014; Kienitz 2005. The *Inquisitionsprozess* is not to be confused with the historical institution of the *Inquisitional trial*, which was introduced above all by the church to fight against heresy.

a major change had taken place. The legal system was now grounded primarily on the principle of orality. Court proceedings from the Kingdom of Württemberg prove that even the inquisitorial trials relied on verbal protocols. The statements of the participants 'so weit es seyn kann, mit den eigenen Worten der Zeugen, und zwar in der ersten Person, zu Protokoll gebracht werden sollten' ('were to be put on record as far as possible in the witnesses' own words, and in the first person').[9] Since at least the middle of the nineteenth century, the official obligation of immediacy in oral presentations and thus the 'Gleichzeitigkeit des gegenseitigen Vorbringens' ('simultaneity of adversarial pleadings')[10] was at the centre of the German legal system. Consequently, the German *Strafprozessordnung* (Code of Criminal Procedure) established the orality of legal proceedings as a precondition in accordance with the 'Prinzip der Unmittelbarkeit in mündlichen Anhörungen' ('principle of immediacy in oral proceedings').[11]

When we talk about legal enquiries in proceedings of contentious jurisdiction, then we are primarily concerned with the taking of evidence, the interrogation of the accused, and the examination of witnesses and their testimonies during the main trial. The requirements stated,

> dass alle Verhandlungen, welche der Entscheidung zur Grundlage dienen sollen, also Angriff, Vertheidigung, Beweisführung und Rechtsbegründung vor den Richtern, welche das Urtheil fällen sollen, selbst und zwar mündlich geführt werden.[12]

> that all proceedings which are to serve as a basis for the decision, i.e. the prosecution, defence, presentation of evidence, and legal reasoning, will be conducted in person, that is, orally before the judges who are to render a verdict.

All of those communicative but ephemeral acts were mandatory parts of a trial. Only the oral performance could guarantee that the judge in charge of the verdict would hear the unfiltered truth of all participants under the compulsion of his questioning.[13] Another important aspect was that the testimony took place in the presence of the accused and his or her lawyer. This involved the 'Möglichkeit, sich über jede entgegenstehende Aussage zu erklären, sie zu berichtigen und Fragen an die Aussagenden zu stellen' ('the opportunity to explain themselves with regard to any contradictory testimony, to correct it and to ask questions of

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9 Reyscher 1839, 721.

10 Gerau 1850, 417; Mittermaier 1845.

11 Mittermaier 1856, 305–316; Gerau 1850; Vismann 2011, 112–129.

12 Gerau 1850, 419–420. Unless otherwise stated, all translations in this article are mine.

13 Bennecke, Beling 1900, 258.

those giving evidence').[14] Prefabricated texts and written statements had no legal validity whatsoever. Their use was explicitly prohibited.[15]

Nevertheless, due to the limited capacity of the human memory, records of the proceedings had to be written down. They would render all statements comprehensible and replicable word for word.[16] This requirement meant in turn that the spoken word was at the same time transcribed into regular *Kurrent-schrift* (German cursive script) by a professional scribe, a process which transformed the spoken word into a legally effective court file. In this process, ephemeral speech not only became a document, but it also gained tangible materiality. The oral statements were documented by handwriting, mainly verbatim:

> Die Aussagen des zu Vernehmenden sind nicht im erzählenden Style, sondern in der ersten Person, und, soweit es möglich ist, in denselben Ausdrücken, worin sie geschehen, nöthigenfalls mit den eigenen Erläuterungen des Redenden, im Protokolle niederzuschreiben.[17]

> The statements of the interrogated are not to be recorded in the narrative style, but in the first person, and, as far as possible, in the same terms in which they are made, if necessary with the speaker's own explanations.

The spoken word should be transcribed 'in möglichster Treue und Vollständigkeit' ('with the greatest possible fidelity and completeness')[18] to serve as evidence of what the people under interrogation had put on record. Because it ensured a certain degree of control about what was said both for the defence and for the prosecution, the transcript could be used later to appeal the case. Likewise, the legal officers and judges could use the transcript as an argumentative basis in their assessment and adjudication. In order to validate the records, the scribe himself had to read them out at the end of the very same court session to allow for corrections and additions.

To cite an example: the *Stadtratsprotokoll in gerichtlichen Sachen* (city council records for legal affairs) of Hall in the kingdom of Württemberg for January 25th in 1825 documents a case of blackmail on account of sexual intercourse and a

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14 Mittermaier 1856, 308.

15 The *Urkundenbeweisverbot* (prohibition of documentary evidence) refers to records submitted in the absence of a judge in charge of the verdict (Bennecke, Beling 1900, 341).

16 Lamm 1867, 219.

17 Knapp 1843, 40.

18 Knapp 1843, 150.

falsely alleged pregnancy.[19] After the first round of evidence was recorded, the case was submitted to the district court. Looking at the layout of the page, it is obvious that the scribe made some additions in the margins. It is very likely that he inserted these addenda simultaneously or right after officially reading out the statements. There are also some corrections throughout the text, which the scribe must have introduced during the hearing. One assumes that he noticed his mistakes while he was still writing and corrected them immediately.

As a next step, the respective speakers had to sign the record of their testimony. In so doing, they confirmed the accuracy of the record and made their own words legally effective. At the end of the testimony, a fixed formula is inserted that says: 'Auf Verlesen bestätigt die Angabe die Bekl.(agte) mit ihren Handzeichen' ('After the reading, the def.[endant] confirms the statement with her initials'). Obviously, the female defendant, Caroline Dillinger, could not even write her name or initials. Instead, she chose to sign with three crosses, which, because of their clumsiness, may also indicate that she had no experience in using a quill. At the bottom of the page, a signature confirms the presence of a witness. Here it says: 'Auf Verlesen' ('confirmed after the reading'). It seems that this person could write her name, but the awkward letters reveal that she lacked practice.

In this respect, the efficacy of the protocol as a legal document was based exclusively on the combination of orality and the authentication of the speaker's signature, as well the signatures of the judge and the scribe. In the end, the verdict relied on those court proceedings.

2 Orality in court and its implications for recording

The oral proceeding was the centrepiece of the trial as such. Even the possibility of speech impediments or foreign-language participants is a topic here.[20] All parties including the judge had to express themselves in the presence of the court and make their pleadings verbally. Orality referred not only to the presentation of the testimony, but also to reading out the court record: 'Das Protokoll

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19 StAH, Stadtratsprotokoll in gerichtlichen Sachen, 19/480, hearing of Caroline Dillinger and Elisabeth Schüle, 25 Jan. 1825.
20 Knapp 1843, 69–70; *Civilprozeßordnung* 1898, 47–48.

ist – in der Hauptsache – dazu bestimmt, vorgelesen zu werden' ('The transcript is – in the main – meant to be read out').[21]

When looking at concrete examples, however, the question arises as to how much orality is actually included in these written records. After all, one must concede that orality is only accessible through the transcription of the spoken word. It therefore is reasonable to distinguish between the agency of the participants as authors and as originators. The speaker is, so to say, the author of his or her story; the speaker, the scribe, and the judge co-acted as originators of the written artefact. Of course one has to admit that the oral presentation was *ipso facto* subject to the power of the scribe.[22] Thus, the very idea of immediacy at court seems to be a legal fiction. For one thing, the linguistic ability of the participants to understand and to express themselves might affect the questioning. Likewise, their familiarity with the cultural context, namely, the specific situation of being called to court, might have some impact. In order to assess the conditions of recording, a basic question is how fast and in what mode and temper people spoke. One might imagine differences in speech when they explained their views and argued, when they defended themselves, when they depicted or remembered facts and circumstances, or when they delineated excuses and invented lies. Even more important is that the skills of the scribe and his capacities in speedwriting dominated the situation. It was his task to document the argumentation in detail while grasping the content of the spoken statement.[23]

Keeping this situation in mind, one must acknowledge that the official claim of a word-for-word transcription always includes some kind of translation.[24] First, a translation into the standard language is in most cases recognisable. The fact that people spoke dialect can be assumed, but is hardly visible here. Secondly, the written artefact itself cannot depict the emotional colouring of the speech, for example, fear or anger. There are some instances, however, in which the scribe made the volume of the voice or the manner of speaking visible via commentary. For example, when he added the information that the accused had spoken 'hastig' ('hastily'), 'sich lange besinnend' ('reflecting at length'), 'bestürzt' ('stunned'), 'in brutalem trotzigen Thon' ('in a harsh, defiant tone'),

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21 Flemming 1898, 585.

22 Gensler 1821, 157.

23 Kienitz 2005, 59–70.

24 Göttsch 1991, 445. However, her examples originate from trials in the eighteenth century and therefore still pertain to the inquisitorial trial. The records represent the hearing in detail, but the scribe paraphrased into indirect speech.

'schnippisch und mit pochendem Herzen' ('caustically and with a pounding heart'), 'bißig' ('cutting'), 'mit sehr stotternder, kaum zu vernehmender Stimme' ('in a stammering, barely audible voice').[25] Apparently, the description depended on his interpretation, such as when the scribe differentiated the manner in which an accused person responded to questions, by 'weinen' ('crying'), 'heulen' ('wailing') or 'bitterlich weinen' ('weeping bitterly'). There is also some evidence that female defendants became verbally abusive. They cursed blatantly and insulted each other in such a way that the judge had to call them to order repeatedly for 'unschicklicher und unziemender Reden' ('indecorous and unseemly speech').[26]

Moreover, the scribe translated the oral statements into a distinctly written form of speech. This is perceptible in the smoothed-out sentence order, as well as in the phrases that are to some extent adjusted to make sense. Usual filler words or repetitions, which are characteristic of unscripted spoken language, are rather rare, but there are examples, such as: 'Ey, ey, da kräuselt es mir. Ich hatte nichts mit ihm' ('Well, well, it gives me the creeps. I had nothing to do with him').[27] Likewise, it is noticeable that in contrast to everyday speech, people seem to present their narration in complete sentences.

Evidently, there was a cultural authority of the written language, which fully asserts itself here and transforms to some extent the previous orality. In this respect, literacy seemed to have been an instrument of domination and power.[28] One must also suppose that the conditions of judicial interrogation played a role, since the terminology used by the judge followed the interests of the judiciary. One must look closely to determine whether people merely repeated the judge's phrasing or whether they used words of their own accord. Sometimes witnesses or defendants even adapted their own language to the expectations of the judge in anticipatory obedience, such as when people had had previous experiences with the juridical authorities, which were documented in their personal criminal record.

The introduction of the principle of orality was much discussed in the 1830s. Jurists and legal scholars considered it innovative because it strengthened the

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25 StAL, Kriminalsenat Ellwangen, E 341 I, Bü 37, 'Strafsache gegen Maria Katharina Röthlin (Röthel), Christine Schön und andere aus Schwäbisch Hall wegen gewerbsmäßiger Unzucht', hearing of Magdalena Bäuerle, 7 Aug. 1824.

26 StAL, Kriminalsenat Ellwangen, E 341 I, Bü 36, hearing of Johanna Friederike Walter, 17 May 1824.

27 StAL, Kriminalsenat Ellwangen, E 341 I, Bü 37, hearing of Rosina Maria Treuter, 4 Aug. 1824.

28 Göttsch 1991, 450.

position and the rights of people who were in court, defendants as well as witnesses.[29] However, the change also brought with it some problems. For handwriting was the central means of recording these ephemeral situations. The transfer of verbatim speech to a written form as an authoritative process of notarisation was in the hands of a more or less ambitious or experienced scribe.

3 Longhand script and the legibility and legality of shorthand

The legal regulations tell us a lot about the requirements and organisation of orality in court. By contrast, guidelines on the subject of writing in court are scarce.[30] In this respect, only the vigorous debate about the introduction of shorthand in the 1860s opens up the possibility of further investigation. The specific practices involved in creating longhand transcripts only became an issue, and therefore visible in archival records, when they were challenged by the concept of a new and time-saving documentation system. As the experts discussed the specifics of shorthand and its characteristic elements – for example, simplification of common writing and illegibility of a non-alphabetic script – the faults and benefits of both longhand and shorthand came into view. In the following paragraphs, two aspects of this debate will be explicitly addressed: first, the conditions of writing longhand as such and their effects on script; and second, the legal dimension of shorthand records.

Obviously, the previously described form organising court proceedings, that is, orality and the obligation to record the spoken statements immediately and verbatim, would have been an ideal playground for the use of shorthand.[31] Yet the opposite was the case: whereas in other countries, for example in England, the use of shorthand had long been common practice, even in the field of

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29 As one of the main outcomes, Mittermaier mentions that the number of acquittals had decreased significantly (Mittermaier 1856, 306, n. 4).

30 According to Gensler 1821, 164, the scribe should avoid 'gewisse Schriftzüge, die das Lesen erschweren und erst einer Entzifferung bedürfen' ('any style of lettering that makes reading difficult and requires decipherment'). Pörschel 1911, 20–22, gives some details on the type of paper to use and insists on the use of black ink.

31 Menger 1873, 155–167, discusses the necessity of elaborate records for appealing a case. He also stresses the technique of shorthand as an essential tool for improving the quality of the records (p. 166, n. 33).

law,[32] the German state authorities refused to apply the system. The earliest evidence of shorthand in German courts dates to the beginning of the twentieth century.[33] Why were the German state authorities so hesitant, and why did it take so long for shorthand to finally be used in court?

The discussion about the use of shorthand in the German judiciary began in the 1860s and relied on the positive experiences with parliamentary shorthand.[34] The promoters described a multitude of advantages of the new method, which included saving time, saving manpower, and saving material resources.[35] The main concern was to offer an alternative to the German cursive script or *Kurrentschrift*, which they faulted for being 'mühsam dahinschreitend' ('slow and cumbersome') and 'allzu schwerfällig für den mächtig und rasch arbeitenden Geist' ('all too clumsy for the powerful and fast-working mind').[36] The proponents of shorthand disapproved of longhand above all because of the large number of hand movements necessary for its many somewhat crooked characters:

> Die deutsche Currentschrift nimmt in Folge ihrer Weitschweifigkeit und Vielzügigkeit, insbesondere der häufigen Erhebung und Senkung ihrer Zeichen über und unter die Schreiblinie einen nicht geringen Aufwand an physischer Kraft und Zeit in Anspruch, lenkt daher die Aufmerksamkeit in zu hohem Grade auf die mechanische Thätigkeit des Schreibens [...].[37]

> German cursive script requires – due to the fact that its letters are too lengthy and consist of too many strokes, in particular because of the frequent elevation and descent of its characters above and below the writing line – a considerable amount of physical effort and time; therefore it directs one's attention too much to the mechanical activity of writing [...].

Fast recording at court by using longhand script was very physically demanding. Not only did the scribe need impeccable hearing, but a quick grasp and excellent memory skills were also essential. Simultaneously listening, understanding,

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32 Zeibig 1867; Gardey 2019, 40.

33 GLAK, Badisches Justizministerium, 234 Nr. 9191–9192, 'J.U.S. gegen Frh. Karl von Lindenau wegen Erpressungsversuchs, Beleidigung und Begünstigung', stenographic record of the main proceedings for 19 Dec. 1907. I thank Hannah Boedekker for this information.

34 Zeibig 1867; Lamm 1867.

35 Mittermaier 1856 was the first to argue that the employment of publicly appointed and sworn shorthand scribes would improve the quality of the court records (Mittermaier 1856, 311).

36 Zeibig 1867, 25.

37 Lamm 1867, 209. He claimed that cursive letters require 'durchschnittlich je fünf Handbewegungen, einige sogar acht' ('an average of five hand movements each, some even eight'), whereas shorthand only requires two or three (p. 210, n. 6).

remembering, and reproducing what he heard required a lot of mental attention and retentiveness. These physical and mental aspects are especially interesting: producing records at court in longhand and cursive script thus seemed exhausting not only for the body and the hand holding the quill, but also for the mind. A professional scribe, it was said, would be worn out in nine to ten years due to the demanding requirements at court. That the mental and physical difficulty of the task could become a problem in court sessions is also evident from the many complaints 'über den Zeitverlust bei solcherart langsamen Beamten' ('about the loss of time caused by some slow scribes'):

> Man erinnere sich nur der lähmenden Pausen, welche daraus entstehen, daß dem Protocollführer Zeit zum Nachschreiben vergönnt werden muß, [und] der unerquicklichen Debatten, welche sich nicht selten bei dem Vorlesen des Protocolls sich darüber entspinnen, ob der Angeschuldigte oder ein Zeuge das oder jenes ausgesagt habe, und in der Regel nicht anders, als durch nochmalige Befragung oder Vernehmung zum Abschluß gebracht werden können.[38]

> One only has to remember the paralysing pauses that arise from the fact that the record keeper has to be allowed time to complete his writing, [and] the unpleasant debates that frequently arise during the reading out of the records as to whether the accused or a witness has stated this or that, and which usually cannot be brought to a conclusion other than through repeated questioning or interrogation.

In view of these complaints, it is easy to understand the basic need for a script at court that was more manageable for body and mind than the inconvenient, slow, and laborious German longhand cursive script. In order to meet the increasingly high demands, the experts of shorthand required: 'Es muss daher jedes Schriftsystem, welches auf Vollkommenheit Anspruch macht [...] die Mittel bieten, so schnell zu schreiben, als man zu sprechen im Stande ist'. ('Therefore, any writing system that claims to be perfect [...] must provide the means to write as fast as one is able to speak').[39] In their view, the regular German cursive script was insufficient: 'Die Stenographie allein ist im Stande, ein vollständiges und treues Bild der mündlichen Verhandlung wiederzugeben und doch mit der Verhandlung selbst gleichen Schritt zu halten [...]'. ('Shorthand alone is capable of reproducing a complete and faithful account of the oral proceedings and yet keeping equal pace with the proceedings themselves [...]').[40]

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38 Lamm 1867, 219.

39 Tietz 1872, 26.

40 Lamm 1867, 219.

In addition to these problems caused by the complexity of the script and the techniques of handwriting itself, there were also some technical obstacles. One of them was the writing support, namely the paper, which, depending on the quality, might be so rough that it dulled the quill in no time:

> Die Oberfläche der unzähligen Papiersorten besteht sehr oft aus Substanzen, welche die Schärfe der Feder angreifen und abstumpfen. Wird doch schon ein Messer womit wir Papier schneiden stumpf, weil es Theile enthält, welche der Schärfe des Messers widerstehen, vielmehr noch greifen diese Theile die Schärfe einer Feder an.[41]

> The surface of the countless types of paper very often consists of substances that damage and dull the sharpness of the quill. Even a knife with which we cut paper becomes blunt, because the paper contains particles that resist the sharpness of the knife, but even more so do these particles damage the sharpness of a quill.

Rough paper also disturbed writing smoothly. The uneven surface caused friction, hampered and interrupted the movement, as if it tugged at the quill or the nib of a steel pen. The script would turn out untidy, stained, and splattered. If the ink was too thin, it seeped into the paper too quickly, and blotted, ruining the appearance of the document, taking away from its official air and authority. If the ink was too thick, writing did not progress smoothly or fast enough. In both cases, either the time spent waiting for the ink to dry or the use of grit increased. Moreover, the aggressive substances of the ink damaged the quill, which, if it was not greasy enough, quickly became ineffective. The problem of the quill becoming too soft for writing could be solved

> wenn man etwa zehn bis zwanzig Kiele zugleich in Gebrauch nimmt, die abgeschriebene Feder hinlegt, eine neue ergreift und die gebrauchten Federn erst dann wieder zuspitzt, wenn sie hart geworden sind.[42]

> by using about ten to twenty quills at the same time, putting down the worn-out quill, reaching for a new one, and sharpening the used quills only when they had hardened again.

Scholars of the art of writing, such as the Prussian instructor Carl Friedrich Stiehr, insisted that writing was a highly complex process in which all components should be in good shape and well coordinated in order to ensure smooth writing and a clear and legible script:

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41 Stiehr 1832, 28.
42 Wieck 1853, 318.

> Die Geschicklichkeit der Hand, die Güte der Posen, die Richtigkeit des Schnitts und die Güte des Papiers und der Dinte schließen sich so aneinander an, greifen so ineinander, daß gleichsam das eine ohne das andere nicht möglich ist.[43]

> Manual dexterity, the quality of the poses [i.e. the goosequill], the precision of the cut, and the quality of the paper and the ink are so interconnected, so intertwined, that it is impossible to have one without the other.

While a 'gute Feder' ('a good quill')[44] was relatively easy to obtain, the manuals addressed the difficulties for the scribe in achieving the habit of a 'gute und flüchtige Hand' ('a fine and quick handwriting'). In the eighteenth century, calligraphers such as Johann Stäps from Leipzig in his 'Selbstlehrende Canzleymäßige Schreibe-Kunst' ('Self-Instruction in the Art of Clerical Writing')[45] gave elaborate instructions on how to sit at the table, how to position both arms and feet, and how to cut and hold the quill. He taught both cursive and chancery script, pointing out above all the differences not only in hand posture, but also in cutting the quill and in pen style, as these pertained to the different scripts.[46]

It took time to develop expertise in writing a fast and legible longhand script.[47] Nevertheless, learning shorthand was just as challenging to say the least. An official report from 1914 – at that time shorthand had already been introduced in Hamburg's courts for some years – noted with regret, that the older clerks in particular had not been able to adapt to the new writing system, because they apparently lacked the requisite physical agility and motor skills of the hand. Not even their declared 'diligence, perseverance, and persistence'[48] sufficed; that is why the use of shorthand had to be left to younger staff members. Shorthand placed special demands on posture and especially on the wrist: the greater angle of inclination made it necessary to write with a pencil. Furthermore, the surface of the paper had to be very smooth and plain without

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43 Stiehr 1832, 9.

44 'Eine gute Feder sei eine, die, ohne daß man viel drückt, leichtweg schreibt' ('a good quill is one that writes easily without the need for much pressure'), according to the German writer Georg Christoph Lichtenberg, quoted by Stingelin 2012, 293.

45 Stäps 1748.

46 Stäps 1748, 5.

47 According to Frank 1919, 84, one of the main criteria for employing a scribe would be a 'schöne Handschrift' ('beautiful handwriting').

48 StAHH, Hanseatisches Oberlandesgericht. Stenographie im Gerichtsdienst, 213-1_1961, 'Bericht betr. die Einführung der Kurzschrift bei den hamburgischen Gerichten' ('Report on the Introduction of Shorthand in the Courts of Hamburg'), 8 June 1914, p. 3–4.

lines to give the scribe room to move.[49] On the other hand, it was seen as a great advantage that a scribe well trained in shorthand from the beginning of his career could maintain his mental and physical strength and thus remain in service as much as seven to nine years longer than a longhand scribe.[50]

4 Legal arguments against the implementation of shorthand

Even though there were many practical arguments in favour of using shorthand in the courtroom, the specific nature of this writing system served as a major counterargument. In putting forth legal reasons, opponents referenced the secrecy associated with shorthand. They argued that the seemingly encrypted script was illegible to outsiders or even to practitioners of a different shorthand system.[51] The inaccessible nature of shorthand would violate the legal norm that every scribe had to be able to read out the written record ad hoc and accurately in the presence of all participants. This requirement pertained not only to the individual scribe but also to his colleagues, when, for example, there was a change in staff during a court session.

There were some other reasons why the legal authorities so persistently rejected shorthand in German courts. A primary reason was the absence of a common shorthand writing system. Neither were there any regulations for implementing shorthand as a mandatory script in legal administration. The respective lobbying associations, favouring either the system of Gabelsberger or Stolze-Schrey, were still in fierce competition with each other.[52] Besides, it was not even mandatory for scribes to take lessons in shorthand. The general use and acceptance of shorthand in legal matters made no sense as long as it was the scribe's private decision as to what system to use or to stick to longhand. In view of these inconsistencies, legal experts argued that shorthand records would not meet basic legal requirements. They refused to accept shorthand as an official mode of documentation at court,

> weil die nur dem Eingeweihten verständliche stenografische Niederschrift selbst ein Protokoll nicht darstellt und die Uebersetzung in Currentschrift eben nicht das aufge-

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49 StAHH, 213-1_1961, 'Bericht betr. die Einführung', p. 4.
50 StAHH, 213-1_1961, 'Bericht betr. die Einführung', p. 7.
51 Lamm 1867, 205.
52 Lamm 1867, 206; Funke 1913.

nommene Protokoll ist, deshalb aber mittelst der Stenografie ein Protokoll im technischen Sinne des Wortes überhaupt nicht gewonnen werden kann.[53]

since the stenographic transcript, which can be understood only by the initiated, does not constitute a protocol, and the translation into cursive script is likewise not the recorded protocol, therefore, a court record in the technical sense of the word will never be obtained by means of stenography.

Despite all these legal objections, the German shorthand lobby still insisted on the indispensable qualities of stenography as 'mächtiges politisches Bildungsmittel' ('a powerful political tool for education'),[54] that, because of its speed and accuracy, was most useful especially in court. It was well into the first decade of the twentieth century before shorthand gained acceptance as part of the bureaucratic reforms in Germany, but this acceptance was also due to the increasing workload in the administrative legal system.[55]

With the introduction of shorthand, court routines changed to a certain extent. The schedule of the court session itself remained the same in terms of procedure. The scribe noted the questions and answers down accurately, but now did so in shorthand. Then he read out the recorded testimony from this very record, and subsequently all parties involved certified their submissions. An example from the Hamburg *Amtsgericht* (local court) shows that people were putting down their signature right on the shorthand transcript itself.[56] Hence, they perceived and used the illegible transcript the same way that an earlier longhand manuscript would have been used. Now the very act of signing turned the shorthand records into a legally effective document.

With regard to some archival examples from Hamburg, which were produced during the 1920s, it should be noted that the typewriter and with it the carbon copy was already accepted and widespread as an important tool for office work.[57] In the years before this technical revolution took place, however, the procedure for transcribing shorthand records was still as follows. After the court session was finished, the shorthand document was sent to the chancery.

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53 Zeibig 1867, 12.

54 Zeibig 1867, 31.

55 *Büroreformen* 1927; Dumke 1993, 163–167.

56 StAHH, Landgericht Hamburg, 213-11 L 231/1921, 'Akten in der Strafsache M. F. G. wegen Abtreibung', hearing of M. F. G., 13 Oct. 1919.

57 Vismann 2000, 267–276. In Hamburg, the first references to typewritten transcripts date to 1910. StAHH, Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, here: 'Anregungen und Mitteilungen, 213-1_1961, Beantwortung des Schreibens vom 11.3.1910 betreffend Verwendung der Stenographie im Dienste der Gerichte', 14 March 1910, p. 2.

Here lower-paid clerks transcribed this stenographic record, producing a fair copy in longhand.[58] Next, they produced several identical replicas for all individual court executives involved. All of these manuscripts, of course, had to be proofread and then signed by the copyist and the judge, not as originals, but as authentic longhand copies, serving the same purpose.[59]

The primary benefit of this bureaucratic modernisation process was that the length of the court sessions noticeably decreased, by a third and up to a half of the time. Thus, the productivity of the judges and the courts increased accordingly.[60] The time saved on-site during the oral proceedings, however, was often lost due to delay in the back office, where the scribes had to spend more time on clerical duties.[61] As the complaints about sick leave and frequent changes of clerks show, the court's efficiency also depended on the productivity of the scribes.[62] This situation meant that the administration was effectively subject to certain rationalisation strategies, including Taylorism[63] and cost-cutting measures. Such measures resulted in an increasing number of administrative jobs and thus expanded the hierarchy of clerical services at court. This situation created new possibilities for building a career in administration.[64] Most of the scribes started as ordinary assistants and tried hard to improve their skills as scribes on the job, as well as to acquire legal knowledge, in order to rise to a position as *Sekretär* or *Obersekretär* (secretary or senior secretary) or even higher positions.[65]

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58 StAHH, Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, here: Anregungen und Mitteilungen, 213-1_1961, 'Beantwortung des Schreibens vom 1.4.1908 betreffend Verwendung der Stenographie', 6 April 1908, p. 1.

59 StAHH, Hanseatisches Oberlandesgericht. Stenographie im Gerichtsdienst, 213-1_1961, 'Bericht betr. die Einführung der Kurzschrift bei den hamburgischen Gerichten' ('Report on the Introduction of Shorthand in the Courts of Hamburg'), 8 June 1914, p. 5.

60 Lamm reported on test runs in which they measured the time necessary to record a testimony in shorthand, read it out, and translate the shorthand record back into longhand (Lamm 1867, 222–223); StAHH Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, here: Anregungen und Mitteilungen, 213-1_1961, 'Beantwortung des Schreibens vom 1.4.1908 betreffend Verwendung der Stenographie', 6 April 1908, p. 3.

61 StAHH, 213-1_1961, 'Beantwortung des Schreibens vom 1.4.1908', 6 April 1908, p. 3.

62 StAHH, Hanseatisches Oberlandesgericht, Nichtrichterliche Beamte, here: Gerichtsschreiber, 213-1_1842, 'Präsident Brandis an den Senatskommissar in Angelegenheiten des OLG', 11 July 1912.

63 Winter 1920, 187–190, 222–223.

64 Thiesing 1927, 18–19.

65 StAHH, Hanseatisches Oberlandesgericht, Nichtrichterliche Beamte, here: Gerichtsschreiber, 213-1_1842, 'Bewerberlisten', p. 2; see also *Geschäftsordnung* 1905, 5.

5 The agency of shorthand records

Many years, it seemed rather unlikely that artefacts written in shorthand could ever serve as legal documents. Obviously, the German authorities then changed their attitude to this problem at the beginning of the twentieth century. For some courts of justice in the states of Baden and Hamburg, there is evidence that shorthand transcripts survived as part of the court record, which proves that these transcripts really did act as official legal documents.[66] I shall return to this point in a moment. In addition, the Prussian Minister of Justice regularly requested reports from the German states on the implementation of shorthand as a work- and time-saving tool at the individual courts.[67]

As the files in the State Archives of Hamburg demonstrate, the court administration authorities were very anxious to systematically improve the shorthand training of scribes at court, even before the introduction of German Unified Shorthand in 1924. On the one hand, these authorities employed only scribes with a certified knowledge of shorthand. Furthermore, starting in the 1910s, scribes in Hamburg, who were about 150 in number, received regular training in shorthand, with classes for newcomers even during office hours.[68] Skill in reading aloud one's own handwriting (and doing it quickly and from a standing position) was particularly important. Therefore, shorthand teachers dictated practice oral testimony twice a week; the scribes-in-training were supposed to constantly optimise their skill in listening and writing quickly.

There remains the question of how acceptance of shorthand records and their agency as part of court proceedings was legally certified. How did the judicial authorities solve the problem of authenticating the illegible script? To answer this question I again refer to the Hamburg archival material. When reviewing court files of contentious jurisdiction from the 1920s, I came across multi-page stenographic records.[69] These records were tied together and bound into

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66 GLAK, Badisches Justizministerium, 234 Nr. 9191–9197, 'J.U.S. gegen Frh. Karl von Lindenau wegen Erpressungsversuchs, Beleidigung und Begünstigung', stenographic record of the main proceedings for 19 Dec. 1907; stenographic records and their translation (1907-1908); GLAK, Badisches Justizministerium, 234 Nr. 9107, 'J.U.S des R.A. Karl Hau aus Großlittgen wegen Mords', stenographic records (1907-1926).
67 StAHH, Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, here: Anregungen und Mitteilungen, 213-1_1961.
68 StAHH, Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, 213-1_1961, 'Bericht betr. die Einführung der Kurzschrift bei den hamburgischen Gerichten' ('Report on the Introduction of Shorthand in the Courts of Hamburg'), 8 June 1914, pp. 3–9.
69 StAHH, Landgericht Hamburg, 213-11.

the respective files, always accompanied by other documents written in long-hand and typewritten artefacts. Fortunately, I did not have to learn shorthand to work with this material. For I soon recognised that in each file there were two versions of the very same record both referring to the same court hearing, and always arranged in the same order. First came the typewritten version, which of course was easy to read, even if the scribe used many abbreviations that were at first unknown to me. Then followed the shorthand version, whose script was spread out on the page in an unordered manner, illegible to me, except for some individual words written in both scripts, shorthand and longhand. Therefore, it was not at all a question of deciphering the shorthand script to get at the meaning of the records. Much more relevant was the materiality and significance of the written artefact itself as part of common legal practices.

In most cases, legal procedures result in written artefacts of some sort, whose originality had to be certified officially, be it through signatures, seals, stamps or other signs of authentication.[70] The same goes for the stenographic court records. There are two points to discuss here. First is the question of whether those shorthand records could also function as self-contained originals in the legal sense. After all, these records emerged live in the courtroom and documented the very words that had just been spoken in public. Accordingly, the sworn stenographer read out in court his own shorthand record in order to confirm the correctness of its content. As a next step, the witnesses or the accused signed this very sheet of paper. By signing it, they confirmed the document's status as an original and the efficacy of the shorthand record as a legal document, even if only the scribe could read the script.

Now, however, there is a second question, regarding the legal status of the typescript version, which other clerks later produced in the chancery on the basis of the shorthand record.[71] If the legal efficacy of the document depended primarily on the connection between reading out the recorded statements and the signature of the person giving the testimony, how could a typewritten copy have any legal agency? Would this typewritten document not be more or less just a fair copy without any legal effect, since there were no signatures on it, but only some abbreviations as a reference to the act of reading it out and the fact that somebody had already signed the other document?

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70 Strippelmann 1860, 40–69; Pörschel 1911, 21–22.
71 StAHH, Hanseatisches Oberlandesgericht, Stenographie im Gerichtsdienst, 213-1_1961, 'Bericht betr. die Einführung der Kurzschrift bei den hamburgischen Gerichten' ('Report on the Introduction of Shorthand in the Courts of Hamburg'), 8 June 1914, p. 5.

Surprisingly, regulations such as the German *Gerichtsverfassungsgesetz* (Code for the Constitution of a Court) do not provide any information on this legal question. Therefore, one can only attempt to answer it on the basis of the available material. If one analyses the details, the conclusion is obvious that there are disparities: there still is a difference in agency between these two versions of the court proceedings. In the end, however, neither version, in and of itself, would have had any legal effect on the course of a trial. Yet I want to put forward the thesis that both documents functioned as originals, though the agency of each depended on the fact that the two were kept together. In this respect, we are not dealing with two entirely distinct originals, but rather with one original that consists of two parts, each confirming the originality of the other. There were two individual yet inseparable written artefacts, neither of which could perform legal agency on its own; the one in shorthand bore the signatures of all the participants and was therefore legally compliant, but it was illegible to outsiders. The other one was a transcription into typewritten script; it ensured by typewriting the legibility of the spoken word. This typewritten version, however, was not legally compliant, since it did not contain the signatures. In this respect, the agency of either document depended on their interconnected relationship, which the authorities preserved by keeping the documents together, both spatially and materially. In some cases, the shorthand transcript was placed in an envelope, sealed and stored, but most of the time it was pinned directly to the typed copy in the file.[72]

In the absence of legal requirements, the judicial authorities solved the problem in a pragmatic way, pointing out the benefit that if there was any uncertainty about the outcome of a hearing, one could immediately evaluate and revise what the scribe had noted in the legal proceedings.[73] In this way, the stenographic records reaffirmed the crucial importance of orality in court, which was only preserved in handwritten artefacts.

Abbreviations

GLAK	Landesarchiv Baden-Württemberg, Generallandesarchiv Karlsruhe
StAH	Stadtarchiv Schwäbisch Hall
StAHH	Staatsarchiv Hamburg
StAL	Landesarchiv Baden-Württemberg, Staatsarchiv Ludwigsburg

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72 StAHH, 213-1_1961, 'Bericht betr. die Einführung', p. 6.
73 StAHH, 213-1_1961, 'Bericht betr. die Einführung', p. 6.

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Patrick Andrist, Marilena Maniaci

The Codex's Contents: Attempt at a Codicological Approach

Abstract: During the preparation of the revised English version of *La Syntaxe du codex*, the authors highlighted the need to reconsider the current notion of 'content' from a codicological point of view, in order to complement the more traditional textual and philological perspectives. This contribution offers a first overview of an ongoing reflection on the identification and delimitation of the various types of contents that can be found in a codex including the notions of *BlocConts* and *UniConts*. The analysis of contents raises a number of (partially open) questions concerning their interaction, aimed at a better understanding of the structure of the codex, as well as of its genesis and subsequent transformations.

Several reasons led us, a few years after the *Syntaxe du codex* was originally published, to consider producing a revised and updated edition in English, which should soon appear with the same publisher.[1] Our revision turned out to be longer and more complex than expected and the original text of the *Syntaxe* has undergone substantial additions and rethinking concerning several points, including the multi-faceted notion of *Content*. In this contribution, we summarize

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1 Andrist, Canart and Maniaci 2013. We were first of all pleasantly surprised to learn that all the copies of the book had been sold just one year after its publication. Second, we received valuable and stimulating comments and suggestions from some competent readers and reviewers which helped us see that certain points of our reasoning required further clarification or improvement. Third, we realised that our French prose was not entirely clear to some non-native speakers: not only has the language barrier in general probably slowed the diffusion of the book among scholars interested in the complexity of the medieval codex, but some of our technical statements may have been, understandably, misunderstood by some readers; the English edition therefore also aims to broaden the circle of our readers and to encourage their reactions and comments.

While preparing this second edition we felt the constant absence of the French edition's third co-author, our dear friend Paul Canart, who sadly left us in September of 2017 and would undoubtedly have efficiently contributed to and immensely enjoyed preparing this new edition with us.

our additional reflection on this topic and share with the readers some more prospective questions beyond those touched upon in our monograph.[2]

1 The basic types of content

The term *content* – generally designating what can be found in a codex (texts, images, musical scores, etc.) – is currently used in different ways but is not formally defined in technical literature. It therefore seems useful to better clarify its use.[3]

At first approach, we understand the content of a codex as follows:

Content: 'In a codex, the whole of the finite sets of signs that convey a message'.

These 'signs' can be letters, drawings, the elements of a miniature, and so forth. As for the adjective 'finite', in the context of the codex it means that the set of signs is a complete message, more or less corresponding to the one that the person(s) in charge of its copy originally transcribed (a whole text, for example, or a subset of a text, or all of a reader's marginal notes) and that it can be independently understood as a whole, without being divided into smaller units of meaning or grouped into bigger ones.[4] This definition is extended to contents whose copy was not completed and those which were mutilated as a result of a transformation of the codex.

Each of these sets of signs can be loosely called a *piece of content*.[5]

In the original *Syntaxe* (hereafter *Syntaxe 1*), content as a general notion was divided into the two categories of main contents (*contenus principaux*, including 'whole works or copies thereof, images, decorations, musical scores, a mixture of these previous categories, marginal notes to a text, and so forth') and

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2 In recent years Michael Friedrich has followed our work very closely with his lively scientific curiosity, providing us with stimulating discussions and valuable comments for which we are deeply grateful to him.

3 On the complexity of the notion of content, see Maniaci 2004, 82–86; Andrist 2016, 18–22.

4 We understand the concept of 'finite set of signs' exclusively within the context of a specific manuscript. For example: in a codex of Homer, every book is a finite set of signs; if a user writes a comment, it is also a finite set of signs; if, in another codex, someone copies the first lines of the Iliad in an empty spot, this is also, for this codex, a finite set of signs. As explained below, the notion of 'finite message' can operate at several levels and cannot always be applied unambiguously to delimit content (see p. 376).

5 On the limits of this definition and the notion of *piece of content*, see below, p. 376.

accessory contents (*contenus accessoires*, such as 'ownership notes, shelfmarks, scribbles, *probationes calami*, obituaries, succession marks' and so forth).[6] Decoration of the binding was assigned to the second category as a special case, but was in fact excluded from our systematisation; we were not unaware of the unsatisfactory nature of this choice.[7] In the new, English edition (*Syntax 2*) a deepening of our thinking has led us to better qualify the previously introduced categories and relate them to the codex's evolutionary history. We now distinguish three kinds of content within a codex:

Basic Content: 'content which is intended to be received, shared, and transmitted by the codex (such as copies of works, images, musical scores, a mixture of these, their direct paratexts, a scribe's or reader's marginal notes on a text, and so forth)'.

Functional Content: 'content which makes the reception, sharing, and transmission of the basic contents possible or easier (such as quire signatures, folio numbers, owner stamps and notes, shelfmarks, etc.)'.

Ancillary Content: 'content which is non-functional and which is not intended to be received, shared, or transmitted by the codex (such as scribbles, *probationes calami* and so forth)'.[8] There are clearly several kinds of ancillary contents, although we leave here open the question of their exact extent (should they, for example, include 'book fillers', or are those rather a type of basic content?). A special case is represented by the palimpsests: the original contents on a codex's palimpsest leaves do not belong to the new book project and thus does not strictly belong either to the new book's production, even if they have been more or less inadvertently included into it. This original content is chronologically earlier than the new book content but totally extraneous to it, and it can therefore be considered as an ancillary content, not in itself or in the project in which it was originally copied, but from the specific perspective of the new book.

A codex's basic contents consist in a series of *pieces of content*, such as texts, images, musical scores, or sometimes a mix of these.[9] These pieces of content (or, for the sake of simplicity, 'contents') are usually distinguished from one

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6 'Nous distinguons entre les *contenus principaux* (œuvres ou copies d'œuvres, images, décorations, partitions musicales, un mélange de celles-ci, des notes marginales sur un texte...), et les *contenus accessoires* (notes de possession, cotes du manuscrit, graffiti, *probationes calami*, obit, marques de succession)', *Syntaxe 1*, 51.

7 'Un cas très particulier de contenu accessoire est constitué par la décoration de la reliure', *Syntaxe 1*, 51.

8 These have also been called 'side content' see Andrist 2018, 137–138, 143–146.

9 We always mean 'series' or 'set' as a collection of objects that contains at least one object.

another by a significant material division, but the situation can be more complicated, as we will discuss it below.

Most pieces of content are made up primarily of texts, or 'words written in a significant order'.[10] Among these one must distinguish between the pieces of basic content which

–   are (supposedly) copies of pieces of basic content already existing in another manuscript (the antigraph of the piece of basic content, which is its apograph); ultimately, they usually go via a first copy[11] back to a 'work', which is usually an artistic creation; and

–   pieces of basic content created for a specific codex, such as first copies (including many book epigrams), as well as colophons or the like.

It is then possible to define:

–   the *work*: 'a production of the human mind which can be materialised in a book', and

–   the *work copy* (or *witness*): 'in a manuscript, each materialisation of a work or a given part of a work'. Work copies or witnesses are also sometimes simply called 'texts', but the high degree of polysemy of this term makes it unapropriate for such an usage. Usually, in a codex most pieces of content are first or successive copies of a work.

Up to this point we have illustrated the how our thoughts on the subject have evolved, as presented in the forthcoming *Syntax 2*. But the notion of content can be further considered in light of the attention recently given to the several ways that the overall content is structured in a codex, which has led to the introduction of new concepts, such as those of *modular units* and *unbroken series*.[12]

In the following pages we concentrate on a neglected 'building block' of a codex's content, the UniCont, which we introduced already in *Syntaxe 1*, but whose implications have not yet been sufficiently accounted for. We are not presenting here the end result of a definitive model: our intention is rather to share some preliminary thoughts with anyone interested in entering the discussion.

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10 *Syntaxe 1*, 51, 'une suite de mots dans une séquence significative'.

11 Copy is understood here in broad sense: since works are intellectual creations, the first time they are materialised as such is, in this sense, already a copy, which we call first copy. Similarly, the first copy is also a witness (the best possible one!) to the work. This is not here the place to discuss text transmission phenomena.

12 Maniaci 2004, 79–81; Andrist 2020, 8–9.

As in *Syntaxe 1* and *Syntax 2*, we focus on books in codex form, as a distinct subset of 'objects with a content'.

2 Delimitation of 'Content Units' and identification of witnesses

Both versions of our monograph deal with the concept of Content Units ('UniConts') and offer clues for how to recognise their boundaries. Nevertheless, the theoretical problems behind this notion are not dealt with: for example, not discussed in the *Syntax 2* are the links and differences between UniConts and the above-defined pieces of content, or how the notion of UniCont can be related to neighbouring research areas such as philology or paratext studies.

In the following pages we discuss UniConts more thoroughly, introducing further details and new questions. We refer primarily to codices as they were originally produced: the implications of possible transformations undergone by a codex for the analysis of its contents will be dealt with in a further stage of our reflection.

Our starting points are the basic ideas that:

– a codex is the result of a book project whose content is an essential part thereof;[13]
– usually at least one piece of basic content is a witness and
– the criteria for identifying the boundaries between a codex's pieces of content must be found primarily in the codex itself, even though external clues may also be often useful.

2.1 Delimiting UniConts

Let us consider first a codex whose basic content is made up of texts only. How can the sequence of words constituting a text be broken down into relevant pieces of content?

Can the physical arrangement of the content on the pages provide the answer? For example, can any visual device separating one portion of text from the other portions (such as headings, blank spaces or distinctive scripts, including majuscule initials or coloured letters) be considered a valid clue for identifying

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13 As a result, our remarks exclude codex-like objects which do not bear a content.

the boundaries between pieces of content? Because of their variety and frequency, these devices would mechanically split the text into a large number of smaller portions of text (which are called Elements of content (ElConts) in the *Syntaxe 1*)[14] and the resulting division would lose any operative value: even though some of these ElConts can be significant, in fact the boundaries of only a small fraction of them might chance to coincide with the boundaries between the witnesses.

As a result, we cannot escape having to take into consideration the meaning of the sequences of words. And indeed, our definition of content requires that it conveys a message.

If one is sufficiently familiar with the language, as well as with the common visual hierarchy of the separating devices in the book tradition to which the codex belongs, one should be able to group most of the ElConts that belong together and isolate the main pieces of content. For example, in the Western tradition, one quickly recognises the main visual content markers, such as decorative elements which usually correspond to major content discontinuities, or other specific layout features usually marking the beginning or end of the pieces of content, as well as the boundaries of small ElConts written in a special ink and / or script, and / or layed out differently from the rest of the text. By identifying these small ElConts as well as the beginning and the end of larger ones, one should also be able to a) recognise the presence of headings, colophons or other accompanying texts; b) group together the ElConts which are closely related through their meaning into Blocs of Content (BlocCont); c) hypothetically identify the main pieces of contents and locate their probable borders, even without being familiar with the corresponding works.

However, this approach is not always without problems.

If the analysts do not have any other information apart from what is found in the codex they are examining, it is difficult for them to evaluate what has probably been copied from the model, and what was introduced by the producers; this is particularly true about the paracontents.[15] Besides they cannot either reach any fully certain conclusion about the extent of the works it contains and

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14 *Syntaxe 1*, 104–108: the ancient definition of ElConts also includes the rare situation where there are no visual devices between the copy of two works.

15 We understand paracontents as, in a codex, pieces of content whose presence depends on one or several other pieces of content in the same codex semantically (on this definition, see Andrist 2018). As explained below, they belong to the same content type as the piece(s) of content they depend on. On the concept of paracontent, see Ciotti et al. 2018; if the paracontent is a text, it can be called 'paratext'.

the quality of the copy, because of possible scribal mistakes and transmission accidents.

There are in fact cases where the content division in a manuscript is aberrant, for example when a scribe unduly divides a coherent ensemble because of a distraction or a misinterpretation of the antigraph, or inversely joins together two texts which do not make sense together because the transition between them has been overlooked (or had been already overlooked earlier in the tradition). Such situations occur very frequently (and some literatures – like the early Christian ones – are commonly affected by them): for example, when the scribes misinterpret the visual hierarchy of the textual ensembles they are copying, and therefore they lay out, for example, new chapters or sections of the same work as if they were major divisions between works, or, inversely, they fall to notice the difference between the copies of two works. Such misunderstandings can also happen when the scribes work from several antigraphs with diverging organisation principles and are unable to synthesise them into a coherent presentation. As a result, the explicit content divisions of the codex by its material content markers do not always faithfully reflect the content divisions from the point of view of text history and philology.

In these cases the analyst lacks a criterion for correctly recognising and then evaluating the observed anomalies: do they frequently appear in the tradition of a given work or set of works? Shall they be considered as individual incongruities or as a common feature of a specific text tradition?

This is why manuscript scholars must combine the history of books with the history of the texts they convey. In most cases, a good knowledge of a work's tradition may allow the analyst to recognise special situations, such as errors in a codex's content divisions. A manuscript scholar does not approach the history of the texts the same ways that a philologist or linguist would, but takes their researches into account in order to understand which meaningful series of words usually circulate together and constitute copies of works.

There is, however, a number of cases where content is presented differently in the witnesses of a given work: there can be, for instance, manuscripts where some chapters appear in different orders or sometimes even as distinct pieces of content. In the tradition of the First Testament this happens, for example, with the book of Daniel, where the stories of Susanna and Bel, which do not appear in the Hebrew tradition, are sometimes copied as a chapter of Daniel, at other

times before or after this book, as separate pieces of content and not always in the same order.[16]

In any case of inconsistencies within a work's history as reflected in its manuscript tradition (or between the tradition and the work's ancient boundaries as reconstructed by philologists) the analyst must ask him- or herself whether the observed discrepancies result from an 'editorial' intention, which would then reflect how the book producers wanted the users to read it, or if they came about by chance or distraction. Theoretically the examination of a single manuscript diverging from the usual division (of one or more works) can only lead to three possible interpretations, depending on a) whether or not the antigraph was faithfully reproduced (so that one can speak of two separate traditions) and, if it was not, b) whether the observed changes were intentional on the part of the scribes or c) if they simply arose by chance (for example, by a mistake by the scribes or binders).

Let us consider an example in the Codex Sinaiticus of the Greek Bible,[17] whose 34th quire has lost all folios, but the last one. This contains a portion of 1 Chronicles, which occupies up to the fourth folio of quire 35 (= 1 Chronicles 9.27–19.17) with the running title of 2 Esdras in the upper margin; it is then followed abruptly – inside a line, without any visual breaks such a punctuation mark, and without the resulting sentence making any sense – by B Esdras 9.9, which then goes on normally to the end of B Esdras.[18] This discontinuity would completely escape the attention of someone considering only layout and titles as clues for understanding the content's structure, while a knowledge of both works' tradition would make it clear. Does the situation observed in the Codex Sinaiticus represent a separate tradition? The fact that the sentence linking the two texts does not make sense already points at a mischance, and the reason for this aberrant situation is most likely an accident in the codex's ancestors.

Moreover, taking the manuscript tradition as the first (but not only) criterion allows one to consider as distinct works pieces originally belonging to a larger work from which they have been separately copied; and as distinct works they also have their own independent manuscript transmission. For example, in

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16 See for example Munnich, Fraenkel and Ziegler 1999, 20–22, 216–233.

17 GA 01. The remains of the codex are preserved today in four institutions under seven different shelfmarks; see the entry corresponding to the main part (diktyon 38316), with links to the other ones (and their diktyon numbers), in the *Pinakes* database, <https://pinakes.irht.cnrs.fr/notices/cote/38316/> (this and all the other links were accessed on 23 March 2021), Andrist 2020, 23 and the web site <www.codexsinaiticus.org>.

18 Milne and Skeat 1938, 1–4; Parker 2010, 65–68; Jongkind 2007, 144–147; Parker 2015, 289–290.

polemical collections *adversus Iudaeos* one finds an independent transmission of Chap. 31 of the *Doctrina Patrum*, or of Titulus 8 from Euthymius Zigabenus's *Panoplia dogmatica*.[19] Similarly, the pararagraph on the four beasts of Ezechiel as symbols of the four gospels in Irenaeus of Lyon's *Adversus haereses* is copied in many tetraevangelia totally independently from the rest of Irenaeus's work.

This is why in our *Syntaxe 1* we developed the concept of UniConts as portions of a codex's overall content, portions whose limits are defined as follows, on the basis of an analysis of the physical text's discontinuity markers as well as on the results of philological and text-historical studies:
– wherever there is a transition in the text from one work to another, even if this transition is not marked in the text;[20]
– wherever there is significant material division of the text, even if it does not correspond to a philologically relevant division;
– (and, of course, by the physical limits of the codex itself).

Our understanding of UniCont is related to, but not identical, to that of 'piece of content', which is a more subjective notion, since the same overall content can be divided into pieces of content in different ways. The differences rely on the notion of 'finite message', which can apply at different levels. In a Tetraevangelium, for instance, does the finite message encompasses the whole book? On the one hand, the answer is 'yes', but each gospel definitely also bears its own finite message. From this narrower point of view, do the evangelist portraits or the prologues belong to the message conveyed by each gospel, or does each of them bear a separate finite message? And within a gospel, should each pericope also be considered as conveying a finite message? The answer to these questions is probably always positive, and all of them would define different – and differently useful – pieces of content; at the same time, a single observer might group portions of the same text in different ways at different times, depending on varying needs. Despite its vagueness, the notion of 'piece of content' retains its usefulness to speak of the content of a codex, when it is not possible to be more precise.

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19 Andrist 2016, 347–348, 368–369.
20 There are of course cases where it is not easy to spot the transition from one work to another, especially if one or both are not otherwise known. But this rule makes it possible to bring cases into the analyst's view where portions of text have been mistakenly joined together following accidents in transmission, such as the above discussed situation in Codex Sinaiticus.

UniConts cannot even be mechanically identified with witnesses, even though there is a close relationship between the two notions: as already mentioned, a UniCont can in fact include BlocConts such as subtitles or so-called 'tail pieces' which are not always considered as part of the witness (see below).

2.2 Identifying witnesses

In order to identify the UniConts correctly, we need to answer the important question of how exactly to recognise and delimit a work's witnesses.[21] What are their identifying features? As is well known, in many manuscript cultures the headings/titles in the manuscripts are not stable (and not even always present) and the identification of a work must therefore rely on its first and last words, which is not without its challenges.

Variants readings have to be dealt with first, since there are no two identical copies of a work, except perhaps extremely short ones. These variant readings may also (and often do) affect the beginning and/or end of the witness and complicate its identification and delimitation. The same difficulty arises when the variants are not the result of accidents but of a systematic revision of the text; in this case it can also happen that two copies of the same work have a significantly different beginning or ending.

Fluid traditions, where one finds radically reworked copies of a work, are an even more difficult challenge. One recognises both their dependency on and their link to a common textual tradition, as well as the uniqueness of the tradition's 'avatar' in this or that specific manuscript. There are also cases where hardly two manuscripts contain the same avatar of the same work. How large must the difference between two avatars of a single textual tradition be before we go from considering them witnesses of the same work to seeing them as two independent works? There is probably no definitive answer to this question.

In several cases the differentiation between works also depends on other factors, such as the analyst's/reader's own way of perceiving things, or his or her contextual need of a more granular description of the works.

In any case the existence of a critical edition (i.e. an edition with is based on a critical study of the witnesses and also provides the users with the main variant readings found in the manuscripts) is very useful, and even more useful if it

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21 For a discussion of this problematic question, see Sharpe 2003, in particular 50–57; see examples on pp. 176–183.

can be searched electronically. In some cases, however, the edition itself can make identifying a text somewhat more difficult, for example if the text of a work from antiquity is presented in a form reconstructed by the editors and not in the way it circulated in medieval manuscripts. If the recognition of the actual shape and boundaries of a work in a given manuscript or set of manuscripts is based solely on its edited form, and neither the history of its tradition nor its physical setting are taken into consideration, the analyst risks applying textual divisions which do not belong to the manuscript but are dictated by a certain philological conception of the text.

2.3 The internal structure of the UniConts

Our definition of a UniCont is still insufficient to account for all concrete cases.

Let us consider for example a codex or part of a codex with the following content segmented into ElConts:

Table 1: Example of a series of consecutive BlocConts.

Decoration
Initial Heading/Title
Plain text of the work = Witness
Amen
Ending Heading/Title
Colophon
Decoration

Let us detail the example of the *headings/titles*.

Are initial or ending headings/titles part of the witness or not? As often, there are several ways to analyse the situation.

In traditional manuscript catalogues the headings are often left unmentioned or are normalised as standard titles for identification purposes. In any cases the cataloguers do not consider them as distinct pieces of content.

In more modern catalogues headings are usually described together with the main text and are often treated no differently from incipits. They are again considered part of the same ensemble as the main text.

In a traditional philological approach the headings as read in the manuscripts are mostly considered not original to the work's production (or revision),

even though many works were first put into circulation by the author (or the revisers) with a heading.

In paratext studies the title is typically kept distinct from the main text, either as an 'authorial paratext', or as a 'traditional paratext' if it was modified and/or imposed by the tradition.

In both last cases the headings are considered accompanying texts and thus distinct from the plain text, no matter if they were made by the author or added at a later stage. As such, they can be considered autonomous BlocConts.

But are the headings part of the UniCont?

Headings are a rather constant feature in manuscripts (except in the case of mutilated manuscripts or in other special situations) and they may appear in a great variety of forms and show a rich concentration of variant readings. But there are also cases where the heading becomes integrated with the beginning of the main text in a single sentence, or at the end in the form of a tail piece. In the most usual situations, headings not only belong to the devices marking the boundaries between two texts and may aid in differentiating the two corresponding UniConts. They are also part of the greater 'package' to be read or copied as a whole, which most importantly includes the BlocCont(s), which each heading is the heading of.

Similar observations could be made about some other kinds of 'paracontents', such as the *Eusebian apparatus* in the margins of the gospel manuscripts: they are presented as part of the reading ensemble, or 'copied package', even though they are clearly not part of the plain text.

As manuscript historians, we consider as our main reference the manuscript itself, and the manuscript tradition of a given work is the soundest ground for the judgment we will make. In the *Syntaxe 1* we proposed a number of theoretical models concerning the UniConts, among which is the 'Model Cont 2', which presents a fictitious codex bearing 'two or more texts certainly or probably without any link between them in the content. For example, a codex containing a book of the *Odyssey*, an epistle of Paul, and a small orthographic lexicon, without significant division within these texts'.[22] In such a case we concluded that we had to do with three UniConts. Although we did not state it openly, we were referring implicitly to copies of works with their usual accompanying material, including their headings and text divisions such as subtitles or section numbers. Seven years later, we still think it is relevant to include these accompanying texts in the same UniCont they belong to. What then should we call them?

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22 *Syntaxe 1*, 105–106.

On the one hand, they are BlocConts, and each of them usually matches a single ElCont. On the other hand, BlocConts such as headings are also accompanying texts matching the characteristics of paracontents.[23] Therefore, in our model, headings, colophons and decorative elements used as separation markers may be considered paracontents to the plain text within the same UniCont.

As a result, a UniCont can also be seen as a structured whole, including a 'plain content' and, possibly, a series of paracontents thereto.

But two caveats are needed:

– the paracontents to a plain content are not necessarily all part of the same UniCont to which the plain content itself belongs;
– the plain content itself can in turn be a paracontent to another plain content hosted in the same book. For example, in the case of a prologue to the Gospel of Mark, preceded by the prologue's own title, the title is a paratext to the plain text of the prologue, and the UniCont containing both of them is also a paratext to the Gospel of Mark.[24]

The resulting structure of the Basic Content can be generally modeled as follows:

– *Basic Content*: in a codex, a series of UniConts;[25]
– *UniCont*: in a codex, a series of BlocConts, grouped following a codicological and text historical analysis as well as according to the results of philological research (if available);
– *BlocCont*: in a codex, a series of ElConts, closely related by their meaning and (apparent) common transmission or composition in the codex;
– *ElCont*: in a codex, a section of the content mechanically defined by visual devices (or the limits of the codex).

3 UniConts and other types of content

The discussion above refers mainly to recurring textual content. Let us now add some observations on other types of content.

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23 See Andrist 2018.

24 Autonomous basic contents, i.e. contents that are not paracontent of any other content, may also be called core contents.

25 As explained above, 'series' always means 'one or more'. For example here, it covers cases where a codex is made of a single UniCont.

3.1 Non-recurring textual contents

Not all UniConts in a manuscript also occur in other manuscripts, either because there is only one known extant copy of a work, or because they are 'circumstantial' UniConts (such as a colophon or many book epigrams), composed in direct relation to a specific copy of a work and the production of a specific codex.

In the first case the content's heading will usually allow the analyst to understand that he or she is dealing with the copy of a work. The history of texts, however, gives no clues for establishing whether this is a full copy of the whole work, or only of a part of it, or perhaps an autograph witness. Two interesting examples of this difficulties are the texts found in two celebrated papyri: the geographical treaty by Artemidorus of Ephesus in the so-called papyrus of Artemidorus,[26] and the Gospel of Jesus's Wife;[27] the fierce debate about their authenticity was made possible by the fact that there is only one extant copy of each in its own UniCont.[28]

As for the limits of circumstantial contents, they are usually determined by their meaning. Let us consider some examples.

Marginal notes to the main text. Marginal scribal or readers' notes are often non-recurring content, either circumstancial or related to the message of the codex' pieces of content. How should they be considered in relation to the UniConts, for example when a scribe or a reader adds occasional and non-continuous explanations to the main text on different pages of a codex? The analyst has first to decide if each of these ElConts should also be considered a separate BlocCont or if they can be regrouped in one or several larger UniConts; then also if the resulting BlocConts are part of the same UniCont as the text of which they are paratexts. How they can be best described is another question, which we do not address here.

However, marginal notes are not necessarily non-recurring content; their peripheral position does not, for example, exclude their being copies of other works or part of works. They can also be corrections to the plain text consisting only of well-known variant readings. In a case like this how can they be ana-

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[26] Among many publications, see Canfora 2007. For another point of view see Gallazzi, Kramer and Settis 2008.

[27] See now Sabar 2020.

[28] According to the latest evidence, it is difficult to consider either of them as anything but a modern forgery.

lysed? On the one hand, they are part of the work. On the other hand, they do not belong to the main flow of the copy and from the point of view of the layout they are separate contents.

If the marginal corrections are by the hand of the scribe or of an original reviser (that is, someone belonging to the production team and correcting the manuscript before it was put in circulation), it is difficult not to consider them as belonging to the main text; they are intrinsic part of what the producers wanted to 'publish' and thus do not constitute separate content. Technically, they are ElConts which can be grouped into the same BlocCont as the text they correct.

What if they are by a later reader? The analysis, we think, depends also on the viewing angle: from the point of view of production, the notes are certainly separate pieces of content, added to the original content, probably from another source and as part of another project.[29] But from the perspective of circulation it can be argued that the notes and the main text together also make up a UniCont, though this differs (perhaps not by much) from the original one; the users of the resulting unit have to do with something (more or less) different from what the readers of the original book had.

What if these notes are not just text corrections but variant readings combined with editorial remarks, such as 'in other manuscripts one reads...'? This is clearly another type of (non-recurring) content, which is also a paracontent, since it is closely related to (and even depends on) the main content. If – as in the previous example – they can be attributed to the original production team, they also clearly belong to the same UniCont as the text they refer to but not to the same BlocCont.

Marginalia that have no direct link with the plain text are clearly separate contents.

Colophons. Readers usually have little doubt about the boundaries of a colophon, because of its meaning and layout: it usually immediately follows the plain text, from which it is often separated through a simple device (such as an extra space or a decorative line) and distinguished by a different layout, script and/or ink; moreover, there is often no other portion of the text after it. The colophon is therefore clearly another BlocCont. But is it also another UniCont?

There are several ways to approach the question. One possibility would be always to consider colophons as separate UniConts, because the nature of their

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29 Loosely understood as the result of any conscious or unconscious motivation to write something.

message is different from the main contents of the codex, and, as a result, they are distinct secondary contents. Another solution would make the analysis depend on the situation: if, for example, the codex contains several pieces of basic context and the final colophon applies to all of them, it will be considered paratext to all of them or, alternatively, to the whole book, and will thus have to be analysed as a distinct UniConts.[30] But if the book contains only one piece of basic content, or several pieces but the colophon applies only to one of them, or if the colophon was accidentally copied from the antigraph, then it might be considered a part of a single 'package' and analysed as being part of the same UniCont; it would also be a paratext of the basic content it applies to.

3.2 Complex contents

Up to this point we have dealt almost exclusively with manuscripts whose only contents are texts. Such manuscripts exist, but many others also (or even exclusively) contain other types of content, such as images or pieces of music, and often content types are mixed. How can UniConts be analysed in such situations?[31]

Textual contents with images. There are copies of ancient or mediaeval works accompanied by images or drawings illustrating the plain text. Independent from the question of whether the images originally accompanied the work, they are clearly paracontents to the plain text. No matter if they are a late reproduction of the original work or were created by the scribe or an artist working with him, they are also part of the same UniCont. Such is the case with most of the evangelist portraits in tetraevangelia, as in the below-presented example of Genavensis gr. 19.[32] In some instances one can even argue that two different (sets of) copies of a work, the one with an image-paracontent and the other one without it, represent different manuscript traditions of the same work.

In complex cases the images might also receive captions (i.e. small texts within the image itself) which describe or explain some elements of it; these are

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30 For colophons as paratexts, see Andrist 2018, 142-143.

31 The following pages contain a theoretical discussion of frequent cases, for which the readers will easily find examples drawn from their own personal experience of manuscripts.

32 Geneva, Bibliothèque de Genève, gr. 19 (diktyon 17169; GA 75); see *Pinakes* (<https://pinakes. irht.cnrs.fr/notices/cote/17169/>). See also Andrist 2008, including the collation of the quires and the reconstruction of their original sequence.

pieces of paracontent within a piece of paracontent but they are most probably to be interpreted as part of the same BlocCont.

Works with a 'visual layout'. In some cases, such as the *Liber de laudibus Sanctae Crucis* by Rabanus Maurus or the visual poems by Theodore Prodromus, the images arise from a particular arrangement of some of the letters composing the text.[33] In these and similar cases the image is not a separate content and there are no reasons to define a new UniCont. However, since it is difficult to speak of the layout in terms of content, one can say that the layout has a semantic significance.

Isolated images. It may happen that images are painted as a frontispiece to the whole book, for example in the Dioscorides of Vienna,[34] some deluxe editions of the gospels, or in the Basel edition of Elias of Crete's Commentaries on Gregory Nazianzen. In this last example these images, which are an original composition and cannot be considered copies or recreations of other images, cannot be described in terms of the dynamics between a work and its copies.[35] As far as an art historian can tell, they are clearly paracontent to the whole of what is copied in the book or, alternatively, to the whole book. They must be therefore considered distinct UniConts. If several images are painted with the same purpose within the same project, and they are placed in the codex one after the other, we might ask ourselves whether there are as many UniConts as there are images or whether all of them as a group should count as one: we incline towards considering them all together as a single UniCont.

Pieces of music. Liturgical manuscripts with systematic musical notation are also examples of works mixing textual and non-textual elements. In this case it is not possible to separate the notation from the text, nor can the one be always clearly considered paracontent to the other. They are also, together, part of the same UniCont.

Syllogai and collections of excerpta. Complex content can also occur in the case of textual works, for example the *sylloge*, i.e. a series of more or less small works

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[33] See Hörandner 1990.

[34] Vienna, Österreichische Nationalbibliothek, med. gr. 1 (diktyon 71026); see *Pinakes* (<https://pinakes.irht.cnrs.fr/backend/cotes/edit/id/71026/>).

[35] Basel, Universitätsbibliothek, A.N. I. 8 (diktyon 8896); see *Pinakes* (<https://pinakes.irht. cnrs.fr/notices/cote/8896/>). See also Krause 2018 and now Macé and Andrist 2020.

(or part of works) which tend to be copied together in more or less the same order.[36] One can argue that they can be considered together as a copy of a single work. Should they be analysed as one UniCont? On the one hand, in those situation where they were originally independent works one is inclined to consider them distinct UniConts. On the other hand however, there might be traditions in which the scribes (and their readers) clearly perceive them as constituting a witness to a single work. Both the *sylloge*'s textual tradition (i.e. whether other witnesses of it exist or not) and the visual devices used to separate the UniConts in the codex usually help one understand what the scribes' and the readers perception was and to decide if the *sylloge* should be considered a single UniCont, or not. This can also be the case with collections of *excerpta*. The smaller the *excerpta*, the higher the chances that they would be best perceived as parts of a single UniCont.

Chains. As a final example, we wish to touch upon the question of chains, or *catenae* – a form of systematic biblical commentary made up of 'chained' excerpts of earlier commentators –, whatever their layout may be.[37] Should the whole set of scholia and the biblical text be analysed as two (or more) works? Or is it more relevant to consider all of them together as a single complex work, which thus includes several previous works or parts of works? In any case, are the scholia paratexts to the plain text of the Bible? Or are the scholia the plain text, and the biblical text a necessary series of quotations, such as many commentators cite when expounding? Or does the page layout decide which one is the plain text?

Independent of the answer, in a codex bearing, for example, a chain to the Pauline Epistles, how many UniConts are there *a priori*? One, because the chain was created in a single undertaking? Or fourteen, one per epistle? Again the answer depends on several factors: in part upon the visual devices at the places of transition between the recognised BlocConts; in part also upon the answer to the question above of how many works are considered to be in the book; but also upon the new question if, in special situations such as a complex work, a UniCont can cover only a portion of the works content, rather than the whole work as a minimum extent.

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36 On the *sylloge* (from a codicological point of view), see Maniaci 2004, 82–86, with related bibliography.
37 For a recent point of entry into a complex literature, see Lorrain 2020. For an introduction to the issue see Maniaci 2002.

The paragraphs above do not take into consideration all the situations encountered in codices, and certainly leave many questions open, that we hope to address at a further stage in our thinking.

4 UniConts and the structure of the basic content

Now that we have presented what a UniCont is and how to recognise it, let us broaden the perspective and inquire into its relation to the other types of content in the codex and to the basic content's structure. Again, in this section we leave aside questions tied to a book's evolution, be they mutilations, restorations, the addition of contents, etc.

4.1 UniConts and the contents of a codex

We first return to the various types of contents in a codex. How do UniConts fit into this picture?

In the *Syntax 2* we define a book as 'a transportable object, made to last, created or used to receive, share, and transmit content in an orderly and immediately readable manner'. According to this definition a book was conceived in order to host content. The specific content that the book was conceived to host is its 'main content', for example a corpus of imperial laws or a series of songs to be sung during a church office. But the main content never comes bare:

– as we have seen, it is always accompanied by (sometimes numerous) paracontents; and
– in some cases the book producers also add 'secondary contents', such as copies of other works, or circumstantial contents which are not central to the project.[38]

Based on the explanation above, we can summarise the various types of content in a codex in the following table:[39]

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38 Analytically, the main content and, if extent, the secondary content are made of a series of autonomous core contents accompanied by their paracontents. Ultimately, all of these paracontents depend on a core content, directly or indirectly. On core content, see above footnote 24.
39 For the sake of making this chart comparable with that presented at a conference in Oslo in 2014 (see Andrist 2018, 147), categories B and C, concerning the transformation of the codex, are also mentioned. Two significant differences between the two charts have to do with the

Table 2: Summary of the various types of content in a codex.

A. Book-producer's content
1. Basic content
a. Main content
b. Secondary content
2. Functional content
3. Ancillary content
a. Side-content
b. Contents on re-used material
B. Post-production content
C. Re-made book content

Paracontent is not included here, since it appears at every level as dependent content within each of the types listed. As mentioned above, they do belong to the same content type or sub-type as the plain content they depend on.

UniConts also can operate at every level of the basic content; they are primarily relevant to understanding the structure of each of these levels.

4.2 UniConts, perimeters and a codex's paratextual structures

Having presented a book production's main contents, we can now inquire as to how the paracontents (mainly paratexts) help give structure to the codex's main content, and how they relate to UniConts. To illustrate these points let us consider the simple case of the tetraevangelium Genavensis gr. 19. The following table summarises the main content of the first half of the codex; the lines separate what we would describe as distinct UniConts:

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integration of the *functional contents* into the classification and the systematic subordination of paracontents to the independent contents they are attached to.

Table 3: Content of the first half of Genavensis gr. 19.

fols 5ʳ–6ᵛ⁴⁰	**Introduction to Matthew** polychrome decoration line golden title of the introduction introduction to Matthew (in black) empty space (4 lines)
fols 6ʳ–7ᵛ	*Capitula* **for Matthew** polychrome decoration line golden title to the *capitula* 68 *capitula* (in red) empty space (3 lines)
fols 8ʳ–13ᵛ	**Letter to Carpian and Eusebian canons** polychrome decoration line golden title of the epistle *Epistula ad Carpianum* (in red) empty half-line *additio* to the epistle (in red; small marginal initial); 8 pages with the illuminated canons
fols 14ʳ–15ʳ	empty
fols 15ᵛ–148ʳ	**Gospel of Matthew** (full page) portrait of Matthew (half page) painting representing the nativity with the ancestors of Jesus in the margins golden title of the gospel Gospel of Matthew (in black) with usual paracontents empty space at the end (11 lines)
fols 148ᵛ–149ᵛ	*Capitula* **for Mark** simple decoration line (in red) title of the *capitula* (in red) 48 *capitula* (in red) empty space (6 lines)
fol. 150ʳᵛ	**Introduction to Mark** simple decoration line (in red) title of the introduction (in red) introduction to Mark (in black) empty space (2 lines)
fol. 151ʳ	empty

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40 Fols 1–4 are anterior flyleaves.

Table 3 (continued).

fols 151ᵛ–232ʳ	**Gospel of Mark**
	(full page) portrait of Mark
	(half page) painting representing the baptism of Jesus
	golden title of the gospel
	Gospel of Mark (in black), with the usual paracontents
	(no empty space)
etc.	

Two introductory pieces to Matthew, placed in first position, are separated from the gospel they introduce by the Eusebian material, because of a misplacement of the folios during a restoration. This might seem strange at first sight, but is in fact quite common.

The introduction and *capitula* to Matthew are clearly presented as distinct UniConts, each of them beginning on a new page, with equally important titles and some empty space at the end.

Recent research has confirmed that the Eusebian canons and the Letter to Carpian, which introduces them, are two parts of the same work.[41] Should they then be counted as making up a single UniCont which includes two (or more) BlocConts? Or, if one accepts the idea presented above, that the copy of a complex work can be analysed as more than one UniCont, can one consider there are two UniConts here? We leave the question open, and present the two texts (tendentially) as one UniCont in Table 3 above, but (clearly) as two UniConts in Table 4 below.

There is instead no doubt that the portrait and the paintings at the beginning of Matthew's Gospel (fols 15ᵛ–16ʳ) were conceived as a grandiose opening to it.

Overall the placement of the paracontents to Mark is similar to that adopted for the first gospel, except that the *capitula* and introduction, whose relative position has been swaped, are not separated from the gospel itself. This separation however is an accident, and there is no reasons to treat both sets of paratexts differently. The empty page which separates them from the opening of the gospel stresses their less important but distinct position as introductory paracontents to Mark.

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41 Wallraff 2021.

Paratextual 'perimeters'. The example of Genavensis gr. 19 illustrates an important aspect of paratexts. In this codex, as in many others, a specific structure of the content is immediately recognisable: each biblical book and its set of accompanying paracontents constitute a certain coherent whole. This ensemble can be called the 'perimeter' of this biblical book.[42] For example, here the perimeter of Mark runs from fol. 148ᵛ to fol. 232ʳ and includes three UniConts:

- 1) the one centred on Mark (which is a main content of the book), including its paracontents,[43]
- 2 and 3) the two other UniConts – the *Capitula* and the introduction –, which are also paracontents of Mark.[44]

Since the grouping of the contents related to Mark is directly linked to a single main content, we define it as a 'simple perimeter', which is distinct from other simple perimeters (to the other gospels) contained in the same codex.

But wider perimeters can often also be recognised in a codex, including several simple perimeters where the paracontents depend on several autonomous main contents and thus form a larger whole with them. These are then referred to as 'complex perimeters', which may include other complex perimeters or even the whole book. For example, here the Letter to Carpian and the Canon Tables form, together with the four simple perimeters of the Gospels, a complex perimeter encompassing all of the codex's original basic contents.[45]

The original relation between the perimeters, the UniConts and one possible interpretation of the related BlocConts is summarised in the following Table 4.

This very common example shows how the UniConts operate first of all as a mean for grouping a series of paracontents around another component of basic content. Second, they bring some structure to the the main basic contents. And thirdly, they help understand and communicate how the scribes understood the codex's structure and its content.

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42 Of course, paratexts can also have their own perimeters.

43 These could be called 'intra-UniCont paracontents', forming an 'elementary simple perimeter' with Mark.

44 These could be called 'extra-UniCont paracontents', making up an 'extended simple perimeter' to Mark.

45 For more explanations and another example, see Andrist 2020, 12–14.

Table 4: Structure of the content in the first half of Genavensis gr. 19.

Perimeters		UniConts	BlocConts	
complex	simple	(folios)	(folios)	
Eusebiana		8^r–9^v	8^r inc. 8^r–9^v inc.	golden title (following a polychrome decoration line) Letter to Carpian (in red)
			9^v des.	*additio* to the letter
		10^r–13^v		Eusebian canons – 8 pages with the illuminated canons
	?	14^{rv}		(empty)
	Matthew	5^{r–v}	5^r inc. 5^{r–v}	golden title (following a polychrome decoration line) Introduction to Matthew (in black) – empty space at the end, 4 lines
		6^r–7^v	6^r inc. 6^r–7^v	golden title (following a polychrome decoration line) *Capitula* of Matthew (in red) – empty space at the end, 3 lines
		15^r		(empty)
		15^v–148^r	15^v	full-page portrait of Matthew
			16^r inc.	painting representing the nativity with the ancestors of Jesus in the margins
			16^r med.	golden titel (in enlarged script)
			16^r des.–148^r	Gospel of Matthew (in black), with usual paracontents – empty space at the end, 11 lines
	Mark	148^v–149^v	148^v inc. 148^v–149^v	title (in red, following a simple red decoration line) *Capitula* of Mark (in red) – empty space at the end, 6 lines
		150^{rv}	150^r inc. 150^{rv}	title (in red, following a simple red decoration line) Introduction to Mark (in black) – empty space at the end, 2 lines
		151^r		(empty)
		151^v–232^r	151^v	full-page portrait of Mark
			152^r inc.	painting representing the baptism of Jesus
			152^r med.	golden titel (in enlarged script)
			152^r des.–232^r	Gospel of Mark (in black), with usual paracontents

5 Conclusion

As readers will have noticed, the pages above do not arrive at a final answer to the central issue of the content in a codex, but rather offer the first fruits of an ongoing theoretical work and share a series of ideas and thoughts on the UniConts, the BlocConts, the work's copies, the paracontents and their related perimeters, and on the other types of contents. They raise some questions and pass by others, for example the 'geography' of the various contents and the limits of paratextuality. We hope the readers will help us to better define and further develop our reflection on this central topic for the understanding of the production and subsequent history of the codex.

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Malachi Beit-Arié

The Advantages of Comparative Codicology: Further Examples

Abstract: The sharing of basic anatomy, techniques and scribal practices of codex production that embodied in manuscripts produced in all the codex civilisations warrants implementing a comparative perspective in our research and in determining the codicological typology of each of the script cultures of the codex. Yet, comparative codicology does not have to be confined to the codex cultures and should attempt to unveil affinities to the production of non-codex manuscripts, as one sample demonstrates. Comparative codicology should indeed be expanded and be universal.

1 Introduction

Some thirty years ago, I published a short article devoted to the benefits of comparative codicology to scholarship and research.[1] My findings were based on the observation that practices of book production were imprinted by a shared tradition ingrained in all cultures in which the codex served as a receptacle for texts and a means for their preservation and dissemination, regardless of the variety of languages and scripts. One may marvel at the force of the regularity and continuity revealed in the basic structures, production techniques, social, artisanal and intellectual functions, and the aesthetic principles embodied in mid- and late medieval codices throughout book civilisations in all cultures. Be they codices inscribed in Latin, Greek, Arabic, Persian or Hebrew scripts, or in the less widespread Syriac, Coptic, Glagolitic and Cyrillic scripts – they all partake of the very same anatomy of the codex: common writing materials, similar proportions and formats, the analogous molecular structure of quiring achieved by the folding and stitching together of a regular number of bifolia, and the use of various means of markings in the margins ensuring the correct order of quires and bifolia. The great majority of these codices would be set for copying by the laying out of the writing surface and by its ruling in a variety of techniques, most of them shared, functioning as a scaffold for the writing. All made use of

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1 Beit-Arié 1993b. See now Beit-Arié 2020.

additional para-scriptural and peri-textual graphic means for improving the readability of the copied text and for achieving its transparent hierarchy. Some would include illustrations, ornamentation and illuminations in the margins or within the body of the copied text. Although the manifestations of this common infrastructure underwent changes over time, as for example the composition of quires, the ruling techniques, and the text's disposition on the page, this structure also displayed, throughout its permutations, a stability and continuity which lasted close to a millennium, allowing us to regard it as some kind of universal grammar that permeated, in some elusive ways, all codex civilisations. Furthermore, its imprint can still be recognised even after the invention of the mechanical printing press, which, notwithstanding its revolutionary nature, still embodies patterns inherited from the deep structure of the manually produced codex. In truth, the basic book form survived very much into our own times, despite the paradoxical resurrection of the form of the vertical scroll – the *rotulus* – on computer displays.

The existence of a common basic tradition of codex production warrants, therefore, that we integrate a comparative perspective and rely on it in our research and in determining the codicological typology of each of the script cultures, calling even for the establishment of a general comparative codicology. All the more crucial is the reliance on a comparative perspective in the study of Hebrew manuscripts and in establishing their historical typology.[2] This need is an outcome of the wide dispersal of Hebrew manuscript production in the zones of the codex civilisations around the Mediterranean and in adjacent regions to its north and east.[3]

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2 The indispensability of the comparative approach and the rewards of implementing it were first emphasised in Beit-Arié 1981. This emphasis is reflected also in the subtitle of Beit-Arié 1993a *(Towards a Comparative Codicology)* and presented there pp. 99–103. There I remarked that Hebrew manuscripts, by bridging between East and West and between Islam and Christianity, may serve as a productive medium for comparative research. Indeed, in recent years awareness of the importance of the comparative aspects of bookcraft has been spreading within European codicology as well. This is evident in the collection published in 1998 (Hoffmann 1998), which brought together articles presenting data on the material characteristics of Latin, Greek, Arabic, Persian, Hebrew, Syriac, and Armenian manuscripts.

3 No doubt, this dispersal and concomitant distribution of script types of the Hebrew codex render the comparisons between Hebrew bookcraft and design and those of the host societies of vital importance for the understanding of the unique typology of the Hebrew book in each of its different diasporas, and for the identification of its sources of inspiration and affinities. Indeed, despite the shared script and, in most copied and designed books, the shared use of the Hebrew alphabet, and despite the strong religious cohesion and social solidarity, the affinity of Hebrew codices with one another is often lesser than that which existed with non-Hebrew

In my 1993 article, I included a few illustrations demonstrating the advantage of using comparative codicology in our research. I argue that the comparative method contributes not only to the study of one given manuscript culture but should also infer upon the collated cultures. The said article cites as an example what could be an explanation for the long delayed adoption of plummet ruling by Hebrew scribes in North-Western Europe (particularly in Franco-German lands), which also required a shift in the ruling technique. The unexplained belated adoption of the coloured metallic instrument that replaced the economical blind relief ruling by hard point (which prevailed in all the codex civilisations until the late eleventh century) has been elucidated once a comparative search was applied. It could have hardly been a coincidence that the shift to plummet by Latin copyists overlapped with the early stage of development of the layout of the glossed Bibles from the early twelfth century. Were literary requirements of Hebrew texts similar?

Indeed, a quantitative decline of original Hebrew literary creation during the thirteenth century, coinciding with a proliferation of the anthological genre – namely, annotated texts embedded with glosses, which peaked at the end of the century – required an adjustment of the ruling technique. From the second half of the thirteenth century onwards, especially in Germany and Northern France, the Hebrew book scene saw the evolution of several textual genres (especially commented biblical and *halakhic* [legal] codices) of complex structure, which integrated, merged, or linked multiple layers of texts, or combined a core text with commentaries, annotations, and glosses. A uniform delineation and regular ruling patterns were unsuited to the scribe's (and author's) attempt to achieve structural transparency for the entirety of the copied texts through visual and graphic means. To reflect the layers' relations one to another and especially to the core text, these texts would deploy several modes of script of

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codices produced by host societies. Spain (and after the Christian *reconquista* also Christian Spain) and North Africa were greatly affected by Arabic calligraphy but less so by Arabic bookmaking; on the other hand, the codicological features, design and scripts of Hebrew manuscripts produced in France and Germany were definitely marked by Latin manuscripts produced in their respective environments, yet this was less so in Hebrew manuscripts produced in Italy until the fifteenth century, Beit-Arié 2002, 377–396.

Employing a comparative perspective in these regards may enable us not only to deepen our understanding of transformations in the practices of bookmaking in the various zones, but also help elucidate an issue much debated by historians, who diverge in their assessments as to the degree of acculturation and integration of the environment's ways and customs by the Jewish society, or the degree of reclusion of these persecuted and rejected minorities, which were yet embedded within gentile societies.

different sizes and densities. Such layered copying required frequent adjustments of the ruling pattern. Layered and glossed texts thus pertain to the practice of dynamic copying, as their layout would be redesigned for each page. As the structures and layouts of the commentated biblical texts and of the widespread *halakhic* corpora necessitated a flexible and dynamic form of ruling, they prompted the adoption of the plummet, which had been avoided by Hebrew scribes during a long period. My arguments that practices of book production are imprinted by a shared tradition in all cultures were confined to cultures whose book form was the codex. It had not occurred to me that some codicological practices can be traced in non-codex manuscripts as well. I would therefore add another two demonstrations in the comparative study of manuscripts, one of them pertaining to a codicological practice shared by Oriental and Occidental codices, while the other relates to a Chinese bamboo manuscript and its affinity to Oriental and Occidental codicological practices.

2 Positioning of parchment bifolia in quiring

Quires made of parchment with distinguishable sides were structured and ordered methodically and consistently by matching the bifolia sides and the openings of the codex. The conspicuous difference of the texture, or at least the hue, of the parchment sides led to a wide acceptance of the practice in all civilisations of the codex, at least from the tenth century and on, of arranging the quire's bifolia by matching their sides prior to folding: hair side facing hair side and flesh side facing flesh side. Consequently, we find that the two pages showing in each quire opening, each belonging to a different bifolium (except for the ones in the central opening of each quire), are identical in appearance – alternating hair sides and flesh sides. As a result, one can easily discern if a folio is missing: for when the matching of the sides is disrupted and an opening displays two different sides of the parchment facing each other, we may conjecture that a folio (or an odd number of folios) is lacking.

Astonishingly, this practice, which had been current since the tenth century or before throughout all zones and all types of bookcraft, was noticed only in late-nineteenth century. It had been named 'Gregory's rule', after the scholar of Greek manuscripts who publicized it.[4] The guiding principle behind this symmetrical arrangement seems to have been aesthetic. However, a parchment

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4 Gregory 1885, 264–265.

maker in Rotterdam engaged in the history of parchment making, Henk de Groot, recently claimed convincingly (as in his email sent to me dated 9 July 2015) that the bifolia leaves were arranged by corresponding sides in view of the concavity of hair sides and the convexity of flesh sides. Disposing the folios according to opposite arcs (concavity facing concavity and convexity facing convexity) neutralizes the curvature and is therefore crucial in the production of a codex as a tight block, whether closed or open and leafed through. The aesthetic aspect was, so it seems, an outcome of the codicological requirement. To quote de Groot's extraordinary statement:

> I think the manuscript makers choose the parchments leaves in opposite bowing to neutralize the bowing of the leaves together. The result: a flat manuscript block. The equal colour of the openings was a lucky gift of beauty.

> ( ) ( ) ( ) gives: IIIIII
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It has been argued that this regularity was an outcome of constructing the quire by means of folding an entire parchment sheet. The scant number of early Latin codices in which quires were constructed by folding, as well as the quire structure in some of the earliest Greek and Latin codices showing an odd number of bifolia dispute this view. The order of the bifolia's sides in the quire would usually be marked by the initials representing the flesh or hair side on every recto side in the first half of the quire, e.g. HFHFH (for a quire made of five bifolia beginning with the hair side, with the openings alternately matching).

It appears that Gregory's rule, displayed in every quire of all dated Hebrew codices, had not been observed in some of the early-undated manuscripts, although they too show a regular arrangement. In Geniza fragments and even in a few complete codices, all apparently from the region of Iraq, it so happens that the spread out bifolia were arranged with the hair (or flesh) facing regularly a uniform direction; in other words, after folding, the sides did not match at each opening (except for the centre opening). Instead, flesh sides would face hair sides.[5] The assumption that this practice was typical of Babylonian Hebrew manuscripts (produced in Mesopotamia, ancient Iraq)[6] is undermined by the data concerning this method of arrangement in early Oriental and Occidental manuscripts inscribed in other scripts – Latin, Syriac, and Arabic.

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5 HHHHH (in quinions, as practised in the Orient), as in Vatican, BAV, Vat. ebr. 66, the early *Sifra* manuscript with Babylonian vocalization, see Glatzer 1995, 19–24.
6 See Glatzer 1995.

The methodical arrangement with non-matching sides is attested also in Latin Insular manuscripts (produced on the British Isles) from the second half of the sixth century until around 700 (and later also from the ninth century till the eleventh); as well as in manuscripts produced in scriptoria on the continent, especially under the influence of Insular bookcraft.[7] Julian Brown maintained that this quiring practice in early Insular manuscripts (which quiring by quinions may attest to Oriental influence) was affected by papyrus codices.[8] According to Sebastian Brock, Gregory's Rule had not been maintained in early Syriac manuscripts produced in both the eastern and western parts of the Middle East.[9] The arrangement of bifolia with non-matching sides, namely in the HHHHH pattern (as in those Hebrew manuscripts), was the standard arrangement in Syriac manuscripts produced in the scriptoria of Syriac monasteries of both the Eastern Church, known as the Nestorian Church, and the Western Church, known as the Jacobite or Syriac Orthodox Church.[10] Moreover, in a large sample of fragmented Arabic manuscripts of the Qur'an from the end of the seventh century through the middle of the tenth century it appears that most of the bifolia were arranged with non-matching sides (HHHHH).[11] Consequently, it seems that the method of constructing quire bifolia disregarding the matching of parchment sides was not zone- but time related; moreover, it could well be that all early codices in all scripts were arranged at first according to this method, imitating the papyrus codex, and that at some point (which might have been different for each region or script) bifolia came to be arranged with matching sides. Babylonian Hebrew scribes might have continued to practice the old

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7 Vezin 1978, 26–27.

8 Julian Brown refers to the sheets of papyrus that were cut into bifolia, formed by strips taken from the stem of the reed, and were manufactured in two layers so that the strips of one layer were perpendicular to those of the second layer and thus they were pressed and forged together. When arranging the bifolia that had been cut from papyrus sheets, they would be laid out in such a manner that in each of the codex's openings one side displayed horizontal strips of fibre while the opposite side displayed vertical strips. Brown believes that quiring by non-matching sides in Insular manuscripts was influenced by the practice found in early Continental and Oriental manuscripts: as parchment started to be used, scribes who were not practised in the folding of sheets were likely to create their parchment quires as was done in papyrus codices, see Brown 1984, 234–235.

9 His view was put forward in an unpublished paper, which I thank him for letting me read: P.S. Brock, 'Saba, the Scribe "who never made a blotted tau" – Some Codicological Notes on Three Syriac Manuscripts from Redsh'aim, ca. A.D. 724–726'.

10 Briquel-Chatonnet 1988, 158–159.

11 See Déroche 2005, 71–76. Déroche 2005, 83–85, proposes that this practice imitates the papyrus codex, as Brown had already proposed before him.

method for some time even after Jewish scribes in other areas had adopted the new one.

3 Chinese Bamboo Manuscripts

Bamboo (or wood) slips were the main book form for writing manuscripts in pre-imperial and early imperial China before the widespread introduction of paper during the CE's first two centuries.[12] The long, narrow strips of bamboo were tied together and connected by binding strings. The custom of interring books made of the durable bamboo strips in royal tombs preserved many works in their original form for centuries. Large collections of bamboo-slip manuscripts were excavated and discovered since the early twentieth century.

One of the basic problems facing researchers who deal with early Chinese bamboo or wood manuscripts is the disintegration of the excavated slips. The binding strings that had been originally holding together the slips constituting a manuscript – either vanished or remained as traces only on individual slips. The problem of reconstruction becomes even more complex if the manuscript in question was not scientifically excavated. Since 2011, the phenomenon of carved lines (sometimes drawn in ink or by brush) on the recto side of slips has been observed and studied, particularly by Thies Staack, a student of Michael Friedrich, who was a supervisor of his dissertation. Staack surveyed and clarified the finds of lines on the slips' verso and emphasised that continual verso lines were mainly found to have related to the written recto of the original sequence of the slips. Consequently, the continuous forms of the lines serve as a fundamental key for the textual reconstruction of the bamboo manuscripts. Staack extended the application of the European (and Middle Eastern) codicological terminology while dealing and interpreting the function of the verso lines, borrowing the term 'codicological unit' for a sequence of the slips, and suggesting that the sets of slips in bamboo manuscripts are roughly comparable to the quire of codex manuscripts.

For the codex-codicologist, the functional similarity of the practice of continuous lines carved on the back side of bamboo slips to the quiring of Western and Near Eastern codices is indeed striking. Moreover, the Ancient Chinese practice

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12 The information is completely drawn from the following publications: Staack 2015, 2016 and 2017.

shows affinity to European codicological means meant to ensure the right order of the bifolia or folios within the quire and marking their sequence after copying, and all the more so during the copying process. The means employed by Latin and Jewish copyists to ensure the correct binding of the codex can be classified into two main groups: methods based on catchwords drawn from the copied text,[13] and methods based on numbering that was added to the text at its material. Both systems were implemented at the codicological dividing points of the codex structure – initially only at the transition from one quire to the next, and eventually also in transitions between bifolia within the quire and even between the manuscript's folios, although these are not independent codicological units. In all zones of production of Hebrew codices both methods were used, usually simultaneously in the same manuscript, but in the numbering methods were extremely rare, and even in Byzantium they were scarcely used. Generally, the methods used to ensure the order of the codex in paper manuscripts were different from those used in parchment manuscripts, except in the Middle East, where paper replaced parchment as the standard writing material already in the beginning of the eleventh century. In the other zones, where paper spread only much later, paper was presumably deemed more vulnerable than parchment and its folios more likely to be separated from their pairing and to become detached from their quire. For this reason copyists were not satisfied with only preserving the order of the quires, like most copyists of parchment manuscripts, but added more means to ensure the order of bifolia and folios.[14] It can hence be inferred that these means spread in those areas in later periods. Acquaintance with these methods[15] has clear typological but also chronological

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13 An unusual method of using graphic markings instead of catchwords was employed in an undated fifteenth-century manuscript in an Ashkenazic script (New York, Jewish Theological Seminary of America, L873). A number of forms were marked at the bottom of each verso page and were repeated on the following recto pages.

14 This explanation for the proliferation of means of ensuring the order of bifolia in the more vulnerable paper codices can be contested: without temporary stitches, the order of parchment bifolium copying could be also easily disrupted during the copying process.

15 The development of means for ensuring the order of the Hebrew codex, until they came to be implemented on every single folio – even on every single page – was presumably not only precipitated by the transition to writing on paper but was also (and perhaps primarily) due to the relatively late development of indexing and inscription of a table of contents in Hebrew books, and naturally these required a precise marking of text locations. Probably the earliest evidence for the inscription of a table of contents appears in the prologue of Rabbi Eliezer ben Natan (one of the early Tosaphists from Germany, deceased 1170) to his work *Even ha'ezer*. Another important reference is the hierarchical detailing of the names of the chapters (*halakhot*) in each book of Maimonides' *Mishne Tora*.

value. The prevalence of each type may help us date a manuscript and to some degree identify its provenance as well. What's more: understanding these methods provides a vital key to uncovering the structure of the quires when invisible, especially in paper manuscripts, and reconstructing the folios, the bifolia, and even the missing quires of a codex.

In conclusion, the partaking of functional means for ensuring the continual order of the copied text in manuscripts is shared not only by different codex production traditions in areas around the Mediterranean but also by pre-imperial and early imperial China bamboo slips manuscripts. Comparative codicology must not be confined to the codex civilisations and should attempt to unveil affinities to the production of non-codex manuscripts. Comparative codicology should indeed be expanded and become universal.

Acknowledgements

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Nuria de Castilla, François Déroche

About a Series of Late Medieval Moroccan Bindings

Abstract: The history of Islamic bindings is hampered by the lack of evidence about the date and place of production of the bindings. The library of the Saadian sultans of Morocco provides at least some clues about the local production in the fifteenth and sixteenth centuries, before the introduction of the plate stamping that local binders borrowed from Ottoman sources. As the library was captured by Spain in 1612, many bindings are still in the condition they were in at that date. This article focuses on manuscripts transcribed in Morocco during the fifteenth and sixteenth centuries and intends to define a type of bindings that seems to have been very successful at that moment.

1 Introduction

The culture of Saadian Morocco is of particular interest as it was a time of changes. Books were also involved. Their bindings bear witness to the shift in tastes but also in techniques that started during the sixteenth century. Slightly later, in the seventeenth century, al-Sufyānī wrote a treatise on bookbinding in which he described three kinds of bindings produced in Morocco in his time.[1] According to Prosper Ricard, who edited this text, these three kinds of bindings were produced from al-Sufyānī's days until the nineteenth century. They are the Oriental type; the 'Hispano-Moorish' one and one with an infrequent decoration, used above all in the eighteenth century.[2] We can conclude that there were two clearly different types of binding decorations in Morocco, one being usually defined as 'Maghrebi', with specific aesthetics, its ornamentation being produced with small tools and gilt and another one which is Oriental, 'in Persian style' according to Ricard, but could be more correctly defined as Ottoman. The bindings from the last group are decorated with a central mandorla and eventually also with four corner pieces, these five components being stamped with plates. This technique, originating in the Eastern part of the Islamic world, was

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1 Abū al-'Abbās Aḥmad b. Muḥammad al-Sufyānī, *Ṣinā'a tasfīr al-kutub wa-ḥill al-dhahab*, ed. Ricard 1925 [1st ed. 1919], and its translation in Levey 1962.
2 Ricard 1933, 110.

met with a tremendous success as it allowed for a quick and sophisticated decoration of the binding boards. It also reduced the variations as the same plate could be used for various bindings and result in almost exactly the same pattern stamped on each of them, which is not the case with the small tools.

Variations were nevertheless possible with this technique, but they were of another nature: a contrast between the stamped decoration and the rest of the board can be obtained by stamping the plate(s) on pieces of leather or paper of another colour, by extensive gilding and painting, etc. During the Saadian period, Moroccan binders started to use these new techniques and aesthetics that were apparently well received by their customers.[3] In spite of this success, there may have been either some local reluctance to import wholesale the Ottoman fashion or the plates imported from Constantinople may have been too expensive for local craftsmen. Nonetheless, local imitations of the mandorla plates were soon available, engraved with patterns that do not exactly copy the very stable Ottoman repertory but reinterpret these compositions.[4] In general, the plates gradually superseded the traditional bindings decorated with small tools that, in order to produce a specific ornament, had to be stamped many times in combination.

2 Small tooling in Moroccan bindings in El Escorial collection

The link between the binding and the manuscript it covers has to be examined with caution. In the El Escorial collection, many bindings are no longer in their original condition. In many instances, binders working for the library removed the decorated leather covering from the old boards that were then discarded and they pasted it over new boards; in this process, they may have damaged the edges of the original binding – if they were not already damaged when this restoration was carried out. It might even be possible that, in this process, the leather covering of a manuscript was glued on the boards of another one. However, the rather high number of bindings involved, some of them still very close to their pristine condition, provides us with a safeguard in our discussion of these bindings.

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3 De Castilla 2019.

4 De Castilla 2019, esp. 103–106.

2.1 The corners and the frame

This older tradition of Islamic bindings used small tooling for ornaments that were either central[5] or covering the whole surface of the field.[6] The latter version was first rectangular, but from the twelfth century on,[7] binders started to prefer octagonal fields. Instead of drawing a rectangular frame corresponding with the shape of the book, they started leaving out small triangles in each of the corners, either defined by fillets and/or stamps or by stamping a triangular shape which would eventually develop later into a corner piece (Fig. 1). A number of bindings in the Real Biblioteca de San Lorenzo de El Escorial collection (hereafter: RBME) attracted our attention because they formally stand apart by the structure of their decoration from this well-established tradition of Islamic bindings.

Fifty-three examples of this specific frame are kept in the El Escorial collection.[8] Their connection with the Western Islamic world is clear since only five of these bindings cover a copy written by an Eastern hand.[9] The three colophons containing an indication about the place of copy suggest that they could have been prepared in Fez.[10] The origin of the library itself, in any case, supports the hypothesis that the bindings are mostly – if not all – Moroccan.

The wide frames of these bindings are drawn by three, sometimes four fillets or groups of fillets almost equally separated from each other by a large space (Fig. 2a). In order to distinguish their respective positions, we will give them a number from the inside of the frame to its outside: the fillet surrounding the field itself will therefore carry the number 1, 2 being attributed to that of the middle and 3 to the next one that is usually the closest to the edges of the board and 4 to the last one (when discernible).[11]

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5 Weisweiler 1962, 46–57, types 17 to 110 (also Déroche et al. 2005, 294–296 and figs 91–93).

6 Weisweiler 1962, 41–46, types 1 to 16.

7 Weisweiler 1962, fig. 30 (manuscript dated 1197), 37 (dated 1205) and 38 (dated 1099). The dates are indicative since the relationship between the binding and the block of quires needs to be assessed.

8 On the binding of RBME 1830 is a frame which is very close to this model, but has only two fillets; conversely, the frame of RBME 986 has four fillets.

9 Among the bindings that will be discussed below, RBME 658, 1076 (copy dated 1514), 1099 (copy dated 1525), 1211 (copy dated 1479) and 1619 (copy dated 1536).

10 RBME 248, 933 and 996.

11 The outermost fillets may have disappeared during the process of restoration described below.

For the reason alluded to above, it is not always completely clear whether all the components of the frame have been preserved since in the process of removing the leather from the original board, the fillet closest to the edges may have been lost. However, a few complete or better preserved bindings show that, at least in some instances, a fourth fillet running close to the edges was part of the frame. This is for instance the case of RBME 986 or RBME 1149. However, the three fillets previously described are a constant component in this group of bindings, along with triangular interlace ornaments set in each corner of the board.

In contradistinction to the dominant tradition of octagonal fields, the triangular corner pieces do never encroach on the rectangle drawn by fillet 1 but are always located in the part of the frame comprised between fillets 1 and 3, the space they occupy varying slightly (Fig. 2b). For this reason, the field is rectangular. A few more refined bindings additionally include a line of S-shaped tooling surrounding the frame. As for the corner pieces, they are all triangular as stated previously, but two situations can be defined. In one case, the triangular piece of interlace is not in contact with the rectangle defining the field and drawn by fillet 1. It is therefore inserted between fillets 2 and 3. In the second type of corner piece, on the other hand, the interlace is in contact with fillet 1 at the angle. In the majority of cases, it is comprised between the two external fillets (that is to say 1 and 3), but there are exceptions where the triangular piece of interlace is found between fillets 1 and 2. An additional decoration is sometimes associated with the corner piece: a tool has been stamped in the corner, either within the field or in a small square drawn by the extension of fillet 1 until it reached fillet 2.

2.2 The central ornament

The decoration of the central ornaments is highly coherent. They are constituted by an interlace pattern which can take various forms: circles, squares standing on the tip as well as various shapes related to the aforementioned ones. These compositions are also found in association with other types of frames on the bindings of the collection. As a first step in the study of this bookbinding tradition, we shall focus here on the bindings with the type of frame described previously when it is associated with ornaments related to a square on its tip/diamond, leaving therefore aside the bindings with a circular central decoration.

Among the thirty-nine items that we shall discuss now, we shall concentrate on twenty-four bindings that are associated with manuscripts dated from

1198 to 1579, four of them being written in an Oriental script. Ten items are dated to the sixteenth century, but it should be noted that eight of them predate the middle of that century.[12] The most recent item is dated 1579 and seems to be the original binding of the manuscript.[13] Six copies were produced in the fifteenth, five in the fourteenth, two in the thirteenth and one in the twelfth century.

The interlace is actually a very old component of the binding decorations since it appears on Qur'anic bindings of the ninth century, with a characteristic decoration of 'caterpillar'.[14] With the passing of time, the tools used to stamp this decoration have evolved. In the earliest examples, a tool with two or four teeth was used to produce the pattern little by little by stamping the tool repeatedly, the interlace effect being enhanced by the impression of fillets on both sides of the sequence of impressions.[15] Later, the size of components of the interlace pattern was reduced and smaller tools were required: the binders usually combine two tools when stamping this kind of composition, a segment and a quarter of circle with two fillets framing a series of short dashes – either perpendicular to the fillets or oblique.[16] In this way, they were able to complete the compositions more quickly (Fig. 2b). All the Moroccan binders who prepared the bindings under examination used both tools. As it is generally the case in the Muslim world in Medieval times, they had only a limited toolkit at hand: besides the two interlace tools already mentioned, the examination of the bindings under discussion shows that they employed between one and three additional tools for the bindings of this group, essentially punches and less frequently rosettes or rosette-like and palmette-shaped tools. On three bindings only, other shapes do appear.

2.2.1 Type A

A first type of central ornaments stamped on the bindings (Type A) is a square standing on its tip (Fig. 3a). The loops of the interlace delimit spaces where the binder eventually stamped larger circular tools like rosettes or related shapes.

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12 Seven manuscripts from the first half of the sixteenth century, two (RBME 964 and 1077) from its second half.

13 RBME 1077.

14 Marçais and Poinssot 1948; Déroche 1986; Dreibholz 1997.

15 Marçais and Poinssot 1948, 322–324 and fig. 54; Dreibholz 1997, 17.

16 An exception with parallel fillets engraved on the segment appears on the binding RBME 760 (a copy dated 1198).

These spaces are located on the vertical and horizontal axes: at their intersection, a space is located at the centre of the ornament, the others being arranged above it, on both sides and below. In some cases, the central ornament does not include such spaces: the loops of the interlace run very close to each other and completely cover the square. Smaller punches have been stamped in the loops of the interlace and on the outside of the square. Single or double fillets starting from the tips of the square have sometimes been drawn by the binders on the horizontal and vertical axes of the board. Type A is the most commonly found in our sample, probably owing to the easiness of its execution. Eleven items are found, eight of them associated with manuscripts dated from 1209 to 1520.[17]

A first variant of this central ornament (Type A.a) resembles a shape frequently used by Muslim bookbinders, that of the eight-pointed star. On the bindings of the El Escorial collection, this variant of Type A relies on a slight modification of the sides of the square, interrupted in their middle by an additional loop of the interlace (Fig. 3b). Segments of fillets radiate usually from the tip of the eight outer loops, corresponding to the axes and their bisectors, towards the sides of the field. As in the simpler Type A ornaments, the loops of the interlace may delimit five spaces within the figure: sometimes a rosette or a circular tool has been stamped there, sometimes these spaces remained blank. Punches have been stamped in the loops of the interlace as well as on the outside of the ornament. This composition was almost as successful as the previous one: ten items are found in the collection, seven being associated with dated manuscripts, from 1315 to 1565.[18] Both Type A and Type A.a involve the stamping of rosettes, a tool that is not used on the other bindings that will be discussed now.

A second variant of this central ornament (Type A.b) keeps the general outline of Type A, but the interlace does not include blank spaces (Fig. 3c). Instead,

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[17] Unless otherwise stated, the manuscripts are written in Maghrebi script. RBME 658 (copy in Oriental script), 1003 (copy dated 1438), 1033, 1035 (copy dated 1520), 1122 (copy dated 1518), 1191 (copy dated 1209), 1211 (copy in Oriental script, dated 1479), 1246 (copy dated 1303), 1514 (copy dated 1234, binding perhaps taken from another manuscript), 1863 (copy dated 1499) and 1867. RBME 658, 1003, 1033, 1035, 1122, 1192, 1211, 1514 and 1867 have been restored in El Escorial.
[18] RBME 276, 384 (copy dated 1508), 632 (copy dated 1324), 933 (binding perhaps taken from another manuscript), 964 (copy dated 1565), 1067 (copy dated 1315; binding perhaps taken from another manuscript), 1076 (copy in Oriental script, dated 1514; binding taken from another manuscript?), 1262, 1322 (copy dated 1543), 1465 (copy dated 1455). RBME 1322 has actually an eight-pointed star outline. RBME 933, 1067, 1076, 1262, 1322, 1465 have been restored in El Escorial.

two parallel segments of the interlace tool have been stamped on the vertical and the horizontal axes of the square on each side of its centre; they create a cross-like shape, with punches stamped in the loops of the interlace. In one case, a palmette tool has been stamped at the four tips of the square.[19] A binding offers a slightly more complex version of this pattern, perhaps derived from Type A.a since an extra-loop is found in the centre of each side.[20] Various parallel segments, instead of two stamped on the vertical and horizontal axes, interrupt the interlace; as in Type A.a ornaments, short fillets radiate from the tip of the eight external loops along the axes and their bisectors towards the sides of the field. Rosette stamps are not used on these bindings. Five bindings have been decorated in this way, two of them being associated with manuscripts dated 1525 and 1579.[21]

2.2.2 Type B

The second type of central decoration (Type B) associated with the three fillets frame is smaller than the first one. The shape of the square standing on the tip has been preserved and the interlace is composed by the combination of what we would define as a square with a loop at each corner and a cruciform shape that has a long history in Islamic bindings' central ornaments (Fig. 4a). A circular stamp has been sometimes stamped in the centre of Type B compositions. In almost all examples found in the El Escorial collection, punches have been stamped in the loops of the interlace as well as on the outside of the square. Seven items were found in the collection, four of them with dated manuscripts copied between 1396 and 1507.[22]

As is the case of Type A, there is a variant we called Type B.a. It would be actually more accurate to speak of variants that keep the idea of a small interlace central ornament, but vary its composition. In three cases, it terminates on the horizontal and vertical axes by a heart-like shape (Fig. 4b).[23] The other two

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19 RBME 1099.

20 RBME 1077.

21 RBME 979 (binding perhaps taken from another manuscript), 999, 1016, 1077 (copy dated 1579) and 1099 (copy in Oriental script, dated 1525). RBME 979, 999, 1016 and 1099 have been restored in El Escorial.

22 RBME 650 (copy dated 1396; binding perhaps taken from another manuscript), 654, 1091 (copy dated 1397), 1149 (copy dated 1507), 1150 (copy dated 1491), 1864 and 1869 (binding perhaps taken from another manuscript).

23 RBME 760 (copy dated 1525) and 1358; RBME 1830 (see n. 8) has the same central ornament.

examples of this group do not clearly follow the same pattern; punches have been stamped in the loops of the interlace.[24]

A single binding with a three fillets frame does not exhibit a central ornament related to Type A and B or to their variants (and not to the circular compositions either).[25] Interlace tools similar to those of the bindings previously described have been used to stamp a knot of Solomon into the leather – in association with punches.

The techniques used by Moroccan binders who produced these bindings can also be defined more precisely. Due to the scarcity of descriptions of the tools, we shall rely on the groundbreaking study by Georges Marçais and Louis Poinssot (MP).[26] As was stated before, only a handful of tools were available in each workshop. The two interlace tools, segment and quarter of circle, were ubiquitous: all the workshops used them. They may vary in length or in the way the element between the two outer fillets is treated. It is mostly made of short dashes perpendicular or slightly oblique (Figs 2b, 5a and 5b), but the segment tool sometimes consists of parallel fillets. The punches were also found everywhere, MP 57c being the most popular (22 cases; Fig. 5c). The larger punches similar to MP 57f are either used alone (3 cases; Fig. 5d) or in combination with another kind of punch (4 cases).[27] Rosettes and circular tools were also commonly used by the binders producing central ornaments Type A and A.a (Figs 5h and 5f); in addition, they were used in the corners of the frame (see for instance Fig. 3a). Next to a classical rosette shape (9 cases) which can be compared to MP 63 a-d,[28] there is a circular stamp with a central dot surrounded by other dots, also associated with Types A and A.a (3 cases; Fig. 5g). Less frequently, a palmette close to MP 64h was stamped in the corners of the frame, but it is also found at the tip of the central ornament of binding RBME 1099 (Fig. 5e). It appears mostly on bindings of Types A.a and A.b (6 cases), once with Type B. A few bindings were stamped with heated tools: this is probably the case of manuscripts RBME 999 or 1099. Gilding when present is always very limited: the three examples found in our corpus are all restricted to punches, mostly in the central ornament.[29]

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24 RBME 1063 and 1097 (copy dated 1468; binding perhaps taken from another manuscript).

25 RBME 1619 (copy in Oriental script dated 1536).

26 Marçais and Poinssot 1948. We refer to the drawings on figs 54 to 66: MP 64h refers to fig. 64, item *h* in Marçais and Poinssot's study. The dimensions of the tools are not considered here. For descriptions, see also Weisweiler 1962, 61-78.

27 Compare with Weisweiler 1962, 76, stamp 93.

28 Compare with Weisweiler 1962, 74, stamp 80.

29 RBME 632, 1003 and 1322.

3 Headbands

Eight original headbands have been preserved: two patterns appear more often, one with parallel lines, the other one in a 'W' shape, and the association of red and yellow threads is the prefered one, before blue and white; however, the 'W' pattern is dominant when one takes into consideration the corpus of fifty-three bindings with three fillets frame (10 instances). As stated previously, in most of the cases, the original lining of the inner board has been replaced in the course of the restauration. However, we found among the dated manuscripts of this group of bindings seven linings which may be original: in one case, it is a yellow paper, but fabric and leather are more numerous (three instances each). When taking into account the fifty-three bindings of our corpus, leather is better represented among the ten original linings with five instances; fabric has been used four times.

4 Conclusion

The relationship between the binding and the volume it protects has to be approached with caution. Bindings can be changed and this has apparently happened after the manuscripts reached the El Escorial Library: as mentioned previously, the binders/restorers replaced original bindings that were in a bad state by local ones, with the El Escorial coat of arms, or removed the old leather covering and pasted it on top of new boards. In that case, it seems that they may have used in a few cases coverings that were not originally connected with the manuscript they are associated with now.[30] However, the number of items in the corpus is sufficient to approach the two fundamental questions that arise when studying bindings, that of their place of production and that of their date, without risking to err considerably in answering both questions. The El Escorial collection is particularly important in this regard since it mainly houses the manuscripts of Mulāy Zaydān (r. 1603–1627) that were captured by Spain in 1612. With the exception of the manuscripts destroyed by a fire in the end of the seventeenth century and those drastically rebound between the seventeenth and nineteenth centuries, the manuscripts are as close as possible to their state in the early seventeenth century. The library amounts to a 'time capsule', which makes an answer to the two questions easier. The first question is the simplest

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30 See for instance RBME 650 or 1097. In our sample, eight manuscripts are in that case.

one: within the group of twenty-four dated copies with both the three fillets frame and the square central ornament, only three are written by an Oriental hand, the rest being all Maghrebi; if we take into account the corpus of fifty-three bindings with the same kind of frame, irrespective of their central ornament, the Oriental copies are only five. We can conclude that the bindings with the three fillets frame were produced in the Western part of the Islamic world, presumably in Morocco.

The three dated Eastern copies with a binding with the frame described previously (Fig. 2a) were completed between 1479 and 1525.[31] As for the dated Maghrebi copies, only two of them are later than the middle of the sixteenth century;[32] eight were produced in the first half of that century,[33] slightly more than those dated to the fifteenth century (one from its first half,[34] five from the second one)[35]. We find then five fourteenth century copies,[36] but only two from the thirteenth[37] and one with a manuscript dated to the end of the twelfth century.[38] However, the date of completion of the oldest copies is not of much use as it is highly probable that their present binding is the result of a replacement, the date of which is difficult to ascertain. In some cases, the similarities between an old binding and a more recent one suggest that the latter provides a clue for the dating: for instance, a copy dated 1315 (RBME 1067) was probably bound in the same workshop as another one prepared for a manuscript completed in 1514 (RBME 1076). The dates of the copies produced in the Eastern part of the Islamic world support the general orientation of the group of bindings associated with Maghrebi manuscripts, which invites to conclude that the period of production of these bindings extends from the late fourteenth century to the end of the sixteenth century, central ornaments of Type B and B.a being perhaps earlier

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31 RBME 1076 (dated 1514), 1099 (dated 1525) and 1211 (dated 1479). RBME 1619 (dated 1536), also written in an Oriental hand, is not included in the present study since the central ornament of its boards is of another nature. These manuscripts as well as RBME 658 do not bear any trace suggesting that they were still in the Eastern part of the Islamic world at a later date. RBME 1619 bears a note dated to the same year as the transcription.

32 RBME 964 (1565) and 1077 (dated 1579).

33 RBME 384 (1508), 1035 (1530), 1076 (1514), 1099 (1525), 1122 (1518), 1149 (1507), 1322 (1543) and 1619 (1536).

34 RBME 1003 (1438).

35 RBME 1097 (1468), 1150 (1491), 1211 (1479), 1465 (1455) and 1863 (1499).

36 RBME 632 (1324), 650 (1396), 1067 (1315), 1091 (1397) and 1246 (1303).

37 RBME 1191 (1209) and 1514 (1234).

38 RBME 760 (1198).

than Type A and its variants: the dates of the former range from 1396 to 1507,[39] whereas the latter include more material from the sixteenth century.[40] Looking at the larger group of forty-four dated manuscripts with a binding with interlace design related to the three fillets frame group, the fifteenth and sixteenth centuries also represent the bulk of this production: twenty-five items are associated with copies completed between 1451 and the end of the sixteenth century (the latest item is dated 1584). The dates also suggest that the second part of the sixteenth century was a period of decline for this kind of decoration based on the interlace in front of the growing success of the new style imported from the Ottoman Empire. The numbers are clear: in the collection, twelve manuscripts in Maghrebi script from the last quarter of the sixteenth century have a binding *alla turca* against a meagre four in the 'traditional' style.[41] The situation is almost reversed in the preceding quarter of this century, with respectively three of the former against twelve of the latter.

It could be possible to argue that the bindings of the manuscripts examined here were made when they were incorporated into the Saadian library. It should however be noted that some of the manuscripts discussed here bear witness of the fact that they were not yet in the Saadian library at a comparatively advanced date in the sixteenth century, which casts doubt on this possibility. On the other hand, the diversity of tools and craftsmanship, in spite of the common repertory shared by these bindings, would hardly support the idea that they were made for the sultan's library at about the same time and by the same workshop – or by a limited number of binders.

Moreover, a few bindings found in the collection show that the interlace decoration could also be used for more elaborate bindings than most of those which have been examined here. One of the best examples is the RBME 248.[42] The study of this manuscript completed in Fez on 17 Ṣafar 969/27 October 1561 for a princely patron, confirms that traditional Maghrebi techniques were still alive in the third quarter of the sixteenth century and that the type with the three fillets frame was used in upper end workshops. Its binding, as that of RBME 47, bears testimony of the skill of some binder. However, towards the same date, other Maghrebi copies were already covered by bindings decorated

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39 We exclude RBME 760 (dated 1198); RBME 650 and 1091 are respectively dated 1396 and 1397, and the copy of RBME 1149 was completed in 1507.

40 Nine bindings in total (RBME 384, 964, 1035, 1076, 1077, 1099, 1122, 1322 and 1863).

41 Taking into account all the Moroccan bindings with the three fillets frame, irrespective of the central ornament.

42 See Déroche 2014; Déroche 2019, 181–190.

in an almost identical way as those produced in Ottoman binderies. The data at our disposal are scarce and contradictory. The 'old style', if we may call it thus, does not seem to be a matter of geography: as indicated at the beginning, three bindings in the larger group of interlace decoration were prepared in Fez, but RBME 47 seems to have been bound in Marrakesh. Economics may have played a role: the small tools were locally produced, whereas the Ottoman plates had to be imported and were likely more expensive. On the other hand, high quality bindings were prepared with the traditional set of tools and local imitations of the plates soon became available.[43] Tastes also were important: some patrons probably preferred the 'old style' while others were favouring the Ottoman aesthetics.

If our dating of the group of bindings with three fillets frame and a square related central ornament is correct, the copies in Oriental script may have been bound for the first time in Morocco. As they were produced about a century before Mulāy Zaydān's library was seized, with the exception of RBME 1211, it can be doubted that their bindings were renewed during this comparatively short period of time. This might imply that they were imported without a proper binding, an interesting information about the book trade between the Eastern part of the Mediterranean and Morocco.

This group of bindings is crucial for our reconstruction of bookbinding history in Morocco between the fifteenth and early seventeenth century. It is a witness of the survival of techniques and aesthetics in Morocco until late into the sixteenth century that were rooted in a long tradition. As stated by al-Sufyānī, Moroccan binders were still, in his time, catering to the tastes of book owners who liked the traditional Maghrebi style. They were also working for those who preferred the Ottoman tastes and techniques. The study of a larger corpus of Moroccan bindings, both decorated with small tools and with plates, will allow us to follow the changes during the Saadian period and their chronology. It might also provide clues about regional peculiarities and the sociology of Moroccan book owners in Saadian times. And the sheer number of examples in a collection with a specific provenance may also lead to the identification of workshops active in the sixteenth and early seventeenth centuries.

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43 De Castilla 2019, esp. 103-106.

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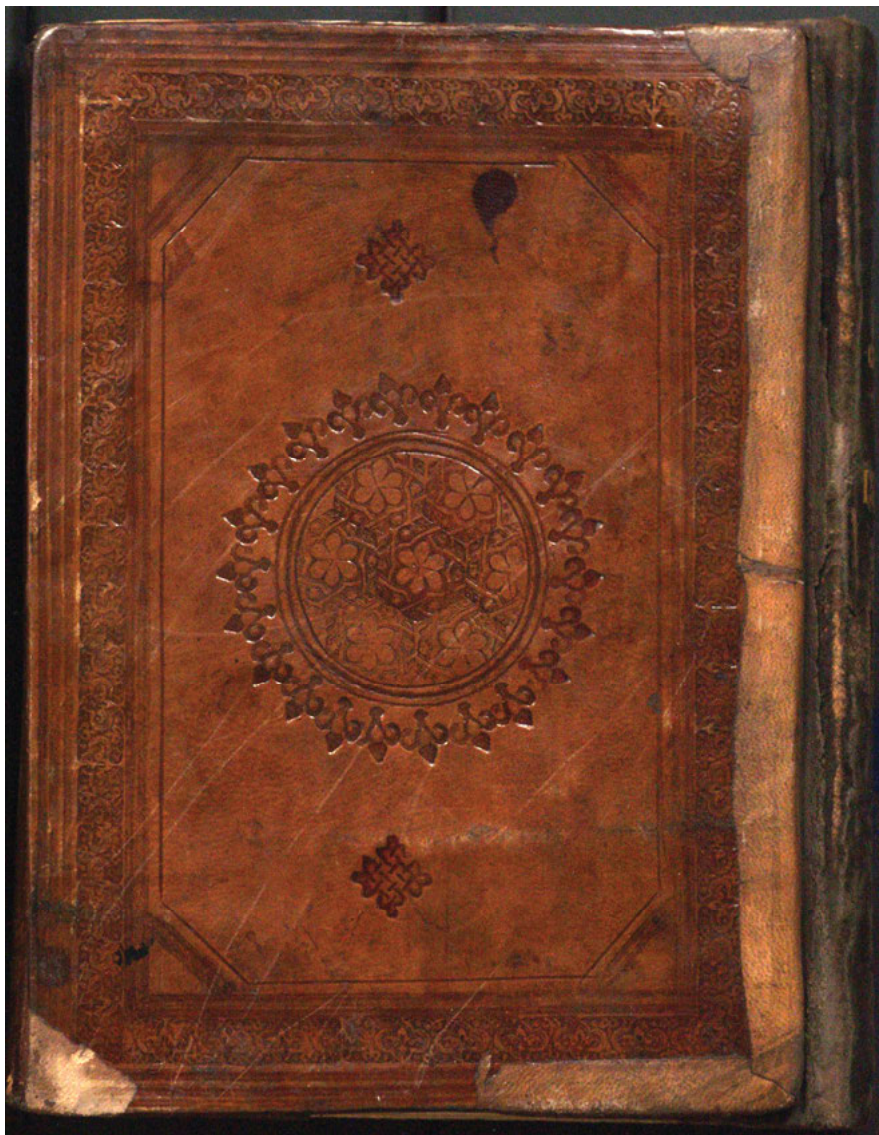
Fig. 1: Binding, Morocco, end of the 15th–16th c. RBME 1540 (copied in 1469). ©Real Biblioteca del Monasterio de San Lorenzo de El Escorial.
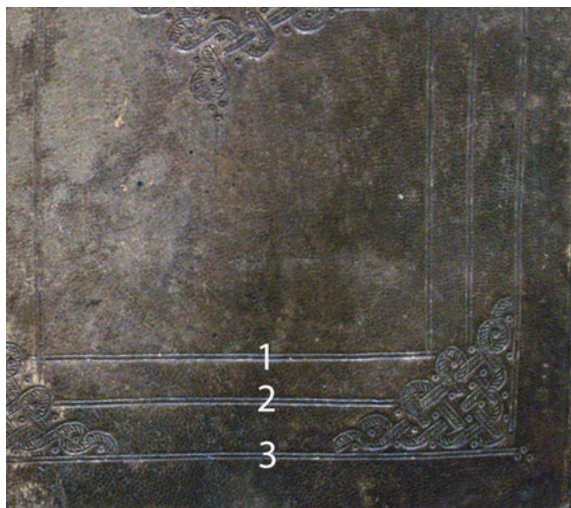
Fig. 2a: Binding, detail of the frame (with the fillets number indicated) and the cornerpiece, Morocco, 16th c. RBME 1149 (copied in 1507).

Fig. 2b Binding, detail of the cornerpiece with the two interlace tools, Morocco, second half of the 16th c. RBME 248 (copied in 1561).

Figs 2a–b © Real Biblioteca del Monasterio de San Lorenzo de El Escorial.

Fig. 3a: Binding with central ornament
Type A, Morocco, 15th–16th c., RBME 1191
(copied in 1209).

Fig. 3b: Binding with central ornament
Type A.a, Morocco, second half of the 16th c.
RBME 964 (copied in 1565).

Fig. 3c: Binding with central ornament Type A.b, Morocco, 16th c. RBME 1016 (probably copied in the 16th c.).

Figs 3a–c © Real Biblioteca del Monasterio de San Lorenzo de El Escorial.
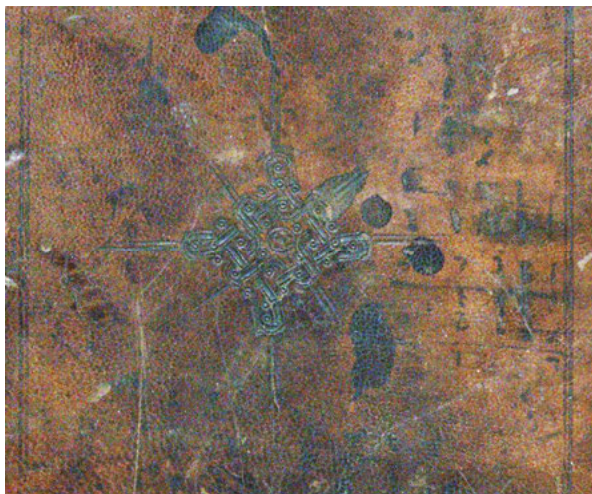
Fig. 4a: Binding with central ornament Type B, Morocco, 16th c. RBME 654 (copied in the 16th c.).

Fig. 4b: Binding with central ornament Type B.a, Morocco, end of the 15th-16th c. RBME 1358 (copied at the end of the 15th–16th c.).

Figs 4a–b © Real Biblioteca del Monasterio de San Lorenzo de El Escorial.

a

b

c

d

e

f

g

h
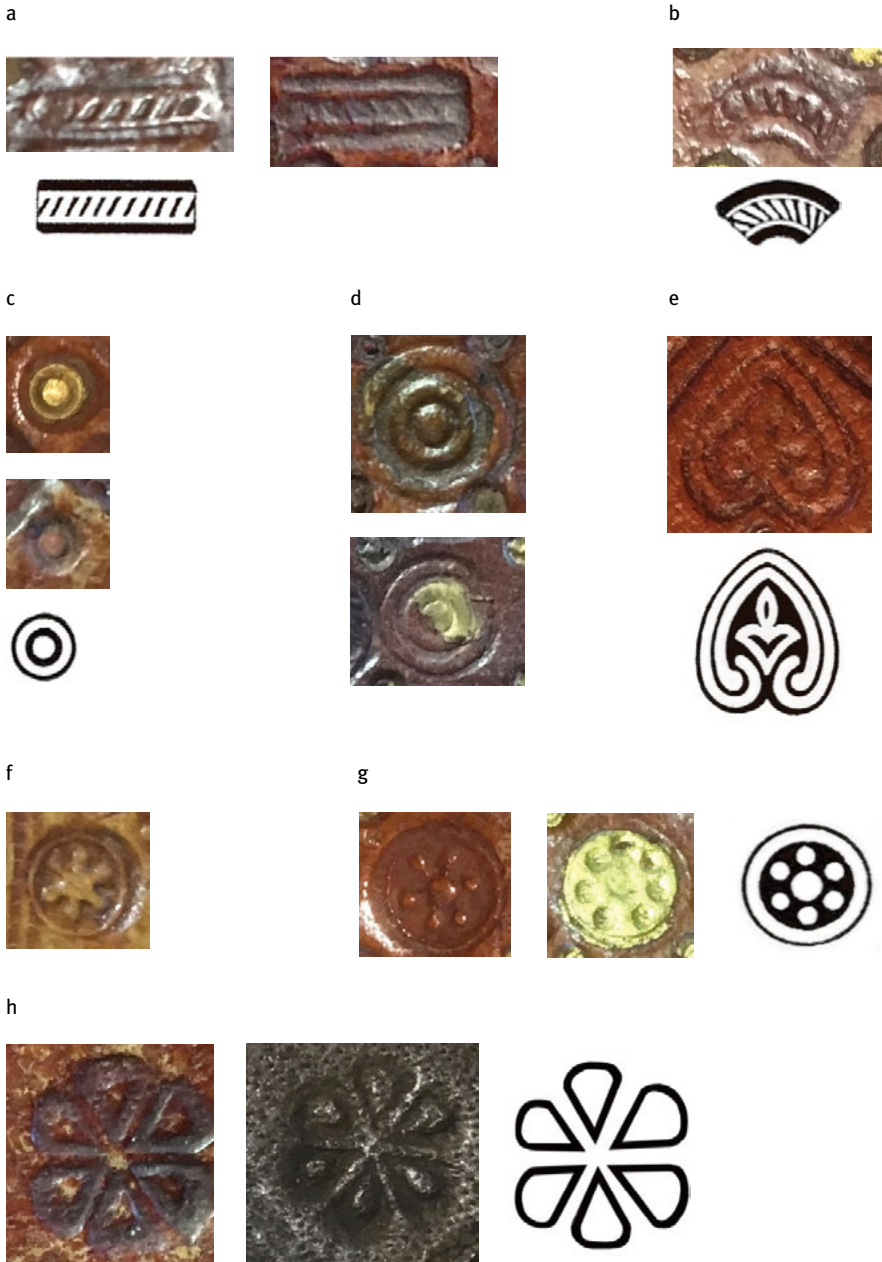
Fig. 5: Stamps. Images published in Marçais and Poinssot, 1948: a = Fig. 54b; b = Fig. 55d; c = Fig. 57Fe; e= Fig. 64h; g = Fig. 58m, and h= Fig. 63e.

Agnieszka Helman-Ważny

A Tale of Papermaking along the Silk Road

Abstract: This study is a tale of the early history of papermaking in the Chinese borderlands as perceived through the materials that compose the manuscripts discovered in Central Asia. The manuscripts and printed books on paper excavated from archaeological sites in the ancient Silk Road kingdoms of Chinese Central Asia were examined for the raw materials used in their manufacture and the technology behind their production. The data retrieved by material analysis revealed the materials used for making the books, and the way that the materials have evolved with technological innovation. A wide range of types and qualities of paper, when interpreted chronologically according to dates included in the manuscripts, contributed to the timeline of the early history of paper.

1 Central Asian manuscripts as repository of early paper

Ideas relating to the history of paper began to change at the beginning of the twentieth century, when archaeological excavations revealed vast new collections that were brought to Europe by, among others, Aurel Stein and Paul Pelliot. Many authors have described the complex history of the acquisition of these manuscripts. This is done especially vividly by Peter Hopkirk in *Foreign Devils on the Silk Road* and by Craig Childs in *Finders Keepers. A Tale of Archaeological Plunder and Obsession*.[1] China considers this plundering of its treasures the archaeological crime of the century. The same people who were considered great explorers by the West were referred to as thieves and fortune-hunters by official Chinese authorities. From whatever perspective, this was a time of immense archaeological richness and colonial freedom for Western powers.

These extensive collections of manuscripts and books printed on paper, which were excavated from archaeological sites in the ancient Silk Road kingdoms of Chinese Central Asia and from a hidden library cave to east of the Gobi Desert, are the earliest repositories of extant paper that bear witness to the early history of papermaking. These manuscripts are now dispersed among collections

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1 See Hopkirk 1980 and Childs 2013, 119–131.

in Europe and Asia, and they have created new opportunities to review the history of paper. There are vast collections of manuscripts available for research: Britain holds a collection of about 50,000 manuscripts, paintings, and artefacts from Chinese Central Asia, as well as thousands of historical photographs, mostly from the first three Central Asian expeditions led by Stein.[2] Germany holds a collection of *c.* 40,000 fragments of text, and thousands of frescos and other artefacts yielded by four German expeditions to Turfan led by Grünwedel and Le Coq. France holds a collection of *c.* 30,000 manuscripts brought back by Pelliot, which also holds the entire collection of Nouette's photographs of the expedition and Pelliot's diaries and other archives. Japanese and Russian collections amount to *c.* 20,000 manuscripts each, and the Dunhuang materials in China amount to around 16,000 items. These vast collections that preserve the archives of early paper in Central Asia are available for study.

Dated between the third and thirteenth centuries CE, the extant manuscripts were written in over twenty languages and scripts, including those of the empires and kingdoms on the periphery of Central Asia during this period: Chinese, Tibetan, Iranian, Indian, and Turkic. The oldest paper manuscripts available for study are Sanskrit and Tocharian manuscripts found in Kucha and dated between the third and sixth centuries CE. At that time, paper was used for manuscripts that were written in Sanskrit or Khotanese, dated approximately between the fourth and the eight centuries CE, and found in Khotan. By the fifth century, paper manuscripts were produced in Dunhuang, and this collection contains written and printed texts in Chinese, Tibetan, Khotanese, and Turkic, dated between the fifth and tenth centuries. Another repository of old paper from Central Asia is the Turfan collection in Chinese, Tibetan, Turkic, and Syriac and dated between the ninth and thirteenth centuries.

These manuscripts are often imprecisely dated with the exception of the group of Chinese manuscripts fortuitously fixed in time by dates given in colophons.[3] Further manuscripts, however, may also be fixed in time and place by other information, such as the names of specific people and places, or episodes associated with historical dates. Information regarding provenance derives from the archaeological contexts (all of the Silk Road period) in which manuscripts

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2 See *British collections: Contents and Access*, International Dunhuang Project website <http://idp.bl.uk/pages/collections_en.a4d#2> (accessed on 2 Oct. 2020).
3 In 1919 Lionel Giles, newly appointed keeper in the Department of Oriental Printed Books and Manuscripts, undertook the compilation work, and between 1935 and 1944 he published a series of articles in the *Bulletin of the School of Oriental Studies* which formed a chronological list of dated manuscripts from Stein's collection (see Giles 1935, 1937, 1940, 1943).

were found, including Buddhist stupas, military forts, residential and official buildings, rubbish heaps, and tombs. The dated manuscripts allowed us to correlate technological and scientific data with the dates included in their colophons. The dated manuscripts were thus especially useful in reconstructing the time-line of paper history. To make sure, however, that my results are not limited to this group of manuscripts, I also studied undated manuscripts.

With respect to great numbers of books and large collections of manuscripts from along the Silk Road, it is difficult to pinpoint when a group of manuscripts is sufficiently large to create historically valid results. Since Julius von Wiesner's time at the beginning of twentieth century, scholars have managed to subject approximately 1500 manuscripts to fibre analysis.[4] Statistically it is probably still too few, though sufficiently large to complete a history of paper with a great deal of valuable information. This is significant in comparison to the scarcity and vagueness of information in the written sources.

2 Evidence of papermaking technologies along the Silk Road

Technology, the sum of techniques, skills, methods, and processes used in the production of paper, may also be understood to be an aspect of social and cultural transmission through time and space. The paper, thread, ink, pigments, and other constituent parts of the Silk Road manuscripts and printed books derive from different and often distant centres of production. The textiles that are found in the same archaeological contexts as the manuscripts and that in some cases form an integral part of them, such as the silk ties used to bind scrolls, the silk book covers, and the manuscripts written on silk, are similarly diverse, displaying a variety of materials, weaves, patterns, and pigments. Material culture, such as extant collections of manuscripts, is thus an ideal source for the study of technological developments such as the mass-production of paper, inks, pigments, and textiles, but the scientific analysis that has been carried out on these materials thus far has been drawn from small samples that cannot be considered fully representative. A recent study has shown that there is the potential for understanding cultural, technological, and religious

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4 Julius von Wiesner was a pioneer of material analysis applied to the Silk Road manuscripts; see von Wiesner 1902 and 1903. For the history of fibre analysis of this early material, see Helman-Ważny 2020, 341–366.

transmission and interaction across the Silk Road through combining textual research with paper and pigment analysis.[5]

The development of mass-production in papermaking across the Silk Road in the first millennium CE constitutes one of the most important technological developments of the era.[6] The rise of these Central Asian trade routes coincided with the Han dynasty (206 BCE–220 CE) in China and with the appearance of paper as a new writing material (Fig. 1). Many commodities other than silk were traded along the Silk Roads, including paper. Of all the precious goods traded along these routes, silk was perhaps the most remarkable for the people of the West;[7] paper, on the other hand, was poorly understood until the sixth or seventh century of the first millennium. The technological development of paper, however, may have been closely linked to the trade in silk, as the increasing development of silk production along the Silk Roads brought about the establishment of papermaking workshops, since mulberry trees cultivated for silk production in the villages and oases of Central Asia could also be used for making paper.

Fig. 1: The Silk Road at the time of the origin and early paper. Map drawn by Dorota Helman and Olga Ważny.

5 Van Schaik, Helman-Wazny and Nöller 2015.
6 See Hansen 2016 for an overview of the Silk Road civilizations and trade.
7 Frye 1996, 154.

Essentially, no comprehensive attempt has yet been made to understand the complexity, spread, and modes of change of the early papermaking technologies. We only have fragmentary evidence which has yet to show the whole picture. The physical nature of paper, textile and book, its full meaning and value, as well as the way technologies spread in ancient and medieval Asia are less thoroughly explored. Most of the information we have is retrieved for large, known centres of paper production, usually from Chinese, Korean, or Japanese sources.[8] Textual sources were commonly prioritized despite the fact that they clearly cannot provide conclusive historical evidence for the origins and dissemination of papermaking, weaving, printing, or other technologies related to book production. Archaeological and material evidence has recently gained in importance.

We know that these technologies were transmitted along the major trade routes, with papermaking and printing developing first in Asia during this period before their transmission to Europe. Aside from this very general statement, however, we know little about the way this transmission occurred. The adoption of these technologies in specific areas was uneven and dependent on a variety of factors, including long-distance trade, the availability of local materials, and cultural contexts, especially those related to religion.

Because we have an unclear knowledge of the driving forces behind the development of the technologies of the book, there is a need for an investigation into the relationships between the development of technologies, religion (especially Buddhism), and different linguistic cultures along the Silk Road. Among textual sources, many Buddhist scriptures encourage the reader to make physical copies of texts, which suggests that religious ideology served as a driving force behind the development of technology. The copies of scripture were made for the sake of religious merit, ensuring a better rebirth and future lives, as well as for the purpose of providing protection against various evils in this life. Passages from such texts could be copied and worn as amulets to protect the body, or they could be put inside statues or hoisted into the air as flags to protect the state. Buddhism, in particular, has been a key factor in the social and economic dynamics that drove the development of papermaking technologies in Asia,[9]

8 Tsien 1973, 1985, 2004; Hunter 1932, 1978; Pan 1981, 1998; Rischel 1985, 2004.
9 Tsien 2004.

with the phenomenon of mass printing in particular being inspired by Buddhist ideas of the merit of scriptural reproduction.[10]

3 Material and methods

The visual appearance of paper is affected by the type of raw material used in its manufacture, the technology behind its production, and the tools used, as well as by the preparation of the leaves during the production of the book. Some of this evidence was either immediately visible or could be revealed through a variety of scientific analyses.[11]

Between 2005 and 2014, I studied a total of 350 manuscripts selected from the Dunhuang collections in the British Library in London, the National Library of France in Paris (Bibliothèque nationale de France), the Institute of Oriental Manuscripts in St. Petersburg (Институт восточных рукописей Российской академии наук) and from the Turfan collection in the Berlin Brandenburg Academy of Sciences (Die Berlin-Brandenburgische Akademie der Wissenschaften) and the Berlin State Library (Staatsbibliothek zu Berlin). My work initially focused on Chinese manuscripts found along the Silk Road and then expanded to include other manuscripts, such as Tibetan, Uighur, Sogdian, Tocharian, and Sanskrit. In these manuscripts I studied the raw materials, the various fibres, and the plants from which they derive. I then looked at other aspects of the papermaking process which influence the nature of the resulting paper, such as the degree of fibre blending, the type of papermaking mould used, and the preparation of the paper surface before a drawing, calligraphy, or a print was set upon it. A study of the various materials and methods provides us with a basis from which we can then begin to interpret and categorize the many ways these papers were made and used.

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10 The importance of the 'cult of the book' in Buddhism of different regions has been addressed by many authors: see, for example: Schopen 1975; Kornicki 1998; Schaeffer 2009; Apple 2014; Diemberger et al 2014.
11 Details on the scientific methodology used are to be found in the following articles: Helman-Ważny and van Schaik 2013, 720–721; Helman-Ważny 2016, 131–132; Durkin-Meisterernst et al 2016, 8.

3.1 Raw materials of Central Asian manuscripts

There is a wide range of types and qualities of paper found in the aforementioned manuscripts from Central Asia. Paper of recycled textile fibres from rags and paper of new bast fibres were both identified (Figs 2 and 3). Rag paper was most typically composed of hemp and ramie fibres in differing proportions, sometimes additionally mixed with scarce amounts of other fibres, such as paper mulberry/mulberry (*Broussonetia* or *Morus* sp.), flax, jute, silk, wool, or cotton. Manuscripts from the Dunhuang collection notably contained ramie- and hemp-rag fibres with an admixture of jute, flax, and silk, while in Turfan the same rag-fibre paper contained an admixture of cotton and wool. These additions may be used as a marker of particular areas, or time of use, if confirmed by future analysis.

The Tocharian manuscripts studied, probably the earliest dated, were made almost exclusively of rag paper. The pure mulberry fibres were in the minority in the group of Tocharian and Sanskrit manuscripts. Chinese manuscripts dated to the fifth and sixth centuries CE are almost exclusively on rag papers, and only a few manuscripts on rag paper are dated to between the seventh and ninth centuries, while the number of rag-paper manuscripts increases in the tenth century.[12] Similar results were obtained by Anna-Grethe Rischel and more recently by Lucas Llopis and Léon-Bavi Vilmont. Rischel's examination of Loulan manuscripts revealed that the third-century Loulan papers are a mixture of recycled hemp, ramie, linen, and mulberry fibres.[13] The same components with the occasional addition of sparse fibres of cotton were found in the remaining thirty-three manuscripts dated later or not dated, and in four cases the cotton fibres were also mixed with paper mulberry fibres.[14] Llopis and Vilmont identified hemp, linen, sometimes with addition of ramie or mulberry, in the paper of 350 Tocharian manuscripts. These raw materials again suggest that these papers were made of rags (textile waste).[15] Rag paper was also confirmed by Enami Kazuyuki, Sakamoto Shoji, Okada Yoshihiro, and Masuda Katsuhiko in manuscripts dated to between the fourth and eighth centuries CE, which were unearthed around the Tarim Basin and are now kept at Ryukoku University, the

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12 Helman-Ważny 2016, 132–134.

13 Rischel 2001, 179–188.

14 Raschmann 2012.

15 Arnaud-Nguyen 2020, 404–405.

Kyoto National Museum, and Toyo-Bunko (Asian Library). Thus, hemp, mulberry, cotton, and foxtail millet were detected in papers from Japanese collections.[16]

According to secondary literature on papermaking around the tenth century, the use of rag paper declined, possibly because of a shortage of raw materials and the consequent high production cost. The documents dealing with papermaking after the Song Dynasty (960–1279) also mention rag paper only occasionally, a fact confirmed by the greater variety of plant components identified in manuscripts dated later than the tenth century.

My sample of manuscripts revealed rag paper in all groups of manuscripts irrespective of the script in which they are written (Fig. 2). This includes a good many of the Sogdian and Turkic manuscript fragments produced in the Western regions of the Silk Road as far as Samarkand, located at the junctions of trade routes from China and India. The Arabs in the eighth century must therefore have witnessed the production of rag paper in Samarkand.

After rag paper the second largest group represented among the manuscripts studied comprise inner-bark (phloem) paper composed of woody plant, such as *Broussonetia* sp. (paper mulberry) or *Morus* sp. (mulberry), derived from living plants (Fig. 3). These fibres are considered the best material for producing high quality paper. In my sample I observed that bark (phloem) paper made of mulberry or paper mulberry began to attain an equal footing with rag paper at the end of the seventh century, and then to prevail in the eighth.[17] The inner white bark of paper mulberry from indigenous trees may have grown wildly or may have been cultivated for this purpose. In addition to paper mulberry in Tibetan manuscripts dated to the ninth century and later, *Daphne* sp. fibres were also found.

It has been assumed that paper mulberry bast was added to Cai Lun's paper reported in 105 CE in the *Hou Han shu* ('History of the Later Han Dynasty'). A record for that year (commonly cited as the date of the invention of paper) shows that the technique of papermaking was reported by the eunuch Cai Lun to the Eastern Han Emperor Ho, and that those first paper samples were made of tree bark, remnants of hemp, rags of cloth, and fishing nets.[18] The evidence collected from material analyses of Hedin's Chinese paper fragments from Loulan and according to Stein's Sogdian paper fragments suggest that the more advanced Chinese production of paper from pure new bast fibres had already

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16 Enami et al 2010, 12–22; Enami et al. 2012, <http://turfan.bbaw.de/bilder/ct/vortrag-enami.pdf> (accessed on 21 Feb. 2021).

17 Helman-Ważny 2016, 134–135.

18 Tsien 1985, 40.

developed in the third century. The technology did not spread westwards as far as Samarkand, but eastwards and northwards, where plants of the Thymelaeaceae and Moraceae families were available.

3.2 Mapping of materials and technology

The findings concerning the use and distribution of paper in the selected manuscripts show the range of materials which might point to the provenance of the paper.[19] If the fibre consists of pure mulberry and the mould screen is made of bamboo splits, the paper is most likely of Chinese or more Eastern origin, but if the paper consists of a mixture of rag fibres and the mould is made of reeds, the provenance cannot be given with any degree of precision, since rags could travel and be turned into paper anywhere. Rag paper may be produced anywhere along the Silk Road, but mulberry paper was only produced in regions where mulberry trees grew. It should be remembered, however, that paper mulberry could grow in desert oases, but was usually cultivated for silk production, which yielded much higher profits, and was thus less frequently used for paper production, with the exception of rare and specific circumstances.

The technological development and bast fibres allowed the production of thinner, more even, and better-quality paper, so we may hypothesize that the centres of rag-paper production were more often located in desert regions, where mulberry trees were sparse and used rather for the breeding of silk worms than for paper production. The rag technology continued unchanged in regions with no natural growth of the requisite plants for the production of paper, whereas the chemical maceration of new bast fibres continued in China and spread to Korea, Japan, Tibet, Nepal, and other regions where these plants grew.

The woven paper made with a textile sieve, in written sources assumed to be a characteristic of the oldest and most primitive technology, typifies a minority of my sample and, in dated papers, appeared only after 692 CE (Fig. 4). Woven paper was found more in samples of bark (phloem) paper made of paper mulberry and mulberry. It is also worthy of note that all of the oldest samples dated by colophons to the fifth century CE were made of ramie and hemp rags on laid patchy paper additionally characterized by irregular laid lines, suggesting the use of a sieve made of reed or grass rather than bamboo (Fig. 5). This type of paper, characterized by the abovementioned combination of features, does not

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19 Nöller and Helman-Ważny 2013, 6–7.

appear in later dated manuscripts. The paper type I have found most widely associated with early paper produced locally in Dunhuang and Turfan is thus thicker rag paper characterized by twelve to eighteen laid lines per 3 cm, often with uneven fibre distribution within a sheet. A second type that could have been produced along the eastern part of the Silk Road is characterized by between twenty-seven and thirty-three laid lines per 3 cm, made of paper mulberry and mulberry.

Macroscopic observations suggest that the floating mould with a fixed screen of woven textile did not necessarily precede the dipping mould equipped with the loose screen. If it did, it was replaced by the dipping mould equipped with the loose screen made of reeds as early as the third century. Reeds were then used, and soon thereafter bamboo sieves took over in the areas where these plants grow, but that papermaking sieve screens were also traded along the Silk Road and occasionally used in the more deserted Western regions cannot be ruled out. In the Himalayan regions, woven moulds have been preferred until the present day.

4 Concluding remarks

The data retrieved from material analysis of Central Asian manuscripts shows the materials that were used in the manufacture of books along the Silk Road in the first millennium CE and the way those books have evolved with technological innovation. The wide range of types and qualities of paper used in the book-making process was confirmed to include paper of recycled textile fibres from rags and the paper of new bast fibres (Fig. 6). Rag paper was most typically composed of hemp and ramie fibres in differing proportions, sometimes mixed with scarce amounts of other fibres, such as paper mulberry or mulberry (*Broussonetia* or *Morus* sp.), flax, jute, silk, wool, or cotton.

The fibre examination of these manuscripts has helped to establish a key for identifying the Central Asian plant fibres used in papermaking. I have created a collection of plants used for papermaking in Central Asia and prepared master samples for comparative fibre identification. An attempt to reconstruct their distribution in Central Asia in the past is an important step forward in finding the geographical origin of unknown books when compared with the results of fibre analysis performed on other manuscripts with a known plant composition. There remain, however, many problems to resolve in the future, including a more precise estimation of such plants' regional occurrence, which can be reliably

modelled for recent centuries, but not for the first millennium due to the lack of relevant climatic data.

Technological development in papermaking was conditioned by a number of coexisting factors, such as the local availability of raw materials and tools, as well as cultural habits originating from locally known technologies. Specific types of papermaking moulds were used in specific regions and possibly coexisted for periods in common areas. The results also show that artists and scribes made technological choices regarding paper, depending on the function of the objects they were creating. Understanding the broader Central Asian context of these results will depend on future analysis of material from other archaeological sites. The challenge for future work is also to learn more about the places in which the paper of those manuscripts was produced.

All these results are limited by the number of manuscripts tested. Additional data collected in the future may provide a more complete picture of the history of paper and allow us to map geographical locations together with time in order to pinpoint technological change, and ascertain what materials were outsourced and when. At this point, however, based on the limited collection of manuscripts tested, I can only share preliminary observations rather than a fixed overview.

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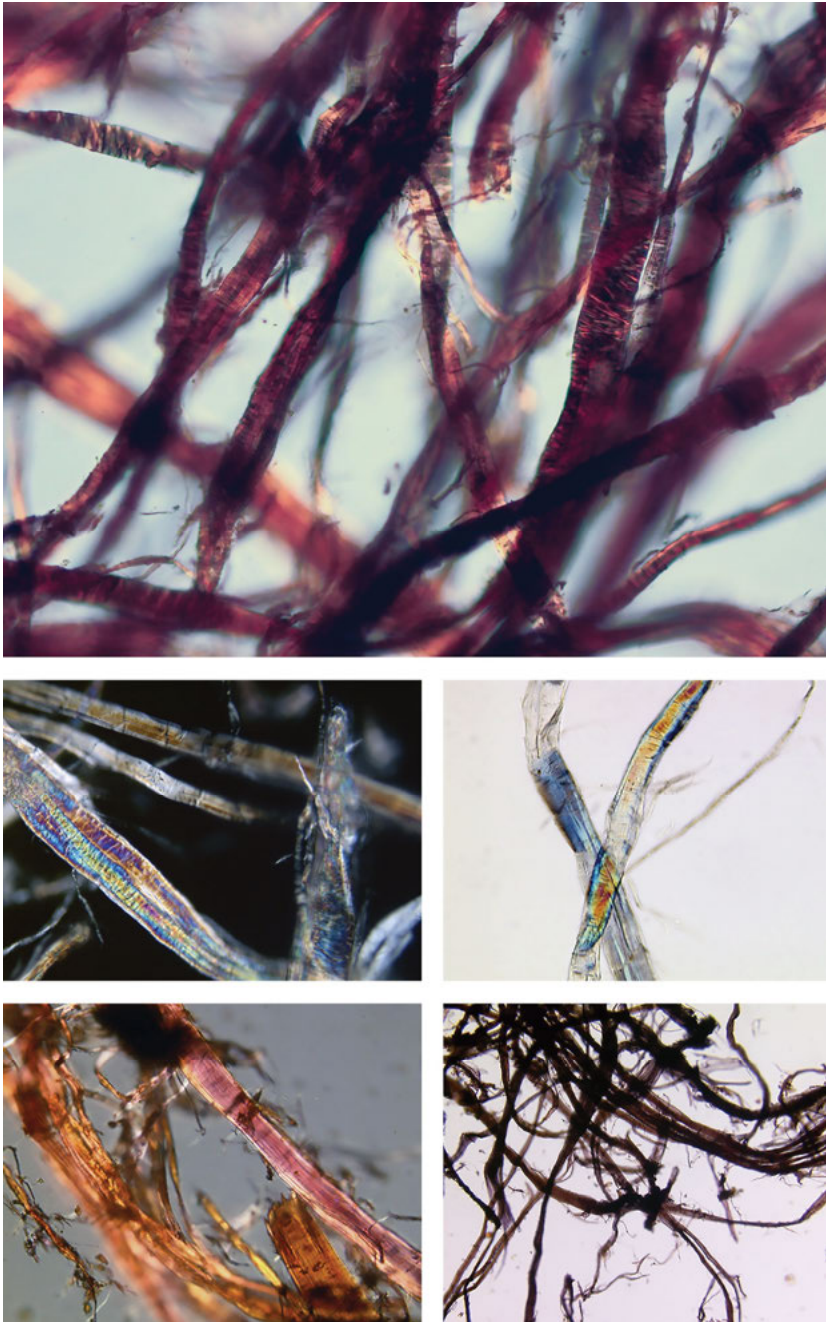
Fig. 2: Rag paper under the microscope. Photographs by Agnieszka Helman-Ważny.
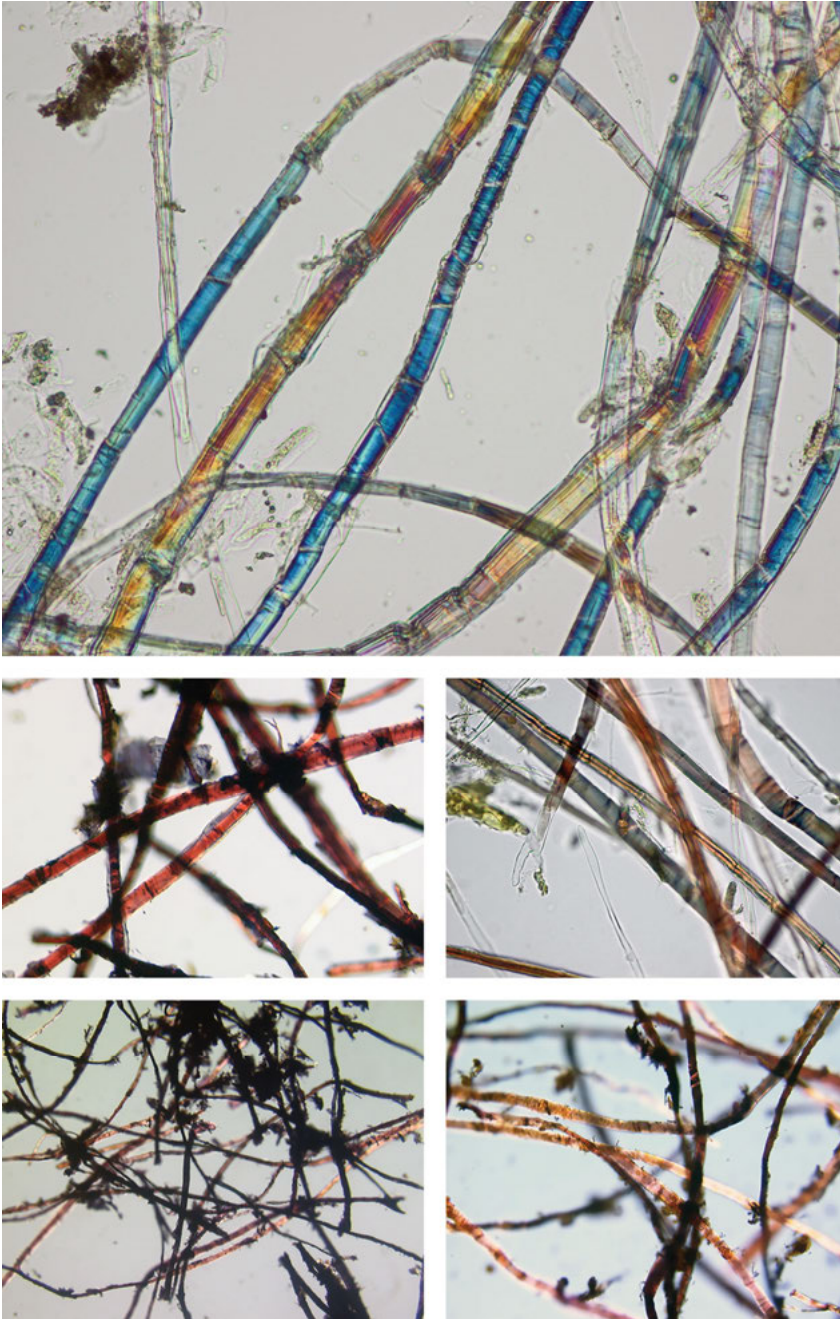
Fig. 3: *Paper mulberry* fibres under the microscope. Photographs by Agnieszka Helman-Ważny.
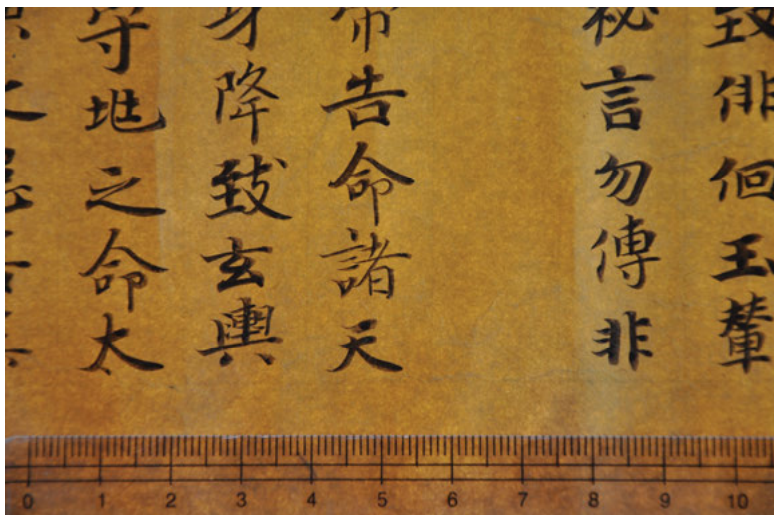
Fig. 4a: The woven paper made with a textile sieve in the manuscript archived as S238 from the British Library.

Fig. 4b: Technology of papermaking with a textile sieve.
Figs 4a–b: Photographs by Agnieszka Helman-Ważny.
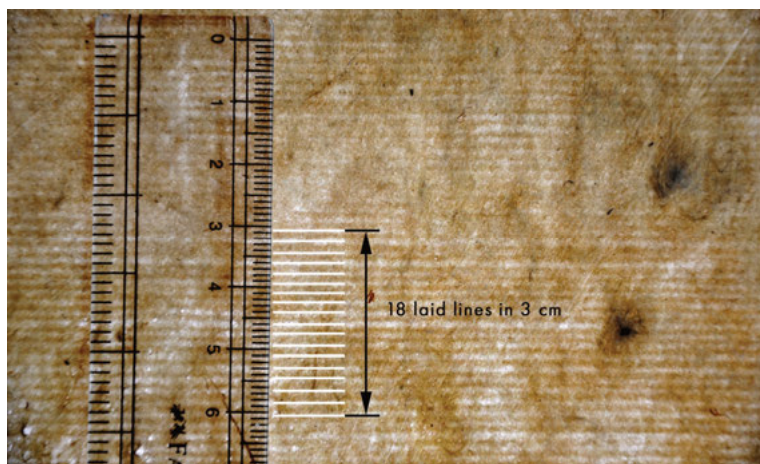
Fig. 5a: Number of laid lines in 3 cm.
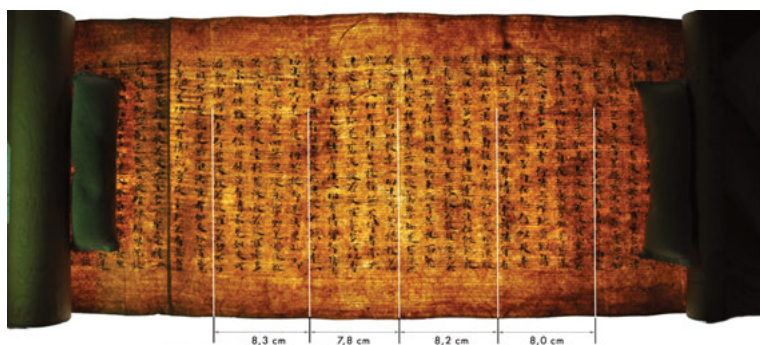
Fig. 5b: Chain lines intervals.

Fig. 5c: Laid paper made with the mould equipped with the bamboo sieve.
Figs 5a–c: Photographs by Agnieszka Helman-Ważny, diagrams by Dorota Helman.

Fig. 6: Examples of the paper observed against light in the manuscripts from the Silk Road. Photographs by Agnieszka Helman-Ważny (paper fragments from the manuscripts preserved in the British Library).

Tilman Seidensticker

Cataloguing Arabic Manuscripts for the Project 'Katalogisierung der Orientalischen Handschriften in Deutschland'

Abstract: This article presents and assesses the outcomes of the project 'Katalogisierung der Orientalischen Handschriften in Deutschland' (KOHD) achieved in the 'Arabic manuscripts' section of the *Verzeichnis der Orientalischen Handschriften in Deutschland* (VOHD). The article describes and explains the (sometimes heterogeneous) method of cataloguing and thus serves as a guide to these volumes. Special attention is paid to the introductions and the numerous manuscriptological findings contained in them. The online database *KOHD Digital*, successor to the printed series, is also briefly presented, with particular attention to the question of sustainability.

1 Introduction

By the end of the year 2022, a mammoth German academic project, which began in 1958, will be finished. The name of the project in question is 'Katalogisierung der Orientalischen Handschriften in Deutschland' (KOHD). As its name implies, the aim of KOHD is to provide a union catalogue of Oriental manuscripts in German collections. In the following pages, I give an overview of the cataloguing activities in one of the larger language groups, the field of Arabic manuscripts. My aims are to present and assess the outcome of the project's book series, *Verzeichnis der Orientalischen Handschriften in Deutschland* (abbreviated VOHD), to describe and explain the rather heterogeneous method of cataloguing in the volumes that appeared between 1976 and 2020, and to compare what has been accomplished in the printed volumes with the successor to the printed series, the online database *KOHD Digital*.

At the moment, a written work dedicated to the project's history does not exist. Nevertheless, ample material can be found in the introductions to the printed volumes (173 as of September 2020) as well as in the files (*c.* 185 in number) stored at the Staatsbibliothek zu Berlin – Preußischer Kulturbesitz (SBB), Orientabteilung. The following material outlines the background of the project. In November 1955, the Deutsche Forschungsgemeinschaft (DFG) issued a call for applications for the 'Priority Programmes' of 1956. After a significant delay,

Dr Wolfgang Voigt (at that time of Westdeutsche Bibliothek Marburg) submitted a four-page application for the project 'Katalogisierung orientalischer Handschriften' in October 1957. The application was based on intensive consultation with libraries in East and West Germany, with the Deutsche Morgenländische Gesellschaft (DMG), and with numerous professors of Oriental studies. Voigt's justification for the cataloguing project amounts to fourteen lines; he points to complaints by German and international researchers that no printed catalogues had been compiled for Oriental manuscripts acquired after about 1900 by German libraries or museums. The DFG's first grant letter is dated 11 March 1958 (see Fig. 2) and provides funding for eight full-time collaborators who could begin their work in February 1958.

The librarian Wolfgang Voigt (1911–1982) initially managed the project. At the same time, he also became editor of the project's publication series VOHD,[1] as would be the case for his successors too. Voigt held this position from 1958 until his death in 1982.[2] His first two successors were the SBB librarians Dieter George (1935–1985, head of KOHD 1982–1985),[3] and Hartmut-Ortwin Feistel (b. 1943, head of KOHD 1985–2013). Tilman Seidensticker, Professor of Arabic and Islamic Studies at the University of Jena and author of this article, has led the project since 2013.

There have been two major changes to the project since its founding. The first was a transition from DFG funding to the patronage of the Akademie der Wissenschaften zu Göttingen in 1990. The second change was in the medium of cataloguing. Since 2016, most of the results have been published in the online database *KOHD Digital* (more on this below). Nevertheless, all the catalogues which were planned and prepared prior to 2016 are still being published in print in the project's publication series VOHD. The number of collaborators, both full-time and honorary, along with their individual Oriental language specialisations, also varied over time.

Voigt made one notable miscalculation in his report. According to his prediction, 'even in the case of the large holdings in Islamic and "Indian" manuscripts, the work will be completed, if possible, in 1963'.[4] In reality, the work would be finished around sixty years later than Voigt had hoped. The delay was due to several factors, the most significant of which is that many libraries – not surprisingly – continued to acquire Oriental manuscripts after the project had

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1 Voigt 1957/58, 68–69.
2 On Voigt, see Ernst Hammerschmidt's obituary (Hammerschmidt 1985).
3 On George, see Martin Kraatz's obituary (Kraatz 1987).
4 Voigt 1957/58, 69.

begun. Furthermore, the first inventory listed around 14,000 Oriental manuscripts.[5] This figure was later corrected to 'more than 40,000' and then to 'more than 70,000'.[6] The increase was due not only to further acquisitions, but also to more exact (i.e. larger) figures furnished by the libraries. From the beginning, one factor has counteracted this increase of material. Voluntary specialists from Germany and abroad, who were not funded by the project, helped out by preparing numerous volumes. For example, since 2014, eight volumes have appeared which relied on such external assistance, comprising 3,850 pages in total.[7]

2 The VOHD sections treating Arabic manuscripts

Section (= sub-series) XVII *Arabic manuscripts* is specifically designated for descriptions of manuscripts in Arabic. For several reasons, other sections of the series also contain descriptions of Arabic manuscripts; these other sections shall be briefly mentioned before the main section and its specifics are presented in greater detail.

Ewald Wagner published a volume devoted to Islamic manuscripts from Ethiopia (XXIV, 2, 1997) in section XXIV *African manuscripts*. Descriptions of 139 Arabic works (from 88 manuscripts) are included. They stem from the archive of the Berlin-Brandenburgische Akademie der Wissenschaften (Nachlass Schlobies) and the author's collection, now in the possession of the Staatsbibliothek zu Berlin.

Section XXXVII *Islamic manuscripts* was created for smaller collections for which polyglot Arabic-Persian-Turkish experts could be found. Christian Arabic manuscripts were regularly included as well. Manfred Götz published a volume covering Nordrhein-Westfalen (XXXVII, 1, 1999), in particular the holdings of the Universitäts- und Landesbibliothek Bonn, the Universitäts- und Stadtbibliothek Köln, and the Kunstmuseum Düsseldorf. Within these 189 manuscripts, he found 104 works in the Arabic language. The next volume, written by Beate

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5 Voigt 1957/58, 69.

6 The figure of 40,000 is reported by Voigt 1966, viii; that of 70,000 by Treue in Franke et al. 1976, 3.

7 V, 2 Erica Hunter and Mark Dickens 2014; XII, 8 Hartmut Walravens 2014; XVIII, 11 Kathrin Müller 2014; XII, 7 Tsuneki Nishiwaki 2014; XII, 2 Renate Stephan 2014; XIII, 27 Dieter Maue 2015; XXXVII, 2 Manfred Götz 2015; II, 20 Siegfried Schmitt 2018; XVIIB, 14 Gregor Schoeler 2020.

Wiesmüller (XXXVII, 4, 2005), could well have been included in section XVII. It describes, besides a small number of non-Arabic manuscripts, 340 Arabic manuscripts from the Max Freiherr von Oppenheim Stiftung, now in the care of the Oriental Institute at Cologne University. In his Thüringen volume (XXXVII, 5, 2001), Florian Sobieroj describes the collection of the Thüringer Universitäts- und Landesbibliothek Jena, the Herzogin Anna Amalia Bibliothek Weimar, and a small remainder from the Forschungsbibliothek Gotha that was not described by Pertsch (1878–92). Within these holdings, there are 95 Arabic manuscripts with 139 Arabic works, as well as others with mixed Arabic-Turkish or Arabic-Persian texts.

Section XLIII was created for a specific type of Arabic manuscript, namely, the Arabic manuscript fragments from the Coptic monasteries Dayr Abū Maqār and Dayr Abū Pšoi; these fragments are now kept in the Staats- und Universitätsbibliothek Carl von Ossietzky in Hamburg. For this section, Veronika Six authored an 1170-page volume – the most extensive in the whole VOHD series (XLIII, 1, 2017, bound in two parts).

Finally, there are volumes that cover a small number of Arabic components in multi-text manuscripts[8] or in manuscripts with mixed Bohairic-Arabic content (XXI, 6 Ute Pietruschka and Ina Hegenbarth-Reichardt 2018). Mixed Bohairic-Arabic manuscripts, as in the latter volume, are also described in VOHD XXI, 1–5, but this fact is not evident from the catalogue titles.

The core section for manuscripts in Arabic is XVII *Arabic manuscripts*, divided into two subsections, A and B. The two volumes of subsection XVIIA, authored by Rudolf Sellheim (1928–2013), bear the subtitle *Materialien zur arabischen Literaturgeschichte* (XVIIA, 1–2, 1976 and 1987). Their contents exceed the expectations of a regular catalogue (see below, Section 4). The manuscripts he describes are an allegedly random selection (cf. VOHD XVIIA, 2, xi) from the holdings of the Staatsbibliothek zu Berlin – Preußischer Kulturbesitz, mainly from the shelf-mark group 'Ms. or. oct.'.

XVIIB is the core cataloguing subsection for manuscripts in Arabic. In this subsection, fourteen volumes were published between 1976 and 2020. Over roughly 7,300 pages, 4,318 Arabic manuscripts from the following libraries are described:

– Staatsbibliothek zu Berlin – Preußischer Kulturbesitz: XVIIB, 1: Ewald Wagner 1976 (362 MSS); XVIIB, 2: Gregor Schoeler 1990 (104 MSS); XVIIB, 3: Rosemarie Quiring-Zoche 1994 (199 MSS); XVIIB, 5: eadem 2000 (335 MSS); XVIIB, 6: eadem 2006 (311 MSS); XVIIB, 7: eadem (with Beate Wiesmüller)

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8 XIII, 3 Hanna Sohrweide 1974; XIV, 2 Soheila Divshali and Paul Luft 1980.

2015 (243 MSS); XVIIB, 13: eadem 2019 (724 MSS); XVIIB, 14: Gregor Schoeler 2020 (263 MSS). The work on this library's holdings is still in progress, with new descriptions appearing in *KOHD Digital*.

– Bayerische Staatsbibliothek München (BSB): XVIIB, 8: Florian Sobieroj 2007 (275 MSS); XVIIB, 9: idem 2010 (330 MSS); XVIIB, 10: Kathrin Müller 2010 (310 MSS); XVIIB, 11: eadem 2014 (170 MSS); XVIIB, 12: Florian Sobieroj 2018 (759 MSS). This library's formerly uncatalogued holdings[9] are now all catalogued in the aforementioned volumes.

– Niedersächsische Staats- und Universitätsbibliothek Göttingen: XVIIB, 4: Tilman Seidensticker 2005 (44 MSS). Together with the large remainder of around 620 manuscripts, described by Florian Sobieroj in *KOHD Digital*, the formerly uncatalogued holdings of this library[10] have been catalogued in their totality as part of the KOHD project.

The uncatalogued Arabic holdings of the Staats- und Universitätsbibliothek Hamburg[11] (besides the Christian Arabic fragments catalogued by Veronika Six; see above): 62 manuscripts, have been catalogued by Frederike-Wiebke Daub in *KOHD Digital*.

In the future, smaller collections of uncatalogued Arabic manuscripts from some libraries, such as the Universitätsbibiothek Tübingen, will be included in *KOHD Digital*, if there is capacity until the end of the project in 2022.

It was decided at the beginning of the project that each volume would be arranged systematically; 'for scientific reasons and in the users' best interest'.[12] According to the rules of orthodox codicology, this is a mistake. In the case of multi-text manuscripts, it has been asserted that the codicological connexion between components is torn apart through systematic arrangement. This allegation, however, does not hold, since the codicological information of all multi-text manuscripts is given at the beginning of the description of the first part. Immediately after the description of the first part, there is a short list that lets the user know which other parts follow and where they can be found in the catalogue. In this way, it is possible to change from a systematic arrangement to an alternative codicological arrangement without losing information.

Nevertheless, in some cases, arrangement according to ascending shelf marks was preferred. In the case of XVIIB, 4 (Göttingen, Seidensticker): where

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9 That is, the manuscripts not catalogued in Aumer 1866.

10 That is, the manuscripts not catalogued in Meyer 1894.

11 That is, the manuscripts not catalogued in Brockelmann 1908.

12 Voigt 1957/58, 71.

just 44 manuscripts with 80 works are contained in one volume, an arrangement according to content seems to be of little use. In the volumes XVIIB 8 and 9 (BSB), Florian Sobieroj has also followed an arrangement according to shelf marks. In his first volume, XVIIB, 8, this arrangement seems to be particularly justified because it allowed a collection of Yemenite manuscripts bought from Eduard Glaser to be kept intact. In XVIIB, 14, Schoeler catalogued the Arabic parts of the format-related shelf-mark group 'Ms. or. fol.' of the SBB, and here too, an arrangement according to *numerus currens* seems to be more appropriate.

The sequence in which the collections of individual libraries were catalogued differs greatly. In the case of the Bayerische Staatsbibliothek, two experts, Sobieroj and Müller, worked simultaneously. They decided to approach the job like workers digging a tunnel from both ends. The Munich volumes XVIIB, 8 to 12 cover the shelf marks Cod. arab. 1058 to Cod. arab. 2820 in the approximate sequence A, B, E, D, and C. Things were more complicated in the case of the Staatsbibliothek zu Berlin, where four people were involved in cataloguing (Sellheim, Wagner, Schoeler, Quiring-Zoche). The shelf marks here are more complicated, since the Arabic collections are just a smaller share of four shelf-mark groups ('Ms. or. fol.', 'Ms. or. quart.', 'Ms. or. oct.', 'Hs. or.' [after 1945]). In two cases the authors were allowed to make their own choice from the shelves (XOHD XVIIA, 1–2, Sellheim; XVIIB, 2, Schoeler). This latitude makes it even more important than in the case of the Bayerische Staatsbibliothek to provide a general index for all the volumes. It was decided that this index should not be a printed index but rather be included in the project's database.

3 The database *KOHD Digital*

When the final KOHD phase (2016–2022) was planned, it soon became clear that much tighter cataloguing would be necessary. The numbers of uncatalogued manuscripts amounted to 1,400 Old Turkic, 1,230 Persian, 1,850 Sanskrit, and 3,300 Tibetan manuscripts. In the case of Arabic, there was a remainder of about 3,000 uncatalogued manuscripts. Online cataloguing was seen to be the best medium; printed volumes were considered an exception from then on.

The design for the database[13] did not need to be reinvented; rather, the project could build upon a database developed in a DFG-funded project (Verena Klemm, Leipzig University) that was intended for the Arabic, Persian, and Turkish manuscripts of Leipzig University Library.[14] The data model for that database was largely built upon KOHD's description scheme. Between 2016 and 2019, the *KOHD Digital* model was gradually adapted to fit other language groups included in the KOHD project.[15]

This step uncovered huge differences between the manuscript cultures, an insight that had previously been hidden by the numerous sections and subsections in the VOHD series. Nevertheless, it proved possible to create a data model that was appropriate for all language groups and subgroups.

The final data model allows almost everything mentioned in the printed catalogues to be included. On the other hand, the approaching end of funding made it necessary to confine the work to the following elementary data:

1. Shelf mark
2. Possessing institution
3. Author
4. Biographical data
5. Author: bibliographical reference
6. Work title
7. Incipit in original script
8. Subject matter[16]
9. Number of folios
10. Measurement of folios/text areas
11. Number of lines
12. Copyist
13. Date of writing
14. Place of writing

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13 In fact, the project had to design a second database because the specifics of the Coptic literary papyri catalogued in the Berlin workgroup 'Coptic manuscripts' demand a special treatment. Descriptions of the papyri, parchments, paper manuscripts, and ostraca are recorded in the database *KOHD Coptica* <https://coptica.kohd.adw-goe.de> (accessed on 22 April 2021, as all the other links quoted in this article).

14 <https://www.islamic-manuscripts.net/content/index.xml>.

15 Both *KOHD Digital* and its Leipzig precursor are, on the level of data processing, much obliged to Jens Kupferschmidt (Computing Centre of Leipzig University).

16 To develop a universal thesaurus for subject matter that is applicable to all language groups seems to be an almost insuperable task. Therefore, the present subject-matter taxonomy is quite rough.

15. Completeness
16. Reference to further copies
17. Glosses
18. Remarks

In practice, additional information can be given, and not only in the final 'remarks' field. If, for example, the cataloguing expert is able to easily identify a special type of script or the specific content, he or she can include this information in a data field specifically provided for this sort of metadata, and this field will then be visible to the users; if empty, it will not be visible.

Online databases have marked benefits, primarily instant worldwide accessibility and the possibility to correct mistakes and to add information retrospectively. On the other hand, their sustainability is limited in comparison to printed volumes, even beyond the question of data backup. A comparison with smartphones is revealing. Smartphones are technical marvels when they are released; their memory capacity and processing power massively dwarf that of the models they replace. Nevertheless, they all fail and turn into high-tech trash within ten years. It is the same with databases. The rapid changes in hardware, operating systems, and other software prohibit any predictions about whether a database will be (safely) usable even just a decade after the project's completion.

In the case of *KOHD Digital*, a way towards sustainability was found, based on the assumption that the possessing libraries are, in the long term, better able to provide data sustainability than anybody else, including the Göttingen Academy of Sciences and Humanities. Among German libraries, the Staatsbibliothek zu Berlin is the greatest with respect to its collection of Oriental manuscripts, and this library has accepted its share of responsibility in a highly constructive manner. A major DFG grant will allow the SBB to establish, from 2020 to 2023, a digital union catalogue that will provide fundamental metadata of Oriental manuscripts stored in almost all German libraries. The project was designed by Christoph Rauch, head librarian of the Oriental Department, who plans to start this work by focussing on manuscripts in Arabic script. A second project phase (2023–2025) may ensure that data from South Asian and Turfan manuscripts can be included as well. Data from printed catalogues published prior to or outside the VOHD series, as well as data from the VOHD series and from *KOHD Digital*, will be contained on this platform, *Orient-Digital*. (Meanwhile, the problem of

sustainability for databases of recent decades has been identified on the level of the DFG as an important general task.[17])

4 The method of cataloguing

Before work started, Wolfgang Voigt published a detailed cataloguing scheme that was mandatory for all language groups.[18] A number of experts had deliberated on it during the 24th International Congress of Orientalists in Munich in 1957.[19] This scheme tended to be rather exhaustive but at the same time it restricted some type of information, which was allowed only in special cases (such as precious bindings, rare writing support, incomplete or incorrect foliation, etc.). When in 1976 the first two Arabic volumes were published (VOHD XVIIA, 1 Sellheim; XVIIB, 1 Wagner), a strange disagreement about the appropriateness of the scheme as applied to Arabic manuscripts became obvious. While Wagner stuck to Voigt's instructions and thus set standards for future XVIIB volumes, Sellheim denied that catalogues such as Wagner's were a meaningful enterprise.[20] Short handlists, Sellheim argued, were senseless because for that purpose one could simply print the libraries' accession books.[21] On the other hand, more detailed descriptions were hardly reasonable in Sellheim's eyes, because, as he wrote, the majority of manuscripts contain books or treatises that had been presented in previous catalogues or that have even been printed.

What Sellheim deemed desirable was *to advance research in cataloguing*, by ample reference to secondary or primary literature. The final aim of his work was nevertheless nothing more than to heap up material, in his words, '... daß sich folglich die Katalogisierung zu einer originären, aktuellen und anregenden Materialsammlung ausweitet'.[22] In his two volumes, this interpretation of the

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17 The initiative *National Research Data Infrastructure* (German abbreviation: NFDI) will, according to a letter of intent from 2020, try to preserve the ruins of as many former database as possible; cf. <https://www.dfg.de/en/research_funding/programmes/nfdi/index.html>.
18 Voigt 1957/58, 72–75.
19 George 1983, 159.
20 VOHD XVIIA 1, xvi–xvii. The principal thoughts of Sellheim's introduction had already been published two years earlier in a programmatic article bearing the title 'The Cataloguing of Arabic Manuscripts as a Literary Problem' (Sellheim 1974).
21 In recent decades it has become clear that in countless cases the accession books are unreliable.
22 VOHD XVIIA, 1, xvii.

task brought forth graphic tables with transmitter chains, genealogical trees of authors, scribes, commentators, and former owners, stemmata of commentaries and glosses, and much more. These scholarly digressions are highly valuable for special aspects of Arabic literature and its transmission, but they are decidedly not what one would look for in a manuscript catalogue. Any ambition to make the masses of Arabic manuscripts accessible to the scholarly public demands more pragmatism than Sellheim was willing to allow.

Being committed to Voigt's scheme and, of course, Wagner's paradigmatic volume XVIIB, 1, the remaining thirteen volumes of the Arabic XVIIB section exhibit diversity in detail. To some extent, the authors were free to pay particular attention to aspects they regarded as especially important. From about 2010, all participants were aware of the project's approaching phase-out. Nothing can illustrate this change better than Rosemarie Quiring-Zoche's two volumes VOHD XVIIB, 7 and 13, both devoted to manuscripts from the SBB and compiled more or less simultaneously. In this case, the project's obligation to make sufficient progress resulted in a bipartite course of action. Quiring-Zoche decided, based on decades of experience, which manuscripts merited a long description (in VOHD XVIIB, 7). The remaining manuscripts were catalogued in a short format that was, up to that point, unusual (in VOHD XVIIB, 13), taking Rudolf Mach's *Catalogue of Arabic manuscripts (Yahuda section) in the Garrett Collection, Princeton University Library* (Princeton 1977) as a model. As Fig. 1 shows, for each work (a) its title, (b) the author, (c) his dates, including references, and (d) the incipit[23] are given. For the manuscripts (six in that example), only (e) shelf mark, (f) number of folios, (g) number of lines, (h) text-area measurement, (i) name of the scribe, and, if known, (j) the place and date of writing are given.

In this way, each manuscript is described in no more than one or two lines. By contrast, in her other volume, XVIIB, 7, Quiring-Zoche devotes about one page to each work, and in some instances even more (for example, three and a half pages in the case of no. 71, pp. 60–64). Although the resemblance of volume 13 to a handlist is exceptional in the XVIIB section, the format did allow a forward leap of 724 manuscripts in describing the SBB's Arabic holdings within a short time.

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23 It is inevitable that in this way the incipit is a standardized version; in other volumes the actual incipits, with their mistakes and deviations, are given.
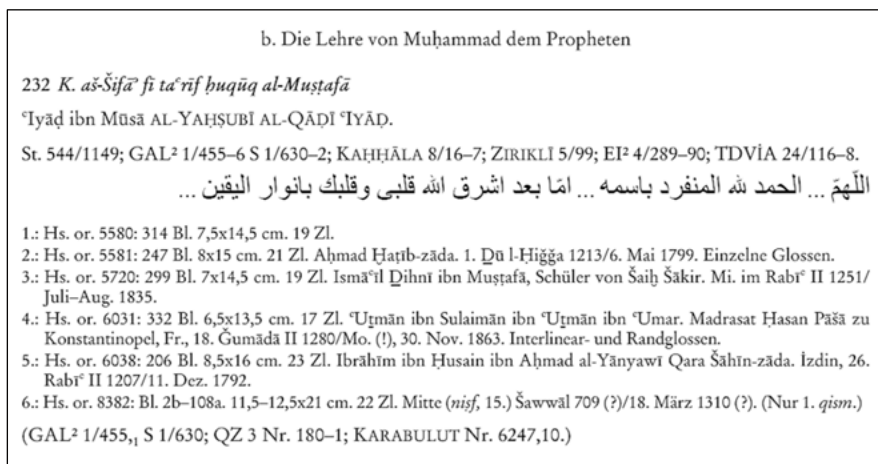
Fig. 1: Cut-out from VOHD XVIIB, 13, 56, showing the entry for a famous work on the prophet Muḥammad from the sixth century AH (twelfth century CE). Six copies are listed in a total of nine lines.

5 The introductions

Catalogues, which describe manuscripts one by one, cannot be properly used without indexes. The basic indexes include those referring to titles (in Arabic script and in transliteration), authors, scribes, and dated manuscripts. In addition, (a) places and buildings and (b) things (*Sachen*), terms, and groups of persons (XVIIB, 3, 5–12) can be made accessible by providing separate indexes. When it seemed appropriate, indexes of illuminated, illustrated, or otherwise particularly ornamented manuscripts were given (XVIIB, 2, 8–9). Further indexes of single collections or provenance (Yemenite, Maghribī) are provided in two volumes (XVIIB, 1 and 7). Nevertheless it is the introductions that are the most important place for presenting observations of a more general character. They contain a wealth of information, some aspects of which are presented in the list below.

– Although the indexes of dated manuscripts are an important and obligatory guide to the age of the manuscript in question, most introductions supply additional information on this subject, as well as tables showing the distribution of the volume's manuscripts according to century.

– Manuscripts containing unique, rare, or (in some sense) important texts are treated in detail, as are autographs or copies closely related to them. These paragraphs are particularly important to philologists.

- When components of separate collections are contained in the catalogued manuscript groups, the background of these collections is covered. Ewald Wagner has given an overview of the collection of Rushayd Daḥdāḥ (XVIIB, 1, xvi–xvii); Rosemarie Quiring-Zoche has sketched the characteristics of the so-called Rescher collection, which mainly stems from the *medrese* milieu in Turkey and in the Balkans under Ottoman rule (XVIIB, 3, xii–xiii).[24] The Bayerische Staatsbibliothek München owns 154 manuscripts from Yemen, acquired from Eduard Glaser. In a separate part of his introduction to XVIIB, 8 (pp. xxi–xxxviii), Sobieroj discusses these holdings, including their background, content, specifics, etc. A group of 26 manuscripts from the SBB, shelf-mark group 'Hs. or.', also originates from Yemen; their specifics are described by Quiring-Zoche in XVIIB, 7 (pp. xiii–xvi).[25] Arabic manuscripts from the Maghreb are easily identified by their specific script. In XVIIB, 7, a separate section of the introduction is devoted to the 15 Maghribī codices, especially their thematic range, described in that volume by Quiring-Zoche (pp. xvi–xviii). A very special type of provenance, quite common in the older holdings of German libraries, is the *Türkenbeute*, that is, spoils from the wars between European powers and the Ottoman Empire.[26] In his Thüringen volume (XXXVII, 5), Sobieroj studied the collections that were acquired in this way and are kept at the libraries in Jena and Weimar (xiii–xiv). A shorter section of the introduction to XVIIB, 7, by Quiring-Zoche, is devoted to the same type of collection held by the SBB (p. xix).
- Closely related to the question of collections and provenance is the matter of former (particularly Oriental) ownership. In the introductions to volumes XVIIB, 3, 5–8, and 12, the former owners are discussed. In XVIIB, 3, Quiring-Zoche analyses their professions (p. xx). In XVIIB, 6, xiii–xiv, she presents the chain of owners as preserved by notes in the 1170 AH /1756–7 CE copy of an Arabic dictionary. It was copied in Baghdad, purchased by a Damascene Christian monk, later sold to Shiraz, and finally came into the possession of a family member of the Iranian ruler Nāṣir al-Dīn (reigned 1264–1313 AH / 1848–1896 CE) (pp. xii–xiii).

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24 Quiring-Zoche's cataloguing work on the Rescher collection led her to author an article on Arabic literature in the Ottoman Empire; see Quiring-Zoche 1989.

25 For further studies specifically devoted to Yemenite manuscripts, see Quiring-Zoche's volume XVIIB, 7, xiii, n. 2.

26 On the *Türkenbeute*, see Seidensticker 2017, 78–80.

- The scribes have been a topic of interest in several introductions (XVIIB, 3, 8–9, 12). Quiring-Zoche has written about their professions (XVIIB, 3, xx); Sobieroj presents important results concerning their mode of working, especially the time it took to copy manuscripts (XVIIB, 8, xxx–xxxi; 9, xviii–xix). In XVIIB, 12, xxv–xxvi, Sobieroj deals with manuscripts that were written for the scribes' own use.
- Art historians might be interested in illuminated and illustrated manuscripts or those written by calligraphers. Beyond the aforementioned indexes, some introductions devote special attention to such holdings, including Schoeler's volume XVIIB, 2, xvii; Sobieroj's volumes XVIIB, 8, xviii and XVIIB, 9, xvii; Schoeler's volume XVIIB, 14, xvi–xvii; and Quiring-Zoche's volume XVIIB, 7, xix–xx. The bindings are given special attention in the last-mentioned volume, pp. xx–xxii, as well as in Müller's volume XVIIB, 11, xxii–xxiii.

Notwithstanding the increasing time pressure, the authors were able to pay due attention to detail. In this way, the introductions yield an increase of manuscriptological knowledge in many instances. For example, in XVIIB, 8, Florian Sobieroj was able to present a formerly unknown, specifically Yemenite Arabic term, *qaṣāṣa*, which obviously denotes some sort of collation (p. xxv). On the doublures of two Yemenite manuscripts, he also detected notes about marriages (p. xxxvii, n. 55). While the use of Arabic manuscripts as a family register is, generally speaking, a well-known practice, any mention of spouses was previously unknown. Some years later, Rosemarie Quiring-Zoche announced a similar discovery in another Yemenite manuscript (XVIIB, 7, xv). The XVIIB volumes do not pay particular attention to watermarks, but Kathrin Müller decided to do so in her two volumes XVIIB, 10 and 11 (and provided indexes for them). While it was previously known that in Venetian paper the three-crescents watermark (*tre lune*) began to dominate by the second half of the eleventh century AH (seventeenth century CE), in her introduction to XVIIB, 10 (p. 23) Müller draws attention to *tre lune* watermarks in a manuscript written in 1035 AH / 1626 CE.

6 Conclusion

That catalogues published over a span of forty-five years by several authors differ in many respects is no surprise. The background for these differences given in this article demonstrates that, for several reasons, there is not just one adequate or correct method of cataloguing. The wealth of information to be

found in many of the different volumes' introductions shows that one type of information will be lost during the transition from print publishing to databases: even though the introductions comment on sometimes random selections of manuscripts, observations about collections and groups of manuscripts, made by people with intimate knowledge of these selections, are rarely accomodated in databases. It is hoped that the cataloguer's focus on manuscript groups and the commonalities within these groups will somehow survive the change of media.

Acknowledgements

Abbreviations

BSB	Bayerische Staatsbibliothek München
SBB	Staatsbibliothek zu Berlin – Preußischer Kulturbesitz
VOHD	*Verzeichnis der Orientalischen Handschriften in Deutschland* (see below; all references to the VOHD volumes can be checked on the project's website: <https://adw-goe.de/forschung/forschungsprojekte-akademienprogramm/kohd/publikations-serie/>.)

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Fig. 2: DFG grant letter, directed to Wolfgang Voigt; photocopy of the original document, contained in the file 'Schwerpunktaufgaben DFG. Handschriftenkatalogisierung. I', which is stored in the files of the KOHD project, Staatsbibliothek zu Berlin – Preußischer Kulturbesitz, Orientabteilung. (The personnel costs of 78,400 German marks amount to 9,800 German marks annually per person, which is surprisingly low. A year later, the sum of 15,034 German marks annually per person was calculated, due to improved pay scales; cf. Voigt's letter to the DFG, dated 21 Jan. 1959, same file.)

Antonella Brita, Janina Karolewski

Unravelling Multiple-Text Manuscripts: Introducing Categories Based on Content, Use, and Production

Abstract: In recent years, multiple-text manuscripts (MTMs) have attracted growing academic interest. MTMs deserve ample attention, since they constitute the majority of manuscripts in many cultures. The aim of this article is to categorize MTMs in a way that goes beyond textual content or mere codicological features. Focusing on and combining three aspects (content, use, and production), we propose the following categories: *Petrified MTMs*, *Intertwined MTMs*, *Open MTMs*, *Repurposed MTMs*, and *Recycled MTMs*. These MTM categories reflect commonly shared phenomena and can be applied to MTMs from various manuscript cultures. At the centre of our approach is an attempt to better understand the projects behind MTMs. In this way, we seek to analyse and categorize MTMs with regard to their emergence, transmission, use, reception, and perception.

1 Introduction

The present article evolved from an ongoing discussion about multiple-text manuscripts (MTMs) which took place within the framework of the Sonderforschungsbereich 'Manuskriptkulturen in Asien, Afrika und Europa' at the Universität Hamburg, beginning in 2011.[1] More specifically, the article has its beginnings in the workshop 'Typology of Multiple-Text Manuscripts', organized by the authors of this article, together with Martin Delhey and Vito Lorusso in April 2016.[2] After our many discussions about these manuscripts, we have aimed at unravelling the 'MTM net'. Our contribution, which is only a first at-

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1 The concept of multiple-text manuscripts has been variously investigated in recent years: the phenomenon and related terminology have been described by Maniaci 2004; Gumbert 2004; Gumbert 2010; Bausi 2004; and Bausi 2010; recent collective volumes have been edited by Friedrich and Schwarke 2016; and by Bausi et al. 2019.
2 Papers were presented by Michael Baldzuhn, Wiebke Beyer, Jonas Buchholz, Philippe Depreux, Jens Gerlach, Kaja Harter-Uibopuu, Gisela Procházka-Eisl, and Thies Staack. We would like to thank all of them for providing valuable insights which stimulated the present article.

tempt at an elaborated typology of MTMs, focuses mainly on codex manu-
scripts. We hope that colleagues working on non-codex MTMs will follow up on
the categories that we propose here and adapt them based on the material
available in their respective manuscript cultures.

The MTMs discussed in the following pages are 'made up of more than one
text and have been planned and realized for a single project with one consistent
intention; as a result, they are usually made of a single production unit'.[3] The
project behind an MTM can be realized over a shorter or longer period of time
and by one or more than one person. In some cases, the production unit is made
with the space to accommodate only the fixed number of texts that are meant to
be included. In other cases, this unit can be expanded over time by adding fresh
leaves to accommodate additional texts.[4] In still other cases, the unit can be a
blank book, which the MTM-makers either assemble themselves or purchase as
a ready-made notebook. And last but not least, there are cases in which the
project implies the use of an existing codicological unit from a previous project,
whether that unit is an MTM or a single-text manuscript (STM).[5] MTMs can be
single-volume or multi-volume manuscripts. Composite manuscripts, which are
distinct from MTMs, will not be considered in our discussion. Therefore, we
exclude manuscripts that were enlarged by the addition of a circulation unit or
parts of it.

Typologies or classifications of MTMs exist in various disciplines and are of-
ten concerned with the content of these manuscripts. In Turkish and Ottoman
studies, for example, there have been several attempts to refine existing classi-
fications or to introduce new ones – usually with a focus on genre, theme, and
authorship.[6] In the field of European codicology, the recently proposed classifi-
cations consider both textual and codicological aspects.[7] In 2010, Alessandro
Bausi described the *Corpus-Organizer*, an MTM category based on the following
three criteria: content, use, and production.[8]

Taking up the combined approach of Bausi, we focus on the same three as-
pects to identify other MTM categories. The intricate relationship between the

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3 Bausi et al. 2019, vii.

4 Cf. 'UniProd-MC' in Andrist et al. 2013, 60, or 'enlarged unit' and 'extended unit' in Gumbert
2004, 31–33.

5 Cf. 'UniProd-C', 'UniProd-MC', and 'Uni-Prod-C-MC' in Andrist et al. 2013, 60.

6 For a short summary, and the plea for a 'detailed, painstaking classification' of personal
MTMs, see Procházka-Eisl and Çelik 2015, 7–8.

7 Cf. for instance 'codice monotestuale/pluritestuale monoblocco' in Maniaci 2004, 82 and 87–
90; 'monomerous' in Gumbert 2004, 26–29.

8 Bausi 2010a.

content, use, and production of MTMs is as self-apparent as it is with all manu-scripts.[9] For instance, an MTM used in rituals by more than one person can have features that differ from those of an MTM produced by a single person for pri-vate study. More concretely, a ritual manual for communal use is more likely to exhibit neat handwriting and a self-contained text structure, while to an outside observer the private notebook of a scholar may appear less carefully written or less well arranged. In such cases, the combination of decisive features related to use, production, and content can help us to identify various MTM categories.

Therefore, our treatment of MTMs focuses on the projects behind these manuscripts. Detecting the various layers of a notebook, for example, is a start-ing point of the analysis we propose. Next, however, we would examine the relationship between these layers and the relationship of these layers to the MTM project or projects. In short, following Patrick Andrist, Paul Canart, and Marilena Maniaci,[10] we propose to tease apart the layers of a codex and try to associate the individual layers to distinct projects. In so doing, we seek to better understand whether an MTM was planned from the beginning to consist of vari-ous layers or was designed as a single production unit.

In addition, we compare observations regarding individual MTMs with other manuscripts from the same context as well as related contexts. In the case of content, for example, we suggest an informed comparison of the MTM(s) in question with other manuscripts carrying similar or related texts. In this way, we seek to better understand and categorize MTMs with regard to their emer-gence, transmission, use, reception, and perception. Needless to say, only a few cases allow such a multifaceted investigation, which demands ample historical sources, including both manuscript evidence and secondary literature. But it is from these studies that we are able to learn more about cultural patterns, which can inform our hypotheses about MTMs with a less well-documented history.

2 Content

The most obvious question to ask about MTMs concerns their textual content. With or without sufficient information about the context in which an MTM was used and produced, our starting point is the identification of the texts collected, followed by an analysis of their content, with particular attention to the order in

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9 Cf. Wimmer et al. 2015.
10 Andrist et al. 2013.

which the texts appear. This examination focuses on the combination of at least the following criteria: (a) genre, (b) theme, (c) text form, (d) text structure, (e) text organization within the manuscripts, (f) language.

The identification of some of these criteria can be problematic, since they are abstract concepts created within the scholarship of specific (mostly Western) cultures. The reception, variety, and diversity of genres, themes, and text-forms in non-Western cultures do not necessarily reflect categories that are valid for Western scholars. Therefore, while the different languages in an MTM can be objectively discerned (independent of linguistic arguments, such as whether they are proper languages or dialects of the same language), the understanding of genre, themes, text structure, or text organization largely depends on subjective evaluation and in-depth knowledge of the literary and material patterns proper to specific cultures across time. Hence it is possible that some researchers will characterize the same MTM as unorganized and others as systematic, depending, for example, on their individual expertise and familiarity with similar manuscripts within a specific manuscript culture or across several such cultures.

To better understand and classify MTMs, the individual texts and their arrangement in the manuscripts need to be evaluated and compared both in synchronic and diachronic perspective. In the first case, a contrastive analysis of the manuscripts produced in the same milieu and period and transmitting the same or similar content can reveal precious information regarding the presence and diffusion of specific MTM forms. In the second case, analysing the transmission of the individual (or groups of) texts attested in the MTMs can reveal: (a) the genesis of each individual manuscript, (b) the process behind the formation of specific MTM forms, (c) whether texts that had previously circulated in STMs or in MTMs were rearranged in new MTM forms, and (d) the reasons behind this process.

3 Use

Like all other manuscripts, each MTM is made to fulfil the needs of its users – whether they are the MTM-makers themselves, the commissioners, or others, who are not actively involved in making the manuscript, but are supposed to use it later. These needs depend on various factors, among which the following may be named as examples: (a) context(s) of use, (b) number of users, (c) mode(s) of use.

The making of MTMs is present in many cultural contexts, but there is a remarkable number of individual MTMs that belong to the educational, professional, and ritual, or liturgical, contexts, to name just a few. In many cases, these contexts are not easily separable. For instance, education covers scholarship, which is also a professional activity and can be concerned with ritual. However, or precisely because of this, it appears that in many cases MTMs were best able to meet the demand of some manuscript users and were a popular choice when circumstances allowed. As Alessandro Bausi outlined,

> [...] one of the main tasks carried out in a manuscript culture by a MTM [...] is to fix the intellectual production of a given time, plan to transmit it to the future, and interact with that transmitted from the past or excerpting and adapting new materials of different provenance from different linguistic and cultural domains. This goal is achieved by putting in direct, physical contact, and consequently in conceptual proximity, different knowledge from different times, places, and contexts, causing hybridizations, new alchemies, and new interpretations, by transferring mental assumptions to the physical level and vice-versa.[11]

Pupils, scholars, judges, and ritual practitioners, for example, compiled their own text collections, tailored for their specific and personal needs. It is assumed that many personalized MTMs remained in the hands of their compilers and were not accessed by other users. Such personal use can be mirrored in the organization or layout of personal text collections, whose features may be less obvious to outside observers. There are of course manuscripts that exhibit later use or reuse, but this subsequent use is not to be confused with a continuation of the project behind an MTM, which can include successive producers and users.

Manuals that assemble texts for various kinds of performances, most prominently for rituals, constitute another common type of MTM. These collections of prayers, hymns, invocations, or formulae are often prepared for several users, such as the religious specialists of a given congregation or the members of a ritual community. These MTMs may be used during the ritual, to facilitate reading aloud or singing, for example, or they may serve as templates for memorization or as aides-memoires. Such manuals may belong to congregations or communities that commissioned their production, retained them in their custody, and sometimes adapted them to ritual changes.

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11 Bausi et al. 2019, ix.

4 Production

Our understanding of MTMs not only relates to their content, but also defines them in accordance with their production: an MTM usually encompasses one production unit and is the result of a single project. What at first reads as simple can become complex in reality. A single MTM-maker, who outlines the project, accomplishes it without help, and does so in a fixed period of time, is the simple case. Even if we think of multi-volume MTMs or a group of MTM-makers, for example, artists in a workshop or a circle of scholars, such projects are rather straightforward.

Among the more complex cases are MTM projects that imply continuous work on the codicological units and that did not predetermine in detail which texts were to be included. Individual notebooks or commonplace books are such cases, since the makers of these MTMs planned to gradually add texts and, when needed, to enlarge the codicological units by inserting fresh leaves or fascicles, for example, or to continue in a new volume. Other examples are MTMs that were compiled by more than one person, such as *Hausbücher*, archival registers, and albums of friends (*alba amicorum*), whether such manuscripts belonged to a family or an institution, as in the first two cases, or were meant to remain with a single person, as in the case of an *album amicorum*. Some of these manuscripts consist of ready-made blank books, available at premodern stationeries and bookbinders; other such manuscripts were assembled and prepared by those who kept them. We call these manuscripts *Open MTMs*, and we will elaborate on them shortly.

MTMs whose makers made use of an existing, text-carrying codicological unit in order to realize their projects constitute another case both intricate and common. Numerous are the examples from various manuscript cultures in which an MTM was made by starting from a previous production unit and adding new texts such as translations, commentaries, and many other kinds of texts, which relate to the content of the existing production unit. Sometimes, by starting with a manuscript containing a work and adding more text to it in empty margins, on blank pages, in between lines, or on attached empty leaves, the MTM-makers turned an STM into an MTM. Other times, we observe that MTM-makers started their own project by reusing a previously prepared MTM.

For us as scholars, it can be hard to distinguish subsequent additions which are part of the same project from subsequent projects in the same codicological unit. Yet because the phenomenon of reusing codices to form MTMs is widespread in some cultures we include it in the category of *Repurposed MTMs*; we will delve into its details and give examples shortly. In *La Syntaxe du codex*,

these phenomena are approached through the concept of layers.[12] We see this codicological approach as parallel to our perspective, which considers the stratigraphy of the codex within the framework of MTM projects.

The differences between MTM projects can become visible in the manuscripts' layout features. Some MTMs have a visual organization designed to host the various texts and facilitate navigation back and forth between them. We can assume that the makers of such manuscripts prepared a suitable layout from scratch, sometimes employing existing layout conventions. In some cases, the contents were arranged in running text, one after the other, and in order to separate the textual units, the MTM-makers used graphic elements or inserted headings and titles. Another convention is the arrangement of translations, commentaries, or glosses to a text in a parallel or additional column, in predesigned, generously wide margins, or in interlinear spaces. But there is also a considerable number of MTMs with a visual organization that is less elaborate or that follows individual patterns which we cannot easily understand. Not to be forgotten, of course, are those MTMs in which the layout alternates from, for example, columns to running text and back.

Repurposed MTMs are not necessarily in line with the common layout conventions of MTMs as described above. This peculiarity is often due to the fact that the visual organization of the existing codicological unit determined the layout of the 'new' MTM. In such cases, the MTM-makers had to find their own solutions to fit their texts into the existing layout.

5 Titles and labels

Some key features to be taken into consideration when seeking to understand and categorize MTMs in relation to content, use, and production are labels and titles.[13] These features help us to understand how MTMs are perceived within a specific manuscript culture.

Labels can be assigned to MTMs that transmit a defined corpus of texts which is recognized as such in the local traditions. Sometimes, labels can also refer to a genre, conveying an idea of what the MTMs contain.[14] The individual texts in the MTMs can have titles but are still considered part of the corpus that

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12 Andrist et al. 2013.

13 On this topic, cf. Brita et al. (forthcoming).

14 The relationship between MTM label and genre was discussed in the meeting of CSMC Research Area C on 7 July 2014.

is identified by the label. The label can be written on the cover or appear in a margin, subscription, or colophon of the MTM, but a label is not necessarily required to appear in the manuscript. Sometimes these labels appear in historical inventories and catalogues of collections; more rarely, they are also attested in catalogues compiled by modern (Western) scholars. The tendency in modern scholarship, however, is to assign generic labels. 'Miscellany', for instance, does not reveal anything except that the manuscript under scrutiny is an MTM. 'Anthology' and '*florilegium*' usually indicate that the texts included are texts selected from one or more authors. A less generic label assigned by scholars is *Hausbuch* ('house book'), which was intended to identify German medieval MTMs that belonged to a family and transmitted practical knowledge useful for daily life.[15] In German studies, however, there is an ongoing debate about the appropriateness of this label, since it is not grounded in the manuscript tradition.[16]

Within manuscript cultures, labels can refer to the manuscript content. For instance, *Gadla samāʿtāt* ('spiritual combat of the martyrs') is the label assigned in the Ethiopian manuscript culture to MTMs that transmit the 'Acts of the Martyrs'; similarly, *Buyruk* ('the command') is the label assigned by Alevis to MTMs containing text collections about their beliefs and practices (more on these two labels below). A label can also refer to the use of MTMs. An example are the small protective MTMs that are widespread in the Islamic world and labelled *ḥamāyil* or *ḥamāʾil* (Arabic for 'things with which one carries something') with reference to their portability and common use as amulets.[17] Finally, an example of a label related to production is the Turkish *cönk* ('boat'). It refers to the peculiar and oblong, boat-like shape of MTMs containing certain collections of poetry.[18]

Unlike labels, titles are strictly related to the texts transmitted in MTMs and must be explicitly expressed, whether in short or more elaborate form, either on the cover or in the core content, margin, heading, subscription, or colophon of the manuscripts. Consequently, titles are also used to name the books that contain those texts. As often observed in historical inventories and catalogues, the title assigned to the MTM is sometimes the title of the first or longest text in the manuscript, while at other times it is the title of the text or group of texts

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15 Heiles (forthcoming).

16 Cf. Goldenbaum 2020, 85–98; Heiles (forthcoming).

17 Berthold (forthcoming).

18 Gökyay 1993.

considered most representative or most peculiar out of the entire MTM.[19] When the use of texts in an MTM is changed, such texts may be selected and copied from the old MTM and recombined in a new one. In such cases the new MTM may receive a title that differs from the previous one and that reflects the new use and function of both the texts and the MTM.[20] Furthermore, although a title may not have been part of the initial project (most MTMs do not have one), a title was sometimes added to the MTM by later users, thus revealing these users' understanding of the MTM in question.[21]

6 MTM categories

6.1 *Corpus-Organizer MTMs*

As the name of this category suggests, *Corpus-Organizers* are manuscripts containing texts that belong to a defined corpus acknowledged as such in a manuscript culture and identified by a label. The number of texts that belong to the corpus is not necessarily definite and can grow over time. All the texts of the corpus can be attested in a single manuscript, but in the case of large corpora they can also be variously distributed in a set of manuscripts named with the same label used to identify the corpus.[22] Titles can be assigned to the individual texts of the corpus, and they are relevant for identifying the textual units within each manuscript, but it is only the label that allows us to identify the set of *Corpus-Organizer MTMs*. The criteria adopted for the distribution of the texts over the set of manuscripts and the sequence of texts within the individual manuscripts reflect cultural patterns and can depend on a combination of factors, such as: (a) circumstances of use – e.g. manuscripts whose texts are arranged in calendric order for ritual needs; (b) material constraints – e.g. the capacity of ready-made blank books to host only a certain number of texts of various length; (c) nature of the content – e.g. texts arranged according to topics in

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19 Piccione (forthcoming).

20 See Buzi, 2016, 99–100, for instance.

21 Piccione (forthcoming).

22 A set of manuscripts corresponds to a series of cognate MTMs that are all representative of the corpus and that can be produced and used over either a short or a long period of time. The need for this clarification derives from the cases in which some texts of the corpus are also attested in manuscripts that contain other texts not belonging to the corpus and that have a different label or no label at all. These MTMs are not part of the set of *Corpus-Organizer MTMs*.

scientific manuscripts or according to authors in literary manuscripts; (d) length of the texts – e.g. first longer and then shorter texts. *Corpus-Organizer MTMs*, as the term itself suggests, have the function of organizing the corpus. The criteria adopted for this organization must be detected in each case through contrastive analysis of a set of MTMs that are related in time and space.

Our understanding of the relationship between a corpus of texts and its material realization in MTMs relies on studying the transmission processes of both the texts and the MTMs. The possibility of reconstructing with a higher or lower degree of correctness the genesis of a corpus, and consequently its distribution in the set of MTMs, largely depends on the material evidence available. In the case of the *Gadla samāʿtāt*, presented by Alessandro Bausi in his paper about *Corpus-Organizers*, it is clear that the formation of the corpus follows a cultural pattern that is related to the veneration of saints in Ethiopia and the liturgical use of the MTMs. These texts are indeed liturgical readings about both non-Ethiopian and, to a lesser extent, Ethiopian saints, and the textual units are arranged in calendrical order in the individual manuscripts. The practices connected to the veneration of the saints fostered the compilation of this corpus of hagiographic literature for liturgical use. The texts were initially translated into Gəʿəz from Greek in the late antique period and from Arabic in the early medieval period. Since there is no evidence that *Gadla samāʿtāt* MTMs predate the thirteenth century, this date is the starting point of our investigation. MTMs attesting the first layer in the formation of the corpus display a group of previously translated texts whose prehistory and previous manuscript distribution is unknown. Due to the presence of a consolidated label (*Gadla samāʿtāt*), recorded in manuscript inventories since the end of the thirteenth century,[23] it can be assumed that these *Corpus-Organizer MTMs* are the result of previous arrangements (and rearrangements).

The *Gadla samāʿtāt* corpus continued to grow during the following centuries by the addition of more texts translated from Arabic and the creation of new texts about local saints. The sequence of the textual units continued to follow the order of the calendar, but the growth of the corpus prompted a progressive change in both the format and the layout of the manuscripts, which made it possible to accommodate more and more texts. The oldest MTMs (end of the thirteenth, beginning of the fourteenth century) are indeed relatively small in size, and the textual units are distributed in a two-column layout, whereas,

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23 The earliest inventories record different forms of the label. In the manuscript EMML 1832, which contains different inventories dated between 1292 CE and the fourteenth century, we find the following evidence: *Samāʿtāt* and *Gadla samāʿt* (fol. 6ʳ).

starting from the end of the fifteenth and the beginning of the sixteenth century, the size of the manuscripts progressively increased, and the texts are often laid out in three columns. From this period, extremely large MTMs (Fig. 1) and two-volume MTMs (Fig. 2 and 3) are attested.[24] In the following centuries, the growing number of saints to be venerated and the material constraints of these MTMs must have been the reason for the gradual obsolescence of the *Gadla samā'tāt* MTMs in favour of different types of collections. Among these collections are the *Synaxarion* MTMs, which contain abridged versions of hagiographic texts and could thus better accommodate the saints' commemorations for the whole liturgical year. This was not the case with the *Gadla samā'tāt* MTMs, which included readings for only a few months.[25]

From a methodological point of view, enlarging our perspective by also taking into consideration manuscripts that belong to related manuscript cultures helps us to better understand the complex phenomena of transmission. This is the case, for instance, with manuscripts transmitting the *Śivadharma* corpus,[26] a collection of eight texts that is present only in *Corpus-Organizer MTMs* and exclusively in Nepal. Two individual texts (textual units or discrete units) of the corpus, however, circulated in other regions of the Indian subcontinent and most often in different arrangements, with a prevalence of STMs. The Nepalese *Śivadharma* manuscripts, which are the earliest evidence of these texts, attest both a possible first stage in the formation of the corpus (four texts in manuscript Kathmandu, National Archives of Kathmandu, 6-7, paleographically dated to the tenth–eleventh century) and a mature stage (eight texts in the manuscript Cambridge, Cambridge University Library, Add. 1645, dated to 1139–1140 CE). That *Śivadharma* MTMs were produced and used until the twentieth century is evidence of their success.[27]

The perception of the *Śivadharma* texts as a corpus in Nepalese manuscript culture is confirmed by a number of colophons, some of which explicitly state the label (or maybe the title?) of the corpus: (a) 'a book [named] *Śivadharma*'

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24 The two-volume format was most likely adopted as a solution to the difficulties of handling very large and heavy manuscripts, which had to be transported from the storage house (*'əqā bet*) to the church to be read on the particular saint's memorial day. These storage houses are often located above ground level or in rock-hewn rooms to prevent fire or flood from damaging the manuscripts.

25 Bausi 2002, 12–14; Bausi 2019; and Brita (forthcoming).

26 De Simini 2016.

27 De Simini 2016, 233–350. Regarding the hypothesis that double foliation in later STMs indicates that they originally belonged to MTMs, see De Simini 2016, 260–262, esp. 262.

('*pustakaṃ śivadharmam*');[28] (b) 'the eight sections of the *Śivadharma*' ('*śiva-dharmāṣṭakhaṇḍa*');[29] (c) 'the supreme book consisting of the 12,000 stanzas of the *Śivadharma*, made of one hundred chapters [divided] into eight sections' ('*śivadharmadvādaśasāhasrikagra · nthaṃ aṣṭo* (sic!) *khaṇḍaśatādhyāyam uttamapustaka<m>*');[30] (d) 'thus [is concluded] the great treatise titled *Śivadharma*' ('*śivadharmo nāma mahāśāstram iti*').[31]

6.2 Petrified MTMs

Petrified MTMs display features that reveal a high degree of stability acquired in the course of time. These features are shared by other manuscripts and are the outcome of an accomplished project. *Petrified MTMs* contain a clearly defined set of texts that is the result of a careful selection process and is perceived as one work. The process by which these MTMs reach their peculiar configuration can (but need not) last for centuries. The set of texts transmitted in *Petrified MTMs* is always identified by a title that, by extension, is also assigned to the entire manuscript. Only the sequence in which the texts appear in the MTM may vary, to a degree, as long as the order reflects a pattern recognized in the respective manuscript culture. Most important is that these MTMs, with their content and titles, are recognized or accredited by an institution or by a community.

The manuscripts that contain the four canonical gospels constitute an example of *Petrified MTMs*. Written in the Greek language, the Gospels of Matthew, Mark, Luke, and John were originally transmitted independently in STM-papyri dated to the second and third centuries.[32] The documentation available also attests the presence of fragmentary manuscripts that contain two of the four gospels, but there is no evidence of MTMs containing the four gospels in the second century. Although some of the four gospels were more famous

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28 Asiatic Society of Calcutta, G4077 (1035–36 CE); cf. De Simini 2016, 251 (this manuscript does not contain the *Śivadharma* corpus).

29 Oxford, Bodleian Library, Or. B 125 (1187 CE); cf. De Simini 2016, 254.

30 Kathmandu, National Archives of Kathmandu, 5-737 (Nepal-German Manuscript Preservation Project A 3/3) (1201 CE); cf. De Simini 2016, 255.

31 Kathmandu, National Archives of Kathmandu, 1-882 (Nepal-German Manuscript Preservation Project A 62/10); cf. De Simini 2016, 262. The manuscript is an STM, but according to De Simini (2016, 262), 'This manuscript is [...] plainly a severed codicological unit originally belonging to an MTM.'

32 On the history of the circulation of the gospel manuscripts and the emergence of MTMs, see Crawford 2019 (esp. 111–113), on which the present section is largely based.

than others, they were regarded like many similar texts that spread during that period. It is only from the mid third century that we have the first evidence of a *Petrified MTM* containing the four gospels. However, manuscripts transmitting a fewer number of gospels (or single gospels) continued to be produced on occasion during that period and later. Finally, from the fourth century onwards, four-gospel MTMs became widespread across all Christian cultures, exhibiting a high degree of uniformity.

The selection and inclusion of these four texts in the canon of Holy Scripture is the reason why the four-gospel MTMs started to display such a degree of stability, in spite of some variation in the order of the gospels themselves. As Crawford underlines,

> [t]he only significant deviation across our surviving four-gospel codices from this period is that these four texts were ordered in two alternate sequences that competed with one another for supremacy for a short time. Modern Bibles print them in the order Matthew-Mark-Luke-John, and most surviving copies from Late Antiquity onwards reflect this same sequence. However, this was not the only order and may not have been the earliest. $\mathfrak{P}^{45}$, [...] the earliest surviving four-gospel codex, follows the sequence Matthew-John-Luke-Mark, and copies of the Old Latin translation of the gospels usually also have this order. However, this alternate sequence died out in the Latin world as Jerome's new Latin translation won favour from the late fourth century onwards, and it eventually faded away in the Greek world as well. Hence, in contrast to the variability exhibited by some MTMs contemporaneous with the manuscripts we have been considering, the four-gospel collection achieved at an early stage a distinct stability attesting to its conceptual status as an authoritative corpus of texts.[33]

We consider these manuscripts *Petrified MTMs* because they received official recognition in their specific configuration, including the oscillation in the sequence of the four texts. In manuscripts, none of the four canonical gospels has ever been assembled together with other gospels that were not accepted in the Christian ritual canon.[34]

Petrified MTMs can originate from *Corpus-Organizer* manuscripts. This happens when, due to specific circumstances, only a certain number of texts from *Corpus-Organizers* are selected and included in *Petrified MTMs*. In the case of small corpora, it is certainly possible that all texts of the corpus turn into *Petrified MTMs*. In these cases, very often, the label of the *Corpus-Organizer MTMs* becomes the title of the *Petrified MTMs*.

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33 Crawford 2019, 113.
34 See Crawford 2019, 113.

For instance, one may wonder whether *Śivadharma* has been considered the title and not the label of this set of texts and, consequently, whether the Nepalese MTMs circulating from the twelfth century onwards may be considered *Petrified MTMs* originating from *Corpus-Organizer MTMs*. Starting from this period, indeed, all *Śivadharma* MTMs transmit a clear, defined, and stable set of eight texts that in the colophons are named *aṣṭakhaṇḍa*, or 'sections',[35] rather than *pustaka*, or 'books', as in pre-twelfth-century attestations.[36] Besides the title and the idea of a unitary work as conveyed by the colophons, what is interesting is that these manuscripts were read during ritual performances, both in sacred and private spaces, and also worshipped.[37] This ritual use indicates that *Śivadharma* MTMs might have obtained the status of officially recognized manuscripts in practices of Śiva veneration, which not only included the transmission of behavioural rules to the lay Śaiva community, but also responded to the need of manuscript donors to accumulate merit.[38]

The shift from *Corpus-Organizer MTMs* to *Petrified MTMs* is, by definition, limited to manuscripts. Nevertheless, by expanding our view to include print, we can observe similar developments taking place. For instance, until the mid twentieth century some Alevi religious communities had *Corpus-Organizer MTMs* with the label *Buyruk*, in which they collected central texts of their tradition. The label *Buyruk* does not appear in the manuscripts but is first attested in Alevi oral lore from the mid nineteenth century. Today, various sub-labels and even manuscript names exist. This situation invites thorough investigation, since academic work on the subject is exerting increasing influence within the community. But we can see a clear trend among Alevis to revise texts of such manuscripts and publish them under the title *Buyruk*.[39] In this way, the contents of some *Corpus-Organizer MTMs* become petrified, though in print, and their

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35 Cf. De Simini 2016, 254 and 256, where De Simini, with reference to the colophon of manuscript Kathmandu, National Archives of Kathmandu, 5-737, states: 'The brief mention of "supreme book [...] of the Śivadharma" given in this colophon is truly remarkable, since here the corpus is regarded as one single work, for which the scribe gives a rough total amount of stanzas and chapters and which he depicts as divided into eight sections, which actually correspond to the eight works.'

36 The current state of research in Sanskrit studies and, above all, our lack of expertise, do not allow a definitive answer here, but scholars working on *Śivadharma* MTMs in 'The Śivadharma Project' (ERC Starting Grant Project), led by Florinda De Simini at the University of Naples 'L'Orientale', may soon delve into such issues.

37 De Simini 2016, 256–259.

38 See De Simini 2016, 269–270.

39 See Karolewski 2021.

label is transformed into a title. An analogous phenomenon can be observed in the Ethiopian manuscript culture with the *Gadla samāʿtāt*. A selection of the Gəʿəz texts of the corpus (the readings for the months of *maskaram*, *ṭəqəmt*, and *ḫədār*) has been recently published by the Ethiopian Orthodox Tawāḥədo Church, with an Amharic translation. The label *Gadla samāʿtāt* has been turned into the title of the printed book (Fig. 4).[40]

6.3 *Intertwined MTMs*

Intertwined MTMs are manuscripts transmitting two or more texts that are related with respect to content. These texts can still have an independent transmission, but when they are transmitted together in an *Intertwined MTM* each of them serves the other, and together they fulfil the function of the MTM. *Intertwined MTMs* include, for instance, manuscripts transmitting the Qurʾān and its commentary (*tafsīr*), when the two texts are laid out as core content in the manuscript, rather than as core content and paracontent, respectively.[41] On the contrary, when the layout of an MTM displays an arrangement of the type core content and paracontent, with the latter written in the margins or in the intercolumnar space, this manuscript cannot be considered an *Intertwined MTM* but is instead a *Repurposed MTM*, a category which we discuss below. *Intertwined MTMs* are designed to carry different texts that are relevant in their mutual interaction; their visually twined organization is planned accordingly, from the inception of their production. The layout of these manuscripts ranges between standard forms, with texts disposed one after the other, and more complex forms, such as framed manuscripts (see below).[42]

Manuscripts that contain works in multiple languages, such as the Harley Trilingual Psalter (Fig. 5), most likely produced in Palermo between 1130 and 1153, are an example of the *Intertwined MTM*.[43] The visual organization of this MTM consists of three parallel columns containing the text of the Psalms (a) in Greek (Septuagint), (b) in the Latin Vulgate, and (c) in the eleventh-century Arabic translation of Abū al-Fatḥ ʿAbdallāh ibn al-Faḍl ibn ʿAbdallāh al-Muṭrān

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40 *Gadla samāʿtāt* 2010 AM.

41 See Ciotti at al. 2018.

42 See Andrist 2018, 141.

43 London, British Library, Harley 5786; cf. British Museum 1808, no. 5786. For a more detailed description, see *British Library*, *Catalogue of Illuminated Manuscripts*, 'Detailed Record for Harley 5786'. For digitised copies of the manuscript, see *British Library MS Viewer*, 'Harley MS 5786'.

al-Anṭākī.[44] After examining the manuscript, Cillian O'Hogan came to the conclusion that several scribes were involved in the manuscript production. Both the layout and the ruling pattern suggest that the writing in the three languages took place seriatim. Each time one of the scribes completed the copying of the column assigned to him in one of the three languages, he passed the quire to the next scribe who copied the next column in the other language. This *Intertwined MTM* was produced in a scriptorium, most likely the royal scriptorium of Roger II, where the presence of scribes able to master different languages reflects the rich multicultural and multilingual environment of mid-twelfth-century Sicily.[45] Scribal notes in Arabic referring to the Latin liturgy, which are written in the margins and relate to manuscript performance, suggest that the manuscript was used by Arabic-speaking Christians to follow along with the Latin service in Palermo.[46]

Another example of *Intertwined MTMs* is manuscripts containing texts and their commentaries arranged *a cornice* ('in the shape of a frame'); in such cases the text is often placed at the centre of the page and framed by commentary all around.[47] For texts with commentaries, translations and other related works, this layout was common in many manuscript cultures. For instance, Greek manuscripts transmitting the *Iliad* and its commentary are an example of these MTMs. Marilena Maniaci stresses that this peculiar layout exhibits the skill of the commentators and scribes in handling the two texts in parallel on the same page. They presented the texts and their related commentary according to patterns that enable the eye of the reader to follow and navigate between the texts. Interestingly, two of these manuscripts, which Maniaci calls Marc. gr. 453[48] (Fig. 6) and Escor. υ.I.1[49], are independent copies of a common *Vorlage*.[50] This example may show that once these elaborate *Intertwined MTMs* were produced, they could serve as models for other manuscripts whose copyists replicated not

44 O'Hogan 2015.

45 O'Hogan, 'Multilingualism at the Court Scriptorium of Roger II of Sicily: The Harley Trilingual Psalter'.

46 O'Hogan 2015.

47 Cf. Maniaci 2006, 213 n. 5; and Maniaci 2016.

48 Venice, Biblioteca Nazionale Marciana, Gr. Z. 453 (=821), described in Mioni 1985, 235–236. For digitised copies of the manuscript, see *Internet Culturale*, 'Venezia, Biblioteca Nazionale Marciana, Gr. Z. 453 (=821)'.

49 El Escorial, Biblioteca del Real Monasterio de San Lorenzo, y. I. 1., described in de Andrés 1965, 178–179. For digitised copies of the manuscript, see *The Homer Multitext Project*, 'Escorial Y 1.1 (294 = Allen E3)'.

50 Maniaci 2016.

only the text but also the layout. It is therefore possible that in some manuscript cultures specific layouts or formats prevailed and became dominant patterns for *Intertwined MTMs*.

At variance with the other types of MTM described above, the production of an *Intertwined MTM* can occur in different stages. The layout of these manuscripts is arranged in predetermined slots, or preliminarily defined areas on the page, that are supposed to host the different texts and are planned from the first stage of the production, regardless of when they are filled in. These predetermined slots are the main feature that distinguishes an *Intertwined MTM* with a text and its commentary from, for example, a *Repurposed MTM* with the same texts, since the latter is made from an existing codicological unit without such predefined areas.

6.4 *Open MTMs*

Open MTMs are manuscripts that were prepared in order to be kept and progressively filled with texts that are not predetermined in detail but certainly are in broad outline. In many cases, the codicological unit of these MTMs was a blank book, either ready-made or self-made,[51] but we also consider cases in which someone continued to copy various texts on unbound quires for years, with the finalisation of the *Open MTM* taking place only when the quires were bound by, for instance, a bookbinder.[52] Adding a codicological unit between the book and its cover did not necessarily complete the *Open MTM*, because its makers could still endeavour to add further blank leaves or quires, even opening the binding, or they could continue the project in another blank volume.

Among the frequently produced *Open MTMs* are personal collections of notes and recipes, or of texts such as poems or daily records, which the MTM-makers themselves composed, or collections of works by others, or excerpts from such works. Today, one often refers to these manuscripts with English labels such as 'notebook', 'organizer', 'scrapbook', 'diary', or 'commonplace book', but they were often named differently in their respective cultural contexts – if named at all. Indeed, the contents of such MTMs can be diverse, so

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51 For Gumbert, making a manuscript followed more or less determined stages. He saw the formation of the quires at the beginning, followed by layout and ruling, writing, and decoration. But Gumbert also mentioned the example of pre-ruled paper that was sometimes used as a base for quires (Gumbert 2004, 22–23); following Gumbert, we see the use of ready-made blank books as another possible beginning of manuscript-making.

52 Cf. Endress 2016, 178, second type in the list, for instance.

that at times they are a notebook, scrapbook, and account book in one volume.[53] Other common *Open MTMs* are manuscripts for non-personal use, which may include different kinds of records for social groups and families, or institutions such as religious congregations and court houses. These manuscripts often bear modern labels such as 'logbook' and 'journal', or 'register' and 'ledger'; we will explain below the extent to which we include such manuscripts in this MTM category.

In general, personal *Open MTMs* remained with the people who kept them and filled the manuscript pages with writing. But there are cases in which the project of a personal *Open MTM* included the participation of makers other than its keeper. The English poet Thomas Wyatt (*c.* 1503–1542), for instance, had a commonplace book,[54] the texts of which were partly written out by his secretary (Fig. 7). Later, Wyatt reworked some of these texts, including his own poetry and works of other poets.[55] In the case of another *Open MTM*,[56] from the court of Henry VIII, Mary Howard (1519–1557) and her friends wrote down poems. First, the manuscript was with Mary Howard, who then passed it on to her friend Margaret Douglas (1515–1578), who left her own verses in it. Some marks by Mary Shelton even hint at the use of this book in performances, including singing.[57] To what extent the initial MTM project had envisioned this manuscript circulating among the three women is difficult to determine.

The practice of scholars, or many other professionals, of collecting their own notes is common among almost all manuscript cultures. In Islamic scholarship, for example, the custom of keeping notebooks was an early one, though often frowned on, and many scholars requested that their lecture notes and other types of notes be destroyed after their death.[58] Students also collected lecture notes, sometimes for their masters and other times for their own ends.[59]

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53 For these kinds of MTMs, one may fall back on evocative, but nevertheless vague descriptions such as 'one-volume library', coined by the Arabist Franz Rosenthal, and 'working library within one cover', introduced by the historian of medieval science Lynn Thorndike (cf. Friedrich and Schwarke 2016, 1–3).

54 Now usually called the Egerton Manuscript (London, British Library, Egerton MS 2711). For short descriptions of this manuscript see *British Library, Digitised Manuscripts*, 'Egerton MS 2711' and Bowles 2019, for example. For digitised copies of the manuscript, see *British Library MS Viewer,* 'Egerton MS 2711'.

55 Murphy 2019, 6–7.

56 Now usually called the Devonshire Manuscript (London, British Library, Add MS 17492).

57 Murphy 2019, 26–28.

58 Schoeler 2006, 60, 70, 78–80, and 113.

59 Endress 2016, 177–178; Schoeler 2006, 113.

Some of these notebooks, however, were copied and gained popularity, while many others are stored in libraries, and still others have remained little known items, occasionally mentioned in secondary sources.[60] Such is the case with the notebook by ʿAbdallāh ibn ʿAmr ibn al-ʿĀṣ (d. 684), Companion of Prophet Muhammad, in which he recorded traditions of the Prophet and the Companions. The notebook, which ʿAbdallāh named aṣ-Ṣādiqa ('the truthful'), was passed on in his family and became a debated source among the traditionists.[61] What started as a personal *Open MTM* for ʿAbdallāh turned into a record book of utmost importance for early Islamic scholarship.

Most obviously, record-keeping is closely linked to the making of *Open MTM*s, since most records evolve with time and are unpredictable in detail. Consequently, such MTMs started as production units whose individual projects were impossible to outline in each and every respect. For instance, we have no detailed information about the making of ʿAbdallāh's notebook, but it is certainly possible that he assembled it quire after quire before he or someone else had them bound or somehow fastened together, when his recording came to an end. The later binding of previously written and stored quires was also a common archival practice. The registers of Ottoman qadis, for example, included various kinds of records, which were most probably preserved on loose quires in the court houses before they received a binding after one or two years.[62] We suggest that these registers can be interpreted as *Open MTM*s, planned by an institution and written by several qadis and their clerks. For some readers, our suggestion to consider archival material and record books as examples of *Open MTM*s might seem to extend the category too far. Still, we believe that it is worth considering whether some of these manuscripts can be classified as *Open MTM*s. The qadi registers, for instance, contain at least two different sorts of texts: court-related records at the beginning of the volumes and copies of imperial orders, starting from the end of the volumes; some registers even contain personal notes by the qadis.[63] While the size of the registers, the page layout, and even the formulaic style of some entries were surely pre-determined, one could not predict the number and length of the decrees from the sultan's council or of the legal cases and transactions. Therefore, these MTMs had to remain open.

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60 Schoeler 2006, 32 and 176, n. 100.
61 Schoeler 2006, 127–128.
62 Uğur 2010, 9.
63 Uğur 2010, 9.

6.5 *Repurposed* and *Recycled MTMs*

Makers of *Repurposed* and *Recycled MTMs* used an existing, text-carrying codicological unit to which they added texts not previously intended to be included. If the new texts relate to the contents that were previously written down, then we can speak of a *Repurposed MTM*.[64] By adding writing to empty margins or pages and inserting additional empty folios or quires in order to accommodate more text, an STM was turned into an MTM, or an existing MTM was incorporated into a new MTM project. If the texts added to an existing codicological unit do not relate to the previous contents, we may speak of a *Recycled MTM*. For such an MTM project, its makers merely used a manuscript's 'empty surfaces', such as margins and empty pages.[65] In some cases, the same codicological unit was repurposed or recycled several times. At the beginning of each repurposing or recycling stands a new MTM project, changing or adding a function to the manuscript. In the case of *Repurposed MTMs*, their previous functions can remain, whilst many *Recycled MTMs* lose their previous purpose, as we explain below.

Returning to the notebook of Thomas Wyatt, we see that it did not fall into oblivion after his death. Its later owners repurposed and recycled the manuscript: John Harington the Elder (*c.* 1517–1582), for instance, wrote in the book, adding material including a poem by Henry Howard, the Earl of Surrey, who praises Wyatt for his translation of the Penitential Psalms.[66] Since his additional texts and notes are clearly linked to the previous contents, namely, to Wyatt's poetry, we classify John Harington the Elder's book as a *Repurposed MTM*. The same can be said about what his son Sir John Harington (bap. 1560, d. 1612) did with the book, namely, adding his own metrical paraphrases of the Penitential Psalms.[67] Then, however, Sir John Harington's son John Harington MP (1589–1654) inherited the manuscript and used it in a different way. He recorded his daily business, wrote math problems, and gave the book to his young son William for writing exercises.[68] These extensive entries were possible because the poems sometimes took up only half of a page, and several pages were still blank. Peter Murphy interprets John Harington MP's attitude towards the manu-

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[64] In a narrow sense, this category is discussed as 're-made books' in Andrist 2018, 144 and 145.

[65] The recycling or reuse of manuscripts was generally discussed at the workshop 'Second(ary) Life of Manuscripts', 11–13 July 2013, CSMC, Hamburg.

[66] Murphy 2019, 51–55.

[67] Murphy 2019, 56.

[68] Murphy 2019, 55–68.

script as follows: 'To Harington the book was just bound paper he wrote on. He probably wished its previous owners had not written so much into it, especially the poet with the questionable morals and a prodigal disregard for the expense of paper.'[69] Indeed, John Harington MP's project was that of using his father's manuscript in order to make a *Recycled MTM*. This utilitarian purpose is apparent not only in that he added texts unrelated to Wyatt's poetry, but also in that he made a clear statement by overwriting some poems and even crossing out others (Fig. 7).[70]

In a *Repurposed MTM*, the relationship between the previous contents and the texts added later is not always as straightforward as in the case of Wyatt's manuscript, when John Harington the Elder inserted the poem by Henry Howard and made other related additions. In Ethiopian manuscript culture, for example, the so-called *Wangela Warq* (or *Wangel za-Warq*, 'golden gospel')[71] codices exhibit a pattern of repurposing that relates to the previous text in a different way. In its double acceptation, which refers both to production and to content, the label *Wangela Warq* identifies four-gospel manuscripts with a gold-like, silver, or metal cover.[72] They are normally regarded as the most precious copies of the gospel books that are kept in churches and monasteries. Besides the text of the four gospels, they also contain texts such as the following: acts and grants declaring rights of land exploitation or inheritance, usually in favour of the monastery or church where the book is preserved; historical records; monastic genealogies and rules; and prayers. These additional texts are added by later hands on blank pages, protective leaves, or on leaves or fascicles inserted into the manuscript at a later time. Their connection with the text of the gospels does not refer to specific passages but rather to the sacred aura that the four gospels emanate and to their value as officially recognized holy books.[73]

The aforementioned examples of *Repurposed MTMs* evolved on the ample space left in the margins, on some pages, and even on the protective leaves. But there are cases in which the makers of *Repurposed MTMs* added empty leaves and folios to the codicological unit in order to accommodate their texts. The practice of interfoliating, or interleaving, books for handwritten additions, for

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69 Murphy 2019, 57.

70 Today, Egerton MS 2711 is even used as an example of how John Harington MP thoughtlessly overwrote Wyatt's verses. Cf. Moulton 2000, 43, for instance.

71 Bausi 2010b.

72 Over time, this label was also used for gospel manuscripts without metal covers.

73 Patrick Andrist describes similar phenomena in Greek Bible manuscripts, classifying them as 'post-production side-content', or 'sacred book paratexts'; see Andrist 2018, 145.

instance, was most common with volumes printed in the Early Modern Era,[74] but the practice can be also observed with manuscripts. The Danish orientalist Theodor Petræus (*c.* 1630–1672), for example, had a manuscript copy of the versed Persian-Turkish dictionary 'Tuḥfe-i Şāhidī'; on interfoliated blank leaves he compiled short texts on several words.[75] What Petræus made is not to be confused with an *Intertwined MTM*, since the dictionary manuscript was not prepared to host a commentary or another text.

The purpose that a codicological unit had before it was turned into a *Repurposed MTM* usually remained intact. For instance, one could still consult the Persian-Turkish dictionary, ignoring the texts added by Theodor Petræus, and the *Wangela Warq* manuscripts still served their liturgical purposes without constraint by the acts recorded in them. In the case of *Recycled MTMs*, however, we sometimes observe that the books could no longer easily serve their previous purposes. After the recycling project of John Harington MP, for example, some of the poems in Wyatt's manuscript could only be read with effort because they disappeared almost entirely under cross-outs and other text. Of course, we can even think of extreme cases when MTM-makers tore the previously written pages out of the codicological units they recycled.

7 Complete and incomplete MTM projects

In the case of *Corpus-Organizer MTMs*, *Petrified MTMs*, and *Intertwined MTMs*, we suppose that their makers had a rather concrete idea about which texts were to be part of these manuscripts. Judging from individual cases, we can say with some certainty whether the respective projects were completed. Very often, this judgement is easier in the case of codex MTMs than it is in the case of loose-leaf paper MTMs, palm-leaf MTMs, or multi-slip bamboo MTMs. While the latter three manuscript forms are either unbound or bound by easily removable threads, and therefore rather effortlessly open to additions, the binding of codex manuscripts usually marks the finalisation of an MTM project, when the previously prepared quires are put into a tightly closed codicological unit. Examples here are the existing four-gospel MTMs or the *Gadla samāʿtāt* MTMs, which illustrate how the quires and the page layout were prepared to accommodate a

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74 Nyström 2014, 120.

75 Hamburg, Staats- und Universitätsbibliothek Hamburg Carl von Ossietzky, Cod. orient. 195. See Zimmermann 2016.

concrete number of texts held together by the final binding. Having said that, we would like to point out that it was still possible to reopen the binding of some books in accordance with the project. MTM-makers could realize that missing texts had to be inserted on single fresh folios, or they might wish to renew the protective leaves or covers of their manuscripts.

With codex-MTMs that are made of blank books, however, the assessment can be more difficult, especially when a considerable number of folios remain empty. In such cases, we cannot be sure whether the makers of these manuscripts had actually planned to add more text in the future or whether they left blank those pages that exceeded the needs of the project. When possible, an analysis of how texts from such blank-book MTMs were transmitted elsewhere can help us understand whether these manuscripts are complete or incomplete projects. In the many cases in which blank books were kept to be filled as *Open MTMs*, we have difficulty in determining whether blank pages indicate an incomplete project, unless paratextual notes provide evidence regarding the completion of a notebook or a register, for example.

8 Final remarks

In order to assign specific manuscripts to the categories proposed here, it is necessary to gain a deep understanding not only of the MTMs in question but also of the circumstances of their production and use. In addition to that, it is necessary to consider their cultural and historical setting. Surely this is only possible when one has sufficient access to historical evidence and is able to consult a considerable number of manuscripts in order to conduct a comparative analysis.

The categories suggested here are not exhaustive and do not cover each single manuscript from the wide variety of MTMs. Furthermore, in the same codicological unit two or more categories can coexist, as is usually the case when a manuscript is repurposed, and as is sometimes the case when the same manuscript is recycled with the previous content still usable.

In finalizing this article, we have remembered again and again what J. Peter Gumbert wrote in his 'Codicological Units' of 2004: 'Practice will have to show how well this terminology does in reality. And reality is always more complicated and surprising than the best theory can predict.'[76] In agreement with

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[76] Gumbert 2004, 37.

Gumbert, we wish to conclude with his statement. Now we too must wait and see to what extent the proposed categories are usable or will encourage others to further unravel the 'MTM net'.

Acknowledgements

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Fig. 1: Manuscript of the *Gadla samā'tāt*. Təgrāy, Monastery of Yoḥannəs Kāmā, YoKa-001. Photograph by Antonella Brita (May 2013).
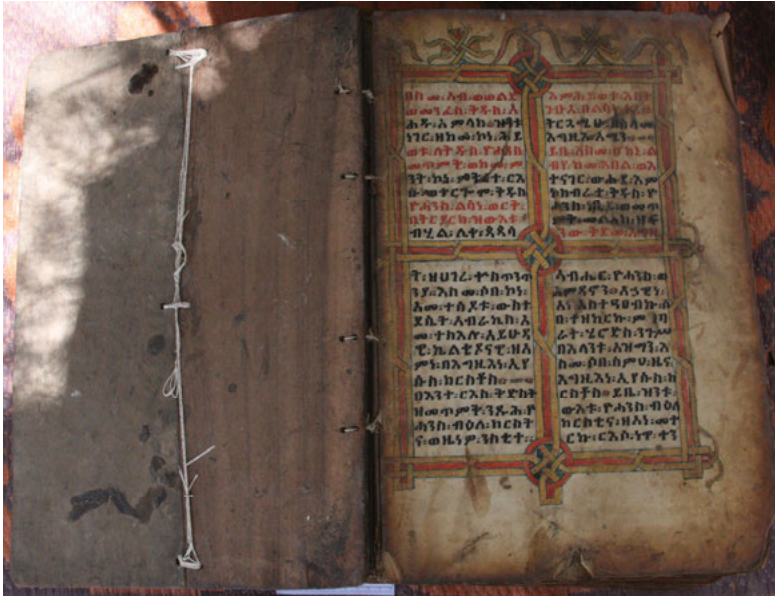
Fig. 2: Manuscript of the *Gadla samāʿtāt*, first volume. Təgrāy, Monastery of Dur ʾAmbā Səllāse, DAS-002, fol. 1ʳᵃ. Photograph by Antonella Brita (May 2013).

Fig. 3: Manuscript of the *Gadla samāʿtāt*, second volume. Təgrāy, Monastery of Dur ʾAmbā Səllāse, DAS-001, fol. 1ʳᵃ. Photograph by Antonella Brita (May 2013).

Fig. 4: Printed version of the *Gadla samāʿtāt* (readings for the first three months of the liturgical year). Photograph by Antonella Brita (May 2021).
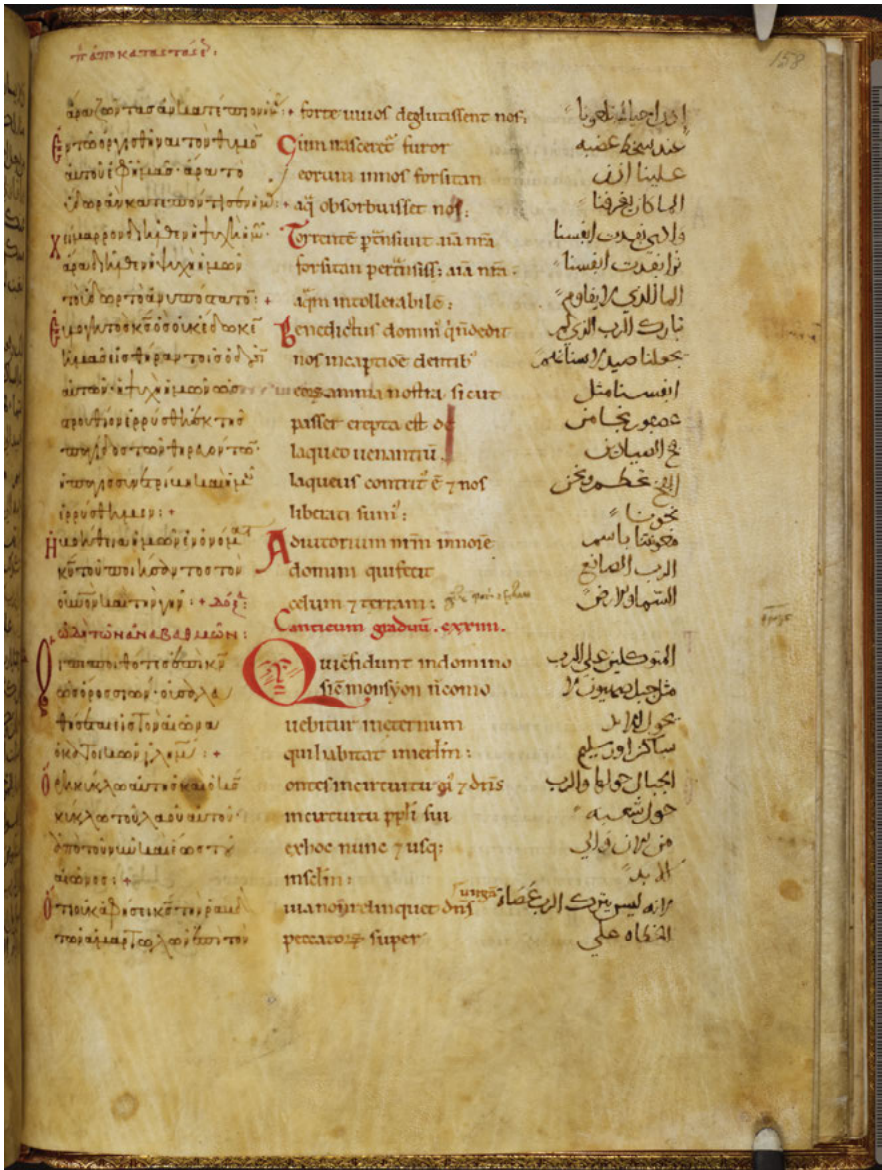
Fig. 5: Manuscript of the Psalter in three languages. London, British Library, the Harley Trilingual Psalter. © The British Library Board, Harley 5786, fol. 158ʳ.
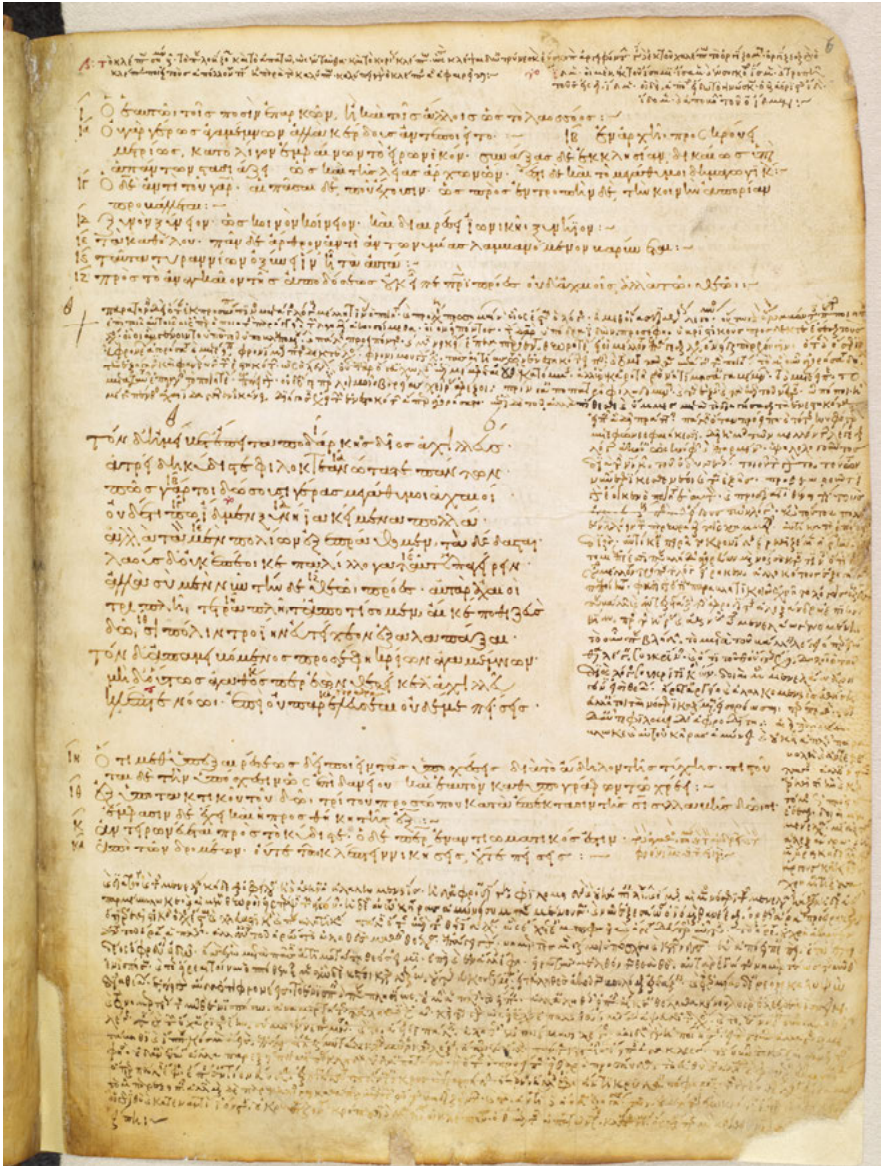
Fig. 6: Manuscript of the Iliad with its commentary. Venice, Biblioteca Nazionale Marciana, Gr. Z. 453 (=821), fol. 6ʳ. © Biblioteca Nazionale Marciana.

Fig. 7: Commonplace book of Thomas Wyatt with later additions by John Harington MP. London, British Library, the Egerton Manuscript. © The British Library Board, Egerton 2711, fol. 9ᵛ.

Imre Galambos
Chinese Character Variants in Medieval Dictionaries and Manuscripts

Abstract: This paper compares variant characters in large-scale dictionaries from the pre-modern period with actual writing habits using a special subset of variants known as 'semantic compounds' (*huiyi* 會意) as a case study. The results show that despite their prominent presence in traditional dictionaries, only a fraction of such variants were in everyday use. Most of the forms recorded in dictionaries were preserved and handed down as part of the lexicographic tradition, to some extent irrespective of genuine writing habits. Going one step beyond recognising that only some of the documented forms were at any given time in common use, the analysis presented here measures the discrepancy between dictionaries and manuscripts as a percentage.

Large Chinese dictionaries abound in orthographic variants.[1] In fact, it is commonly remarked that the majority of characters in large dictionaries, which contain in excess of forty or fifty thousand entries, are historical variants no longer in common use. The profusion of variants in medieval dictionaries creates the impression that they were relatively common in the pre-modern period, but when we look at surviving manuscripts, such as those from Dunhuang or Turfan, we do not necessarily see that the same character was written in several different ways. We only find two or three forms at most, rather than an abundance as suggested by traditional dictionaries. The question arises whether there is indeed a discrepancy between the lexicographic tradition and actual usage. After all, one would expect dictionaries to record character forms that were in daily use, even if one understands that they often had their own agenda. This paper uses a special subset of variants known as *huiyi* 會意 ('semantic compound') characters as a case study, to show that despite their prominent presence in traditional dictionaries, only a fraction of them were in everyday use. Most of the forms recorded in dictionaries were preserved and handed down as part of the lexicographic tradition, to some extent irrespective of genuine writing habits. The main issue is how representative pre-modern dictionaries

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1 The initial idea behind this paper was published as a brief research note in Japanese; see Galambos 2012. I am grateful to Gábor Kósa for his valuable suggestions.

were of contemporary writing habits. Going one step beyond recognising that only some of the documented forms were at any given time in common use, the analysis presented here measures the discrepancy between dictionaries and manuscripts as a percentage.

1 Semantic compounds

This paper is primarily concerned with character forms consisting of two or more components, the semantic value of which is indicative of the meaning of the word written with the character in question. In traditional Chinese usage, these are usually labelled using the term *huiyi*, one of the six principles of character formation articulated as early as the first century CE. The scope of meaning of this principle and its historical role in the development of the Chinese writing system has been the subject of heated debate in anglophone scholarship for almost a century.[2] The debate, however, has been primarily concerned with the formative stage of the script, long before the development of the 'modern' script. This paper focusses on the medieval period when the primary medium of writing was paper, and the script had been in use for at least two millennia. The focus is not on how certain characters had been initially created but what permutations they underwent at a much later stage of their existence.

David P. Branner makes the distinction between 'real' *huiyi* characters, the components of which 'contribute abstractly to the overall meaning of the word represented', and the category he calls 'portmanteau characters', the components of which can be read 'as connected words to form a phrase that defines or denotes the word'.[3] Typologically, such portmanteau characters form a distinct subset of semantic compounds, most of which came into being long after the Qin-Han 秦漢 unification of the script. In fact, the character forms examined in this paper are mostly, although not exclusively, of such portmanteau type. Chinese scholars working on Dunhuang manuscripts call them 'newly created *huiyi* characters' 新造會意字, revealing that they see them as analogous to the original *huiyi* characters.[4] In this paper, the notion of semantic compounds encompasses both Branner's portmanteau characters and those that contribute to the meaning of the word more abstractly (i.e., 'real' *huiyi* characters).

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2 For an overview of the problem, see Lurie 2006, Handel 2006 and Galambos 2011, 398–399.
3 Branner 2011, 73. Modern examples include characters such as *wai* 歪 ('askew, crooked'), the components of which 'spell out' the phrase *buzheng* 不正 ('not straight').
4 Zhang Yongquan 2015, 144 and Huang Zheng 2005, 30.

Often there is distinction between the structure of the standard character and its variant. A point in case is the character *jia* 假 ('false, fake'), the standard form of which is a combination of the semantic component *ren* 亻 ('man') and the phonetic component *jia* 叚 ('borrow'). By contrast, its variants include the form 賈, a combination of the components *bu* 不 ('not') and *zhen* 真 ('true'), neither of which plays a phonetic role but, together, the two of them gloss the meaning of the word (i.e., *bu zhen* 不真, 'not real').[5] Therefore, even if the 'mother' character has an ordinary *xingsheng* 形聲 ('form and sound') structure, in which one of the components plays an obvious phonetic role, in the variant form both components have a semantic function.

By focussing specifically on variants that appear in manuscripts, I intend to move away from a perspective that sees characters as abstract units of the script and view them in light of the writing habits of the people who wrote them in their daily routine. It is an approach that favours concrete archaeological evidence over derivative forms of data. The basic premise of the current study is the comparison of manuscript evidence with data preserved in pre-modern dictionaries. As commonly recognised, comprehensive dictionaries often treated variants found in earlier dictionaries as part of an inherited tradition, adapting them wholescale, but also further decontextualising them. Yet there is little understanding of the extent of this phenomenon, of the proportion of variants transmitted primarily in the lexicographic tradition.

The justification for choosing *huiyi*-type variants (as opposed to other types of variants) for the current exercise is threefold. First, *huiyi* characters are a category that has generated a considerable amount of discussion in English-speaking academia and are therefore already in the focus of attention. Secondly, they are highly visible forms which stand out among other variants with their inspired structure. In comparison with other types of variants, where the difference to the standard form may lie in the addition or omission of a stroke or a cursive simplification of parts of the character, the *huiyi*-type variants exhibit a wealth of fanciful and curious forms. Thirdly, it is certain that people at the time were very much aware of the creative possibilities in interpreting the structure of characters. The various traditional methods of dissecting and interpreting characters (e.g., *cezi* 測字, *chaizi* 拆字) show how prominent such kind of approaches were.[6]

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5 Unsurprisingly, this gloss is a close match to the definition of the character 假 in the *Shuowen jiezi* 說文解字, which explains it as *fei zhen* 非真 ('not real').

6 On the phenomenon of 'character manipulation', see Schmiedl 2020.

2 *Huiyi*-type variants in dictionaries

Pre-modern dictionaries include a plethora of *huiyi*-type character forms, even if they are not necessarily identified as such. For the sake of the current exercise, a pool of variants is selected from four pre-modern dictionaries: 1) *Sisheng pianhai* 四聲篇海; 2) *Longkan shoujian* 龍龕手鑑; 3) *Jiyun* 集韻; and 4) *Yupian* 玉篇.[7] All are large-scale compilations in excess of 20,000 characters, which also means that they record many non-standard variants. In fact, the larger the dictionary, the higher the percentage of such variants, as the core pool of standard characters remains approximately the same. The reason for choosing more than one dictionary is to obtain a snapshot of the lexicographic tradition in general, rather than exploring the idiosyncrasies of a particular work.

The variants in the sample pool were chosen randomly, by combing through the dictionaries and identifying relevant forms. Although this is an admittedly subjective process of selection, it results in a repertoire of largely random examples. A comprehensive coverage of all relevant variants in available dictionaries would have been a monumental task and is not the aim here. Instead, the objective is to rely on a smaller body of sample data to assess the differences between dictionaries and manuscripts. A criterion when selecting the variants was that only the variants have a *huiyi* structure but not the mother character. Thus, I did not include characters such as *fei* 朏 ('light of the crescent moon'), with variants such as 胜 (月+小+生 'moon-small-born'), because the standard character 朏 itself is an unmistakable *huiyi*-type combination in which the two components (月+出) are indicative of the meaning of the word. I did select, however, several borderline cases in which the variants could be interpreted as having both a *huiyi* and *xingsheng* structure, as long as their standard character included a clearly articulated phonetic component (e.g., 仙, 妃, 念, 妊 and 聽).

Table 1 lists the sample group, which contains 37 variants of 27 characters. The rightmost column indicates their source, even if many of them appear in more than one dictionary. While the exact distribution of such variants in various dictionaries may be of interest with regards to the sources utilised by

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individual lexicographers, from the point of view of the current study it is sufficient to know that they occur in at least one of the four dictionaries.

Table 1: Examples of *huiyi* variants in the four dictionaries.

Standard character	Variant	Components	Source
大 'great'		不+小 'not-small'	*Sisheng pianhai*
思 'think'		用+心 'use-mind'	*Sisheng pianhai*
老 'old'		先+人 'prior-man'	*Sisheng pianhai*
吹 'blow'		口+風 'mouth-wind'	*Sisheng pianhai*
洟 'nasal mucus'		弟(<涕)+鼻 'mucus-nose'	*Sisheng pianhai*
齋 'fast'		不+食 'not-eat'	*Sisheng pianhai*
假 'fake'		不+真 'not-real'	*Sisheng pianhai*
仙 'immortal'		人+大+山 'man-great-mountain'	*Longkan shoujian*
		人+大+止 'man-great-recess'	*Longkan shoujian*
		人+止 'man-recess'	*Longkan shoujian*
		入+山 'enter-mountain'	*Longkan shoujian*
光 'light'		日+火 'sun-fire'	*Longkan shoujian*
		火+化 'fire-transform'	*Longkan shoujian*
帆 'sail'		舟+風 'boat-wind'	*Longkan shoujian*
		風+舟 'wind-boat'	*Longkan shoujian*
計 'plan, scheme'		供+言 'provide-words' (人+共+言 'men-together-talk')	*Longkan shoujian*
蠶 'silkworm'		天+虫 'heavenly-worm'	*Longkan shoujian*
		天+天+虫 'heavenly-heavenly-worm'	*Longkan shoujian*

Table 1 (continued).

Standard character	Variant	Components	Source
		神+虫 'divine-worm'	*Longkan shoujian*
聽 'listen'		耳+忍 'ear-endure'	*Longkan shoujian*
		耳+用 'ear-use'	*Longkan shoujian*
爌 'bright light'		大+明 'great-bright'	*Longkan shoujian*
念 'recite'		言+心 'speak-mind'	*Longkan shoujian*
娠 'pregnant'		女+身 'woman-body'	*Longkan shoujian*
些 'some'		少+大 'few-large'	*Jiyun*
炒 'fry'		取+火 'take-fire'	*Jiyun*
飢 'hungry'		食+乏 'food-shortage'	*Jiyun*
衄 'nosebleed'		血+鼻 'blood-nose'	*Jiyun*
飲 'drink'		冷+水 'cold-water'	*Jiyun*
妊 'pregnant'		任+女 'undertake-woman'	*Jiyun*
		女+任 'woman-undertake'	*Sisheng pianhai*
		任+身 'undertake-body'	*Sisheng pianhai*
辯 'eloquent'		巧+言 'artful-speech'	*Yupian*
妃 'concubine'		肥+女 'plump-woman'	*Jiyun*
長 'chief'		上+人 'above-person'	*Yupian*
嚏 'sneeze'		至+鼻 'reach-nose'	*Yupian*
期 'period of time; expect'		大+日 'great-day'	*Yupian*

The table shows that in many cases the components can be read together into meaningful phrases, glossing the meaning of the word written with the character. To take the first three entries from the table, the word *da* 大 ('great') is glossed by the variant's components as 'not-small' 不小; the word *si* 思 ('think') as 'use-mind' 用心; and the word *lao* 老 ('old') as 'prior-man' 先人. For this reason, the location of components in the overall composition matters, as it determines the sequence in which they are to be read.

The four dictionaries list many more similar variants in addition to the ones showcased here. Note that the components in many cases do not define the meaning of the word unambiguously and the structure only works if the reader is aware of what it intends to represent. For example, the components 不+食 ('not-eat') in the variant of the character *zhai* 齋 ('fast') could theoretically signify other possible meanings (e.g., 'starve', 'hungry', 'ill'). Therefore, the semantic value of the components is only one of the factors that contribute to the legibility of the variant. Just as important is the graphic semblance to the referent character, the preservation of its overall shape and symmetry. In addition, syntactic context and even social setting play a role in ensuring that readers recognise the variant.

As mentioned above, some of the variants can be interpreted as both *huiyi* and *xingsheng* structures. Although modern scholarship prefers to explain these as *xingsheng* combinations, the phonetic motivation of a component does not automatically disqualify it from also playing a semantic role. In many character forms, one of the components may perform a double function, even if one of these is more pronounced. Of the three variants of the character *xian* 仙 ('immortal') attested in the *Longkan shoujian* (Table 1), 㒈 (人+大+山 'man-great-mountain') and 𠓥 (入+山 'enter-mountain') include the component *shan* 山 ('mountain'), which is the phonetic component in the standard character. But the phonetic component is absent altogether from the form 㑦 (人+大+止 'man-great-recess'), making it a pure *huiyi* composition. In contrast, the two variants that include the component 山 can be considered a *xingsheng* and *huiyi* structure at the same time. It is not hard to notice, however, the graphic link between the variants, demonstrating the role of the overall shape of the mother character in constraining the scope of possible variation.

In other cases, the variant may introduce a phonetic element that is not part of the standard character. For example, according to the *Shuowen jiezi* 說文解字, the phonetic component in the character *nian* 念 ('recite') is *jin* 今 ('now'). The *Longkan shoujian*, however, records the variant 意 (言+心 'speak-mind'), in

which the component *yan* 言 ('speak') plays a weak phonetic role, at the same time also having an evident semantic function.[8] In some cases, a component in a *huiyi*-type variant enhances the phonetic structure of the character, as it can be seen in the form 夶 (上+人 'above-person') listed in the *Yupian* as a variant for the character *zhang* 長 ('chief'). Although the two components work well together as a gloss, the component *shang* 上 ('above') also plays a phonetic role, improving the phonetically opaque structure of the standard character.

Similarly, the *Shuowen jiezi* identifies the component *chen* 辰 ('celestial bodies') as the phonetic component in the character *shen* 娠 ('pregnant'), but the *Longkan shoujian* lists the variant 娠 (女+身 'woman-body'), which replaces 辰 with the component *shen* 身 ('body'). This new component improves the standard character's phonetic transparency, compensating for the shift in pronunciation over time, but at the same time introduces a semantic dimension absent from the original component. As a result, it could be argued that in this variant the component 身 plays both a semantic and phonetic role.

There are, however, cases where the function of the component is less transparent. For example, traditional dictionaries record the variants 姙, 婹 and 曁 for the character *ren* 妊 ('pregnant'). While in the standard character the component *ren* 壬 ('ninth heavenly stem') clearly plays a phonetic role, in the variants it appears as *ren* 任 ('undertake a task'), and in this context its semantic value 'bear, undertake' is surely relevant. This is also likely to be the reason for using 任 rather than the purely phonetic 壬. At the same time, the words written with the characters 壬, 任 and 妊 have long been recognized as being related.[9] Accordingly, the component 任 in the variants merely highlights the existing semantic function of the component 壬 and thus the standard character itself could also be regarded as having both a *xingsheng* and a *huiyi* structure.

Despite these examples, it is just as common that the variant does not retain the *xingsheng* structure of the standard character. Even though the characters *chui* 吹 ('blow'), *zhai* 齋 ('fast'), *jia* 假 ('fake'), *chao* 炒 ('fry'), *ji* 飢 ('hungry') and *nü* 衄 ('nosebleed'), to name just a few, are all stereotypical *xingsheng* configurations, their variants listed in Table 1 feature a semantic-only structure with no phonetic motivation. The example of the variant 鼠 of the character *nü* 衄

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8 Interestingly, the structure 意 is also attested in the Ming-dynasty dictionary *Zhengzi tong* 正字通 as a variant of the character *yi* 意 ('intention'), although here the component 言 plays no phonetic function.

9 The *Shuowen jiezi*, for example, links 壬 with the other two characters. With regards to the character 妊, it notes that the component 壬 had a phonetic function as well, suggesting that it also had a semantic one.

('nosebleed') is particularly interesting because it replaces the phonetic component *chou* 丑 ('second earthly branch'), which had lost some of its transparency, with the semantically relevant 鼻 (*bi* 'nose'). This is a complete shift from a *xingsheng* combination to a semantic-only structure.

Naturally, the structure of medieval *huiyi*-type variants is not directly indicative of the historical development of the characters. Encoding accurate historical information from earlier stages of the script's history was clearly not an objective. Instead, the variant forms are creative interpretations exploiting the graphic possibilities inherent in the orthography and playfully reordering the characters' structure. *Huiyi*-type variants are invariably derivatives of more mainstream forms, whether those were officially recognized standard characters or merely popular forms in common use. In most cases there is a graphic connection with the mother character and the *huiyi* combination preserves a resemblance to the shape and overall symmetry of the original character.

3 *Huiyi*-type variants in manuscripts

Extracting examples of *huiyi*-type structures from medieval manuscripts is a time-consuming task. Even though manuscripts abound in non-standard forms, *huiyi*-type variants in particular are not easy to find. A pragmatic way to accelerate the search is to use dictionaries of variant characters based on pre-modern manuscripts. A straightforward choice for locating variants in Dunhuang manuscripts is the *Dunhuang suzidian* 敦煌俗字典, a dictionary of non-standard variants in the Dunhuang corpus.[10] Without question, this is an extremely useful tool, although unfortunately not large enough to paint a comprehensive image of contemporary scribal habits. As it references about 280 manuscripts, it only documents the most common variants. For this reason, even if a particular form is not attested in the dictionary, it does not necessarily mean that it does not occur in the manuscripts.

A significantly larger collection of variants is the *Koryŏ Taejanggyŏng ichʻe chajŏn* 高麗大藏經異體字典 (hereafter: *Koryŏ chajŏn*), a massive dictionary of character variants from the Korean Buddhist Canon.[11] Although the dictionary is based on texts printed in Koryŏ (Goryeo) in the first half of the thirteenth century and is thus removed from the manuscript tradition of medieval China in both

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10 Huang Zheng 2005.

11 Yi Kyu-gap et al. 2000.

time and space, the woodblocks versions ultimately (through several incarnations) derive from Buddhist manuscripts copied in China prior to the Mongol period. Even though, as a dictionary, the *Koryŏ chajŏn* cannot be taken as directly representative of the Chinese manuscript tradition, in practical terms it is the best available resource for locating variants used in pre-modern Buddhist manuscripts. The utility of the dictionary derives from its breadth, as it includes all non-standard variants in a vast corpus. In sum, the *Dunhuang suzidian* is more relevant for our examination but is limited in its scope, whereas the *Koryŏ chajŏn* is statistically more reliable but several steps removed from medieval Chinese manuscript culture.

Both the *Dunhuang suzidian* and the *Koryŏ chajŏn* document concrete examples of variants from medieval manuscripts and prints, rather than data extracted from earlier dictionaries. They are purely descriptive in their approach, in contrast to the prescriptive agenda of many pre-modern dictionaries. This makes them especially valuable for comparing variant forms used in medieval scribal culture with those preserved in the lexicographic tradition. Using these two resources considerably speeds up the process of locating examples of *huiyi* structures. Of the original 37 variants in Table 1, only 13 can be found in the *Dunhuang suzidian* or the *Koryŏ chajŏn*; see Table 2.[12] The table records the location where the variant occurs: for the Korean Canon, it is the letter 'K' followed by the number of the text in the canon (e.g., K-1257); for the Dunhuang manuscripts, it is the pressmark.[13]

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12 In some cases, we also find *huiyi*-type variants which are not in our original list (Table 1). For instance, under the character *ting* 聽 ('listen') the *Dunhuang suzidian* lists a variant consisting of the components *er* 耳 ('ear') and *e* 惡 ('bad'), neither of which serves a phonetic function. Although this variant does not occur in any of the four traditional dictionaries, similar forms are attested in other early dictionaries; for example, the Southern Song scholar Lou Ji's 婁機 (1133–1211) *Hanli ziyuan* 漢隸字原 records the same form occurring in Han-period stone inscriptions.

13 'DY' stands for Dunyan 敦研 (i.e., Dunhuang Research Academy 敦煌研究院); 'DB' for Dunbo 敦博 (i.e., Dunhuang Museum 敦煌博物館); 'S' for the Stein collection at the British Library; 'P' for the Pelliot chinois collection at the Bibliothèque nationale de France.

Table 2: *Huiyi*-type variants from Table 1 featuring in the *Koryŏ chajŏn* and the *Dunhuang suzidian*.

Standard character	Variant from Table 1	*Koryŏ chajŏn*	*Dunhuang suzidian*
老 'old'	耂	耂 K-1257	耂 DY.234 耂 DY.302 耂 DY.042
洟 'nasal mucus'	鼽	鼈 鼈 鼊 鼊 K-1498	
仙 'immortal'	僊 僊 仚 仚	仚 仚 K-1257 仚 K-1498	仚 DY.029 仚 S.6825 仚 S.388
帆 'sail'	颿 颹	颺 K-1063 颺 K-1498	
蠶 'silkworm'	蚕 蝅 蝁 蝁	蚕 蚕 K-1257 蝁 蝁 K-1257 蝁 K-0801 蝁 K-0391	蝁 P.3833 蝁 S.134 蝁 S.3491 蝁 S.388
聽 'listen'	聝 聭		聭 S.388
炒 'fry'	㷃	㷃 K-1063 㷃 K-1498	
飲 'drink'	㵪	㴱 K-1498	
辯 'eloquent'	辡	辡 K-0394	辡 S.530 辡 S.779
嚏 'sneeze'	鼤	鼤 鼤 K-1498 鼤 K-1063	

Not all variants aligned in the table are identical. For example, in the case of the character *xian* 仙 ('immortal'), the top component of the fourth variant in the *Longkan shoujian* is *ru* 入 ('enter'), whereas in the Korean and Dunhuang examples it is *ren* 人 ('man'). But the graphic similarity of the forms across the columns is undeniable. In general, the table demonstrates that whenever we find analogous matches, they are structurally very similar, regardless of the type of script or hand in which they appear. This attests to the stability of variant forms through time and space, as some of them emerge centuries apart in geographically distant regions (e.g., Dunhuang vs. Korea). The remarkable thing about this phenomenon is that most of the *huiyi*-type variants do not represent the usual way of writing a given character, as it is somewhat counter-intuitive that scribal cultures would sustain and transmit idiosyncratic forms that do not serve a practical function. Some of them have more strokes and thus take longer to write than the original characters (e.g., writing 㵄 in place of 浼), revealing that the formation of variants was not necessarily motivated by convenience.

Taking a step further and examining the source of the variants recorded in Table 2, we can see that even within the pool of forms ostensibly collected from manuscripts, some examples derive from dictionaries. The 23 variants from the Korean Tripitaka in Table 2 are extracted from the following texts:

10 examples	K-1498	*Yiqie jing yinyi* 一切經音義, in 100 *juan*, compiled by Huilin 慧琳 during 788–807
7 examples	K-1257	*Xinji Zangjing yinyi suihan lu* 新集藏經音義隨函錄, in 30 *juan*, by Kehong 可洪 during 931–940
3 examples	K-1063	*Yiqie jing yinyi* 一切經音義, in 25 *juan*, compiled by Xuanying 玄應 after 649
1 example	K-0801	*Zhengfa nianchu jing* 正法念處經, in 70 *juan*, tr. by Gautama Prajñāruci during 538–541
1 example	K-0391	*Guoqu zhuangyan jie qianfo ming jing* 過去莊嚴劫千佛名經, in 1 *juan*, tr. by unknown translator during the Liang 梁 dynasty (502–557)
1 example	K-0394	*Wuqian wubai Foming shenzhou chuzhang miezui jing* 五千五百佛名神呪除障滅罪經

Three of these six texts are in fact dictionaries included in the Buddhist Canon and transmitted along with other texts. All three feature in their title the term *yinyi* 音義 ('sound and meaning'), referring to a type of work that provides phonetic and semantic glosses for words and terms found in Buddhist scriptures. Of

these, Huilin's *Yiqie jing yinyi* (K-1498) is a monumental work in 100 *juan* that takes up two large volumes in the modern edition of the Korean Canon. Although the thousands of variants assembled in such dictionaries supposedly derived from the medieval manuscript tradition, they also include a cumulative repertoire of forms which may not have been in common use.

Overall, we can see that out of the 23 variants from the *Koryŏ chajŏn*, only three (i.e., 蝅 from K-0801, 蝨 from K-0391 and 瞀 from K-0394) come from non-lexicographic texts. Two of these are variants of the character 蠶 and consist of the components 天+虫 ('heavenly-worm') and 神+虫 ('divine-worm'). Most of the Korean variants in Table 2, however, come from various *yinyi*-type Buddhist dictionaries and thus should not be taken as representative of pre-modern writing habits. Unfortunately, removing variants attributed to *yinyi*-type dictionaries does not fully solve the problem because we can never be sure that a given variant does not *also* occur in a non-lexicographic text. As the *Koryŏ chajŏn* only records one source for each variant form, the inclusion of data from pre-modern lexicographic works potentially conceals examples of the same form occurring in other texts.

Seen in the rightmost column in Table 2 are the 13 variants occurring in the Dunhuang corpus. These come from the following manuscripts:

3 examples	S.388	*Zhengming yaolu* 正名要錄, etc.; d. u.
1 example	S.6825	*Laozi daode jing* 老子道德經 with the Xiang'er 想爾 commentary; *c.* 6th c. copy
1 example	S.134	*Shijing* 詩經, 'Qiyue' 七月; d. u.
1 example	S.3491	*Pinposaluo wanghou gong cainü gongde yi gongyang ta shengtian yinyuan bian* 頻婆娑羅王后宮綵女功德意供養塔生天因緣變; 9–10th c. copy
1 example	P.3833	Poems of Wang Fanzhi 王梵志; dated *bingshen* 丙申 year (936?)
1 example	DY.042	*Miaofa lianhua jing* 妙法蓮華經, tr. by Kumārajīva; 4–5th c. copy
1 example	DY.234	*Daban niepan jing* 大般涅槃經, tr. by Dharmakṣema 曇無讖; 4–5th c. copy
1 example	DY.302	*Weimojie suo shuo jing* 維摩詰所說經, tr. by Kumārajīva; 4–5th c. copy
1 example	DY.029	*Daban niepan jing* 大般涅槃經, tr. by Dharmakṣema; 4–5th c. copy

| 1 example | S.530 | *Da Tang Shazhou Shimen Suo falü Yibian heshang xiu gongde ji bei* 大唐沙洲釋門索法律義辯和尚修功德記碑 |
| 1 example | S.779 | *Da Fan Shazhou Shimen jiaoshou heshang Hongbian xiu gongde ji* 大蕃沙洲釋門教授和尚洪辯修功德 |

The two last items in the list record two forms of the character 辯, both of which essentially consist of the components 巧+言 (or 功+言 'merit-speak'), matching the form recorded in Table 1 as coming from the *Yupian*. These last examples are from manuscript copies of commemorative inscriptions and occur in the names of high-ranking monks Suo Yibian 索義辯 (793–869) and Hongbian 洪辯 (d. 868). Indeed, their names feature frequently in the Dunhuang corpus and are consistently written with this variant. In addition, the same variant is also commonly, but not always, used in other names. There are, however, also examples where the same variant is used to write the word *bian* 辯 ('eloquent; debate').

In the above list, three forms derive from manuscript S.388 with the *Zhengming yaolu*. In reality, this work is only one of several lexicographic lists copied onto the same scroll. One of our examples comes from the *Zhengming yaolu*, whereas the other two come from a short list of *huiyi*-type variants. Thus, once again, these three examples are based on dictionaries, rather than ordinary texts, and should be excluded from our pool of 'genuine' cases. The remaining 10 forms come from 10 different texts. Some of these forms, however, effectively have the same orthographic structure, which is why they represent only five orthographically distinct structures of four characters:[14]

老 (*lao* 'old')	尐 (先+人 'prior-man')
仙 (*xian* 'immortal')	仩 (人+止 'man-recess')
	仚 (人+山 'man-mountain')
蠶 (*can* 'silkworm')	蝅 (天+天+虫 'heavenly-heavenly-worm')
辯 (*bian* 'eloquent')	晢 (巧+言 'artful-speech')

Observing the dates of the manuscripts which contain the variants, we can see that variants 尐, 仩 and 仚 all come from manuscripts pre-dating the Tang period

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14 The reason for this is that the *Dunhuang suzidian* often includes forms that differ from each other in terms of their calligraphic traits (e.g., balance, stroke width) but not necessarily in orthographic structure.

(i.e., DY.029, DY.042, DY.234, DY.302 and S.6825). The variant 蚕, however, appears in later manuscripts, probably dating to the ninth or tenth century. Of these, S.134 is possibly the earliest but not earlier than the beginning of the Tang. As expected, the variant 蚕 also appears in the Korean subset, which is closer in time to the majority of Dunhuang manuscripts. The overlap corroborates that this specific variant was indeed in common use in pre-modern scribal culture and is not a dictionary-only form. The only Korean variant not in the Dunhuang set is 蜇, a variant of the character 蠶. Overlaying the two sets from Korea and Dunhuang, we end up with six variants of only four characters:

老	耂
仙	仚, 仚
蠶	蚕, 蜇
辯	辡

Therefore, of the 37 *huiyi*-type variants listed in Table 1 at the beginning of this paper, only these six can be linked with actual writing habits, while the rest appear to be chiefly perpetuated in the lexicographic tradition. In other words, six out of 37 (i.e., 16%) of the variants randomly chosen from traditional dictionaries are likely to have been in common use.

4 The control group

Naturally, the analysis presented above has its limitations. One of these is that the 37 variants (of 27 characters) are only a small subset of the total number of variants preserved in pre-modern dictionaries. It is likely that some variants not included in Table 1 may have been relatively common. To correct the bias of our original data set, another set of 37 variant forms was chosen as a control group, hoping to improve the accuracy of the results of the above analysis. To obtain a different set of random variants, I went through the initial lines of the *Qianziwen* 千字文 (Thousand Character Text), looked up the variants of each character in the four pre-modern dictionaries and selected the ones consisting of components which together were indicative of the meaning of the word normally written by the given character. From the point of view of the dictionaries, the sequence of characters in the *Qianziwen* is entirely random, but the characters are all commonly used ones.

As before, the chosen variants did not have to belong exclusively to the *huiyi* category, they could also be interpreted simultaneously as *xingsheng* combinations. Among the criteria for selecting variants was that their components had to contribute to the semantic value of the character unambiguously. Another criterion was to exclude variants which contained the entire mother character and thus the added other component merely disambiguated or amplified the meaning of the word (e.g., 懲 < 常, 嘝 < 悲). Table 3 lists the 37 variants of 21 standard characters chosen sequentially from the *Qianziwen*.

Table 3: Control group of 37 additional *huiyi*-type variants from the four dictionaries.

Standard character	Variant	Components	Source
天 'heaven'		一+先 'one-prior'	*Yupian*
		佛+國 'Buddha-kingdom'	*Sisheng pianhai*
地 'earth'		山+水+土 'mountain-water-soil'	*Yupian*
		土+水+山 'soil-water-mountain'	*Sisheng pianhai*
		水+土 'water-soil'	*Jiyun*
洪 'flood'		水+山+竝(=並) 'water-mountain-merge'	*Longkan shoujian*
		水+生+生+竝(=並) 'water-grow-grow-merge'	*Longkan shoujian*
歲 'year; harvest; Jupiter'		山+火+火 'mountain-fire-fire'	*Sisheng pianhai*
		山+木+山 'mountain-tree-mountain'	*Longkan shoujian*
		山+收 'mountain-harvest'	*Longkan shoujian*
陽 'Yang, sun, southern slope'		阜+火 'abundance-fire'	*Sisheng pianhai*
騰 'gallop'		炎+頁+馬 'flame-head-horse'	*Longkan shoujian*
雨 'rain'		宀+水 'cover-water'	*Longkan shoujian*
水 'water'		井+泉 'well-spring'	*Sisheng pianhai*

Table 3 (continued).

Standard character	Variant	Components	Source
昆 'mass, many; brothers'		四+弟 'four-younger brothers'	*Sisheng pianhai*
		豕+豕+虫+虫 'pig-pig-worm-worm'	*Sisheng pianhai*
岡 'mountain ridge'		山+四 'mountain-four'	*Longkan shoujian*
		山+四+止 'mountain-four-stop'	*Sisheng pianhai*
珍 'precious'		西+玉 'western-jade'	*Sisheng pianhai*
國 'kingdom'		囗+王 'enclosed-king'	*Longkan shoujian*
		囗+八+方 'enclosed-eight-directions'	*Jiyun*
		囗+八+土 'enclosed-eight-lands'	*Yupian*
罪 'crime'		自+辛 'self-painful'	*Jiyun*
		自+卒 'self-die'	*Longkan shoujian*
愛 'love'		心+及 'heart-reach'	*Sisheng pianhai*
體 'body'		身+本 'body-foundation'	*Yupian*
		身+豊(<豐) 'body-plentiful'	*Jiyun*
		身+骨 'body-bones'	*Sisheng pianhai*
歸 'return'		去+來 'leave-come'	*Longkan shoujian*
四 'four'		二+二 'two-two'	*Yupian*
五 'five'		又+一 'another-one'	*Longkan shoujian*
惟 'think'		佳+心 'good-mind'	*Longkan shoujian*
得 'gain'		見+寸 'see-inch'	*Jiyun*
信 'trust'		人+口 'person-mouth'	*Yupian*
		言+心 'speak-heart'	*Jiyun*
		言+小 'speak-small'	*Jiyun*
		子+心 'child-heart'	*Sisheng pianhai*

As before, comparing the variants of the control group with data in the *Koryŏ chajŏn* and *Dunhuang suzidian* results in a significantly smaller set of variants. If, in addition, we exclude lexicographic data, then we are left with six variants of only four characters occurring in similar form in either, or both, of these two sources.[15] Table 4 shows these variants along with their sources.

Table 4: *Huiyi*-type variants from Table 3 matching non-lexicographic variants in the *Koryŏ chajŏn* and the *Dunhuang suzidian*.

Standard character	Variant from Table 3	*Koryŏ chajŏn*	*Dunhuang suzidian*
地 'earth'	坔	坔 K-0934 坔 K-1058	坔 P.2151
岡 'mountain ridge'	崗	崗 K-0648	
國 'kingdom'	国 囻	国 K-0056 囻 K-0934	国 F-96 囻 P.2151
體 'body'	躰 軆	躰 K-0549	躰 F-96 軆 Dunyan-119 軆 Zhedun-027

The variants 国 (<國) and 躰 (<體) are similar, although not identical, to the modern simplified forms 国 and 体, currently in use in Mainland China and Japan. The reason for this is that such forms, and other similar ones, remained popular for many centuries over a vast geographical area and were eventually chosen as substitutes for their more complex standard characters. That both

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15 I also excluded as lexicographic data the so-called *guwen* 古文 ('ancient script') variants handed down as part of the *Liguding Shangshu* 隸古定尚書 (S.799). The reason for this is that this text transcribes pre-Qin (i.e., pre-221 BCE) character forms into the 'modern' script and effectively preserves them as a specialised set of palaeographic data. The *guwen* variants certainly did not represent the way people normally wrote at the time when the manuscripts were written.

Japan and then China – independently – chose the same forms attests to them having been in widespread use throughout East Asia.

It is conspicuous that two of the six variants are character forms introduced during the reign of Wu Zetian 武則天 (r. 690–705). These are 埊 (山+水+土), used in place of the character *di* 地 ('earth'), and 圀 (口+八+方), a variant of the character *guo* 國 ('kingdom').[16] As these forms had a political and religious motivation and, at least initially, were primarily used within her reign, it is questionable whether they can be taken as representative of everyday writing habits in the medieval period. They did not, however, disappear altogether and were transmitted to other parts of East Asia, including Korea, Japan and the Nanzhao 南詔 kingdom, where some of them remained part of written culture for centuries. If we include the Wu Zetian forms in the results, then the portion of variants in actual use comprises 16% of the control group, matching the results obtained from our initial group. If we exclude them, we are left with only four variants, representing 11% of the group. In either case, the control group's results are entirely consistent with those of the initial group.

5 Conclusions

This paper assessed to what extent character variants documented in traditional dictionaries reflected actual writing habits in the medieval period. As part of the exercise, 37 *huiyi*-type variants were chosen from four pre-modern dictionaries. These were then matched against the *Dunhuang suzidian* and the *Koryŏ chajŏn* to evaluate the degree of overlap between data preserved in traditional dictionaries and roughly contemporary scribal habits. Although a portion of the variants had corresponding forms in the *Koryŏ chajŏn* and the *Dunhuang suzidian*, many of the matches occurred in dictionary-type works that had been incorporated into the Buddhist Canon or transmitted along with other types of manuscripts. Naturally, these variants were not directly representative of the way people wrote in real life. After eliminating such 'lexicographic noise', only six variants of four characters (i.e., 老, 仙, 蠶 and 辯) remained. Consequently, of the original 37 variants, only six (16%) seemed to have been in actual use.

In the second step, to validate the results of the above analysis, I assembled a control group of another 37 variants. This second analysis similarly yielded six variants (16%) of four characters (i.e., 地, 岡, 國 and 體). As two of these vari-

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16 On the origin of each character, see Bottéro 2013.

ants (i.e., 坔<地 and 圀<國) were character forms introduced during the reign of Wu Zetian, they primarily occurred in manuscripts and inscriptions dating to the end of the seventh and beginning of the eighth centuries, when she was on the throne. They did not fully disappear, however, but remained in use in various parts of East Asia, which is why they should not be dismissed outright. If we exclude these two forms from the results, we are left with only four variants, comprising 11% of the initial pool of variants in the control group. Whether we go with 11% or 16%, the results of the control group are fully in accord with those obtained from the first group of variants, attesting to the statistical reliability of the data.

In sum, the analysis presented in this paper shows that only a fraction (11%–16%) of the *huiyi* variants preserved in traditional dictionaries were in daily use. Other types of variants are likely to exhibit a similar pattern, even if specific percentages may be slightly different. Clearly, lexicography had its own tradition, and large dictionaries, aspiring to gather a comprehensive set of character forms ever in existence, relied just as much on earlier dictionaries as on epigraphic and manuscript sources. A variant featuring in an influential dictionary became part of the lexicographic tradition and from there on was likely to be included in large dictionaries. Lexicographic knowledge was cumulative and precedence-based, gradually incorporating even relatively rare variants.

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Matthieu Husson

The Art of Astrological Computations: Conrad Heingarter and the Manuscript Paris, BnF latin 7295A

Abstract: Late medieval astronomical manuscripts produced in Europe attest to different kinds of historical practices. Computations are one such practice and the focus of this contribution. My hypothesis is that a detailed analysis of the manuscripts and a deep understanding of what computation was for late medieval astrologers or astronomers in Europe are mutually beneficial. By concentrating on one of the manuscripts associated with the late fifteen-century astrologer Conrad Heingarter, I show that the document has specific characteristics of a slowly assembled personal *toolbox* for computation. I also argue that the multigraphic properties of the document are fundamental to understanding calculations that values comparing multiple computation paths among astronomical quantities.

1 Introduction

The manuscript evidence on which historians of late medieval astronomy in Europe rely was essentially shaped by the historical actors who used those manuscripts in scientific practices. These documents are contemporaneous to the practices they attest.[1] In some cases, it is even possible to examine autograph manuscripts of important astronomers and astrologers of the period.[2] Some of the practices attested by these sources may be closely linked to the actual production of manuscripts (e.g., when astronomical material is adapted to a specific dedicatee or when a student copies a manuscript in order to learn astronomy); other practices relate to the use of manuscripts to achieve specific tasks such as computation. In this contribution, I want to investigate this second kind of practice. My hypothesis is that a progressive unravelling of the complexity of manuscripts will allow a deeper and more contextualised understanding of what computation, understood as a form of mathematical reasoning, was for late

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1 See, for instance, the list of manuscripts in Chabás 2019, 413–423; or the manuscript descriptions in Pedersen 2002, 87–214.

2 Husson and Saby 2019, 205–234.

medieval astrologers or astronomers in Europe. Reciprocally, the analysis of these manuscripts' material, graphical, and intellectual features and of their interactions will be enlightened by an increasing comprehension of the computations.

About a dozen manuscripts are now identified as having been, in the second half of the fifteenth century, part of a collection assembled by Conrad Heingarter.[3] Conrad Heingarter's manuscripts can be identified because he annotated, or in some cases even copied, parts of them himself.[4] Together, these manuscripts form an exceptional archive from which much can be learned about Heingarter's biography.[5] Born in Horgen by Lake Zürich, he studied arts and medicine in Paris between the early 1450's (licence in arts, 1454) and 1466 (master in medicine). He was an astrologer and physician in the service of Jean II de Bourbon and his wife, Jeanne de France (sister of Louis XI), from 1464 onward. He also served as a physician and ambassador to King Louis XI and maybe to his successor Charles VIII. Most of Heingarter's manuscripts relate to his practice as a physician and astrologer. He authored commentaries on Ptolemy's *Tetrabiblos* and Ps.-Ptolemy's *Centiloquium*.[6] He also wrote several treatises mixing dietary recommendations and astrological considerations.[7] Beside astrology and medicine, four Heingarter manuscripts contain material dealing with mathematical astronomy.[8] Among them, Paris, Bibliothèque nationale de France, latin 7295A can be described as a 'toolbox' manuscript dedicated to astronomical computations.[9] This manuscript, one among many similar manuscripts produced in Europe during the fourteenth and fifteen centuries, is the subject of this article.[10]

Heingarter copied between half and two thirds of the manuscript.[11] The annotations, rubrication, and punctuation introduced by Heingarter in the

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3 Paris, BnF, lat. 7197, 7273, 7295A, 7305, 7314, 7333, 7347, 7432, 7446, 7450, and 11232.

4 Many of these 'Heingarter manuscripts' were already identified about a century ago by Lynn Thorndike, who devotes two chapters to Heingarter in his *History of Magical and Experimental Sciences* (Thorndike 1934, 357–385). Thorndike describes Heingarter as an 'astrologer' and a 'physician'. Here I consider Heingarter's astronomical computation practices.

5 Nicoud 2007, <doi.org/10.4000/books.efr.1448>; Jacquart 1979, 57.

6 The *Tetrabiblos* with an original commentary from Heingarter is found in Paris, BnF, lat. 7305. The *Centiloquium* and the *Tetrabiblos* in Paris, BnF, lat. 7432.

7 Paris, BnF, lat. 7446 and 11232.

8 Husson 2019, 247–274.

9 Kremer 2021.

10 A high-resolution colour digitalisation of the manuscript can be consulted at <gallica.bnf.fr/ark:/12148/btv1b10027322j> (accessed in Jan. 2021).

11 Heingarter copied the main text on fols 1^r–32^r, 35^r–45^r, 49^r–93^r, 145^r–142^r, 179^v–193^v. Heingarter annotated, for instance, fols 99^r, 100^r, 164^r.

manuscript are interesting but of secondary importance for our purpose. Such features have a local interest for specific astronomical topics, but they do not disclose the structure of the computation. Therefore, it is by describing the manuscript itself that I propose to grasp the kind of computation practices that Heingarter envisioned when composing this manuscript. I will thus focus in turn on the manuscript's material and graphical features as well as its content.

2 Material aspects: A composite manuscript

The manuscript binding is modern (Lefebvre 1828).[12] It gathers 193 folios in 17 paper quires of various sizes (2^{12};1^{10};1^{6};1^{8};1^{12};1^{14};2^{12};1^{16};1^{13};1^{12};1^{5};1^{10};1^{12};1^{14};1^{13}). On two occasions, folios are glued: fol. 115 is glued so that a quire of 14 folios is turned into one of 13 folios; fol. 139 is glued so that a quire of 4 folios is turned into one of 5 folios. These features show that the manuscript was not composed with a great deal of attention to the uniformity of its material structure. Rather these features indicate a collection of various elements produced on different occasions by different means. Such features are quite characteristic of toolbox manuscripts, which are often 'opportunistic', and content-oriented rather than the result of a carefully planned production process that is attentive to the physical harmony of the codex.

Six different watermarks are present in the manuscript.[13] Four of them point to paper produced in Paris between 1451 and 1461. The two other watermarks point to Chateaudun 1463 and Pont-à-Mousson 1459. The distribution of the various types of paper in the different quires does not exhibit any clear pattern. This fact again indicates that the manuscript itself was composed with no particular attention to uniformity in material used. The different quires of this manuscript were probably copied in Paris during the latter part of Heingarter's stay at the university while he was mostly a student in medicine and beginning in the service of Jean II de Bourbon. This chronological indication is important: when he composed this manuscript, Heingarter was for the most part already a trained astronomer, at least on the basic topics.[14]

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12 See the online catalogue notice by Laure Rioust (2018) at <archivesetmanuscrits.bnf.fr/ark:/12148/cc664943> (accessed in Jan. 2021).
13 Briquet 1548 on fols 10, 26, 34; Briquet 9167 on fol. 47; Briquet 1527 on fols 50, 55; Briquet 1683–1684 on fols 64, 67, 181; Briquet 15067 on fols 76, 79, 95; Briquet 11475 on fols 100, 127.
14 Heingarter learned liberal arts and more specifically astronomy in Paris (see Paris, BnF, lat. 7197).

A small flyleaf is added between fols 131–132 and 135–136 isolating a subset of a larger 12-folio quire. This feature suggests that the different quires of the manuscript had a life prior to being bound. This insight is reinforced by a supplementary observation. The last two folios of the third, fifth, ninth and fourteenth quires are left blank. In each of these four cases, the last blank page and the following one from the next quire exhibit traces of use that seem to indicate independent circulation as a booklet before binding. This life before binding is also characteristic of toolbox manuscripts. Such manuscripts were likely to exist in a pre-codex format, allowing for different ordering of the quires and booklets, easier simultaneous consultation of different parts of the manuscript and a process of slow accumulation and selection of different elements. In order to understand how the manuscript can be used in astronomical computations, it is very important to keep in mind that the physical configuration of the manuscript was, in its early stages, in a pre-codex, pre-binding form. This recognition has at least two consequences. First, the current ordering of the different booklets in the manuscript must be relativized even though, when the booklets were assembled in a codex, a specific ordering was chosen. Second, before binding, it would have been possible to open several of these booklets simultaneously in front of a reader.

3 Visual aspects: A multigraphic manuscript

The main visual feature of the manuscript, shared by most contemporaneous European astronomical manuscripts, is its use of three different types of contents: texts, numerical tables, and diagrams (Fig. 1). Diagrams and tables have specific kinds of paratexts such as table headings or textual-diagram labels. The paratexts are an important unifying element between the three kinds of contents. These texts, tables, and diagrams are the working tools with which one computes astronomical phenomenon. Their distribution in the manuscript reveals core features of the computation practices that were supported by this document. I describe first this distribution and then each of the elements in turn.

The codex comprises 386 pages, 35 of which are blank (Fig. 2). There are 190 pages inscribed with text, 173 pages inscribed with tables, and 58 pages inscribed with diagrams. Only 3 pages are inscribed with all three types of graphical elements, while 14 pages have both text and tables (i.e. a little under 10 per cent of the tables are found with text), and 51 have text and diagrams (i.e. around 90 per cent of the diagrams are found with text). In this manuscript,

there is no instance of diagrams and tables on the same page without text. However, diagrams are found alone on 6 pages while text is found alone 124 times and tables 156 times. The first two booklets of the codex comprise 125 pages with text, 58 with tables, and 46 with diagrams. The last four booklets of the codex comprise 115 pages with tables, 65 with text, and 12 with diagrams. Thus, there is also a general distribution of these elements in the codex: texts usually come first, while tables come after.
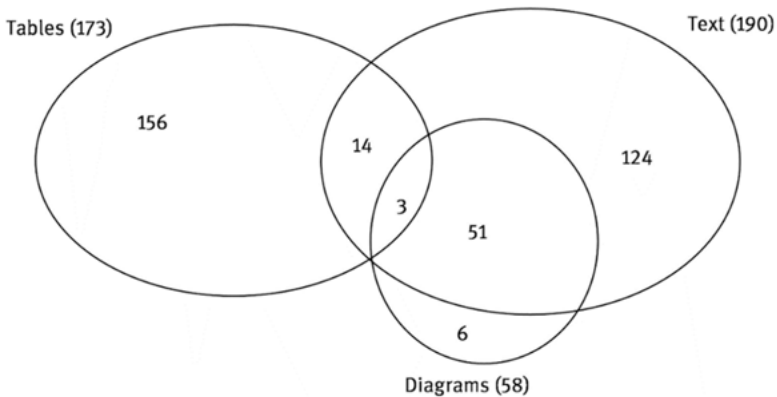
Fig. 2: Combination of text, tables, and diagrams in the pages of the manuscript.

Tables and text share almost an equal portion of the pages in the document, but tables are, by far, the most autonomous element. Diagrams are in most cases dependent on text. In between these two extremes, text is complemented by diagrams or tables on about a third of the pages where text is inscribed. Finally, tables and diagrams seem to require text in order to be combined on the same page: a direct confrontation of both elements does not seem to have been easily meaningful for late medieval astronomers.

The layout of text in the manuscript is that of the late medieval European manuscript cultures to which the codex belongs. From folio 1 to 98, the pages are mostly organised in one large column. In this first section, comprising the first two booklets, the ruling alternates between around 42 lines (first booklet) and around 45 lines (second booklet). These first two booklets are also unified by some text-structuring decorative elements: a hierarchy of illuminated fifteenth-century Parisian-style letters (four red and blue illuminated letters in the first booklet, one red and brown in the second booklet); alternate red and blue capital letters (not all of them realised; see fols 2ʳ–8ᵛ, 35ʳ–45ʳ, 49ʳ–62ʳ); and

alternate red and blue *pieds de mouche*. These first two booklets are also copied in Heingarter's hand. From folio 99 to the end, the page layout is in two columns (the only exception is fol. 181ᵛ). The ruling is mostly of 45 lines, but sections of 50 lines (fols 182–193) or even 62 lines (fols 174–181) do occur. The structuring of the text by means of decorative elements is also more diverse and generally less polished in these last four booklets of the manuscript. Illuminated letters are absent. Two different styles of red capital letters are used in two different sections (fols 115ʳ–144ᵛ and 174ʳ–180ᵛ, respectively). Black and red *pieds de mouche* are used in various places (mostly fols 101ʳ–111ᵛ, 174ʳ–180ᵛ), along with more refined punctuation marks (*virgulae*). Among the eight quires of this second part, Heingarter copied only two (quire 14 and quire 17). Intervention by Heingarter is nevertheless apparent in each of these quires via *marginalia* of different types, including several *manicula*. These elements strongly imply that Heingarter copied the first half of the manuscript. In the second part of the manuscript, Heingarter's interventions are those of a compiler and attentive reader (adding, for instance, rubrication and punctuation), except for two quires. Qualitatively, the first half of the codex, copied by Heingarter, mostly contains text, while the second half, mainly collected and read but not copied by Heingarter, mostly contains tables. The document thus attests a situation where texts and tables share a balanced amount of page space but exhibit different levels of engagement by Heingarter. He interacts more intimately with texts that he mostly copied himself, as opposed to the tables for which Heingarter mostly trusted other copyists.

In a discussion of the visual aspects and distribution of numerical tables in the manuscript, it is important to introduce a distinction. I use the word 'grid' to refer to a particular ruling of the page that displays lines and columns. A grid can be used for many different purposes on a page, one of which is to display numerical tables. 'Numerical tables' are mathematical objects defined by a series of relations between argument and entries. Numerical tables can be displayed in different ways, via prose, within different kinds of graphs and diagrams, or within grids. To some extent, the visual features of a grid share the properties of other kinds of non-discursive diagrammatic representations in numerical tables.

When tables are displayed along with text or diagrams on the same page, the grid used is simple and of small dimensions (Fig. 1). Such grids are often used to display numerical information in relation to a diagram (e.g. fols 16ʳ and 30ʳ). Most of the 14 small grids found on pages with text only are also directly related to a diagram found on the previous or following page of the manuscript. These small grids can be considered direct paratexts to the diagrams or an ex-

tension of their labelling system. In one instance, on fol. 182ᵛ, the relation between the diagram and the table is inverted: the diagram is used to display in a geometrical way the relations displayed in the tables. Small grids sharing the page with text are also used to display other kinds of tables that provide information about the mean motions of celestial objects (e.g. fols 38ᵛ, 39ʳ, 40ʳ, 40ᵛ). The meaning of these tables is not directly dependent on a diagram or a text. Grids for these kinds of tables tend to be a little larger than the first kind. They can be also a little more complex, since one grid, for instance, can be used to display two different tables concomitantly sharing their argument column (e.g. fols 40ʳ or 40ᵛ).

In this respect, these small grids share some features of the larger series of grids filling most of the second half of the manuscript (see Fig. 3). These larger grids often fill the full space of the page, though in some cases with comfortable marginal areas (up to about a third of the page, on fol. 120ʳ for instance). On the other hand, a given page can have more than one grid. The most frequent situation is to have two grids on one page, but three grids are not rare and fol. 116ʳ, for instance, has four grids. Each of these grids can be quite complex and display more than one numerical table. The numerical tables displayed in these grids are often long and require several grids on several pages for their presentation. In many cases red and black ink are used in order to enhance readability and distinguish different tables in a given grid, or the arguments from the entries, or the heading of the tables from their values, etc. (e.g fol. 120ʳ). Finally, graphical aspects also include broken lines cutting across the grid. These lines are embedded with different meanings. For instance, in Fig. 3 such broken lines dividing the grid can be seen. They mark a separation between meridional and septentrional values of the latitude of Mercury (i.e. to some extent, this line is a projection onto the grid of the celestial ecliptic).

Grids of numerical tables are a fundamental tool for astronomical computations. Their visual characteristics and distribution in the manuscript reflect the complexity and intended precision of these computations. Grids running for multiple pages allow the display of a large amount of numerical information in long and precise numerical tables. Moreover, these tables often share the same series of grids, indicating that astronomical computations require the concomitant consideration of sets of relations between astronomical quantities rather than a more pedestrian path going successively from one relation to the next. These large and complex tables are the majority, but smaller tables appearing in simpler grids related to diagrams through text are also important as they illustrate the intervention of numerical tables in a different context, less 'frontline' with respect to computation.

In many ways, diagrams are distributed in the codex along the same patterns as these small numerical tables in simple grids. About 30 per cent of these diagrams appear in connection with one of these small tables on the same, previous, or following page. About 60 per cent of the diagrams appear in a textual context but are not associated with any tables. The last 10 per cent are diagrams filling an entire page. A portion of them appear on their own (Fig. 4), independently of any direct relation to a text (or a table). These cases indicate that diagrams possess an autonomy and can generate meaning on their own.

Diagrams in the manuscript all rely on a very simple repertoire of geometric shapes involving circles and straight lines. However, they can be distinguished according to some of their visual properties, especially with respect to the way they use different kinds of lettered, textual, or numerical/graduation labels (Fig. 5). Diagrams using lettered labels are the majority, with 51 cases. Textual labels (i.e. nouns or nominal groups mostly) are present as well in 43 cases. Graduations and/or numbers labels appear in 31 cases. Graduation and numbers never appear alone as labels. They are always coupled with at least one other kind of label. Texts are also quite rare as a stand-alone label for a diagram, only 3 cases. Letters, on the other hand, are the only label in 15 cases. The combination of text and letters is the most frequent type of label with 10 cases. Text and graduations/numbers are attested in 5 cases. The combination of graduations/numbers with letters is very rare, only 1 case.[15] There are 25 diagrams combining the three kinds of labels.
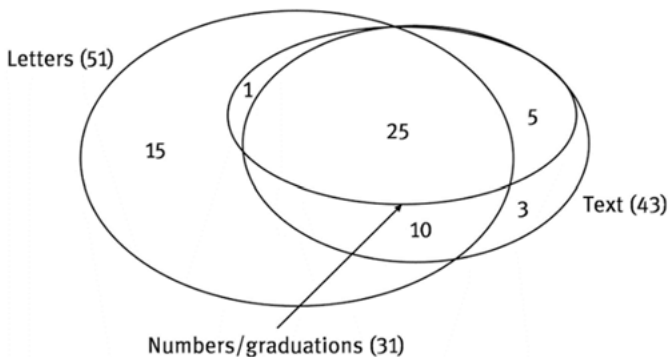
Fig. 5: Repartition of types of diagram's labels.

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15 This is the specific situation of fol. 182^v, mentioned above in relation to a small grid of numerical tables.

Lettered diagrams are the majority. Actually, direct mentions of Euclid's *Elements* in relation to some of these diagrams are rare but not absent from the manuscript. In most cases, however, lettered diagrams are supplemented either with textual labels or with graduation and numbers. Small tables are also used in some cases to complement the lettered labels. Thus, lettered labels must be used in different ways than in the *Elements*. Moreover lettered labels were not sufficient to cover a range of uses that appears to be much broader for diagrams. It is interesting, for instance, with respect to the relation of diagrams to quantification, that graduations/numbers labels require the presence of at least one other kind of label (in 80 per cent of the cases in fact, graduations/numbers labels appear with lettered and textual labels).

Other visual features of astronomical diagrams in the manuscripts, although they are more difficult to quantify, are of importance. Some diagrams (e.g. fol. 183$^{\text{v}}$) seem purely mathematical. None of their elements represents, even indirectly, an astronomical quantity. The geometrical reasoning expounded in this part of the manuscript relies on a series of 3 diagrams (all to be found on fol. 183$^{\text{v}}$). Diagrams, like tables, can be organised in series. On the other hand, a cosmological diagram such as that of fol. 191$^{\text{v}}$ represents some aspects of solar eclipses with moon shadow coloured in black ink. Like the mathematical diagrams of fol. 183$^{\text{v}}$, the eclipse diagram of fol. 191$^{\text{v}}$ initiates a broader series of 4 diagrams that are to be found in the following folios. These diagrams display relations between astronomical quantities by representing directly astronomical objects (here the sun and the moon). Obviously, these two kinds of diagrams rely on quite different modes of representation. Instrument diagrams (e.g. fol. 50$^{\text{r–v}}$) are yet another kind of diagram with quite distinctive features. They appear in series, which shows the 'construction' process of the instruments or different details of the object. These diagrams represent, through an instrument, specific relations between astronomical quantities. Such diagrams do rely in some cases on a direct representation of astronomical objects (notably the stars on the rete of the astrolabe) but this is not systematic. Some of these instrument diagrams are even metrically exact, and thus can be used as 'paper' instruments for some kinds of computational use. *Theorica planetarum* diagrams are yet another way to display sets of relations between astronomical quantities. They are often much closer to the representation chosen by numerical tables. For instance, they provide geometrical representation of interpolation coefficients (*minuta proportionalia*) which are typical artefacts of numerical tables' computation practices (Fig. 4).

The manuscript has several instances of variations among versions of the 'same' diagram.[16] Some of these instances (Fig. 4) are part of a stand-alone series of diagrams that are meaningful on their own, independent of any direct relation to text or tables, while others diagrams are inserted into a text. These possibilities are grounded in the fact that these diagrams, like most of the diagrams in the manuscript, are found in many other manuscripts. They are elements of a shared epistemic visual culture in mathematical astronomy where meaning is likely to arise even from these small variations.

In spite of the fact that they rely on a very simple geometrical repertoire of shapes, diagrams appear to have a broad visual range, including a complex use of different kinds of labels and different modes of representation for the relationship between astronomical quantities. Like grids for numerical tables, diagrams generally show sets of relations between astronomical quantities rather than each relation one by one. Different types of diagrams, with respect to their labelling systems and their modes of representation, will generally also select different sets of relations between astronomical quantities. Like grids for numerical tables, diagrams are organised in series that can display different kinds of processes or analysis. Finally, variations on 'same' diagrams provide slightly different representations of identical sets of relations between astronomical quantities. Thus, together diagrams produce a robust and nuanced set of tools for identifying and analysing pertinent astronomical quantities and their relations in the study of celestial phenomenon. Diagrams, and more generally geometrical insights, have a thick and diverse role in the mathematical practice attested by this manuscript.

Inspection of the manuscript's visual aspects confirms that Heingarter was deeply engaged with the manuscript. This engagement is different with respect to text and tables. Moreover, analysing the visual organisation of diagrams and grids of numerical tables provides important information about the nature of the computations supported by the manuscript. Consideration of the various sets of mathematical relations between astronomical quantities, presented in diagrams or in grids of numerical tables, is at the centre of this mathematical practice. It is also important to remember that these two types of graphical expressions for sets of relationships between astronomical quantities can appear together on a page only if they are supplemented by a text. Indeed diagrams and tables share a common terminology used in table headings and in diagram labels. Thus, it is likely that various texts and more deeply a specific subset of

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16 Compare Fig. 4 with fol. 188ʳ, both connected with Mercury.

expressions shared by the different graphical modes used in the manuscript have a central role in articulating the computation.

4 Intellectual aspects: A multiple-text manuscript

Twenty-three works can be identified in the manuscript. Ten of them cover 307 pages, about 90 per cent of the inscribed pages of the codex. On the other hand, the remaining 13 works share only 44 pages, that is, a little more than 12 per cent of the inscribed pages. A few works, which constitute the core of the manuscript, are copied down in full. These core works are accompanied by about the same number of shorter works, to which very little space is devoted. These smaller pieces are often fragments of larger works (only a portion of a larger work is copied, or several portions are compiled, or the original work is abridged by other means). The shorter pieces can also be complete and independent but nevertheless small works. It is often very difficult to identify these fragments and short works because parts of unedited works are almost impossible to detect, especially if the wording, in case of a text, has been slightly adapted or variant. While difficult to identify, these fragments and short works indicate the type of complementary and auxiliary material that Heingarter felt was necessary to handle the larger texts. Thus, the relationship between the core works and the fragments or short works is an important aspect of the astronomical computations attested by the manuscript.

The first booklet (quires 1 to 5) is a perfect illustration of this situation. It contains four works. The first one is Campanus de Novara's *Theorica planetarum*.[17] It takes up 64 pages (fols 1ʳ–32ᵛ) with an intricate combination of text, diagrams, and tables. The text describes planetary models qualitatively in their geometrical and cosmological dimensions. It also proposes an instrument for representing these different models and relies on the instrument to explain the rationale of the astronomical tables. The second text is the *De armilis* of Profatius Judaeus. This text also describes an instrument for displaying the geometrical planetary models.[18] It is 12 pages (fols 35ʳ-40ᵛ) long, with the same kind of combination of text, diagrams, and tables as the previous work. The following two works are much smaller units. *De horologio* is 3 pages (fols 41ʳ–42ʳ)

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17 Benjamin and Toomer 1971, 83.
18 Poulle 1980, 66.

long, with text and diagrams.[19] It deals with the topic of water clocks. Moreover, a small text on proportions with the incipit *Incipit arithmetica de rerum ac numerorum proprietationibus* takes up 6 pages of text (fols 42^v–45^r).[20] The last 7 pages of the quire and booklet are left blank so that the choice of this work, near the end of the booklet, is probably not explained by an optimisation of page space: Heingarter did not select small works to fill empty pages near the end of a quire.

The second booklet (quires 6 to 9) has a similar organisation of large and small works. Two small, unidentified works dealing with proportions take up 3 pages. The first work, with the incipit *Si vis scire quantitatem cuiuslibet linee*, occupies fol. 49^r. The second, with the incipit *Notandum quod habendo aliquid de modo proferendi*, occupies fols 92^v–93^r. The last 11 pages of the booklet are left blank (almost half of quire 9). Two large works fill the remaining 86 pages. Ps.-Messahala's *De astrolabio* takes up 31 pages (fols 49^r–64^r), with a combination of texts, tables, and diagrams. Like the works found in the first booklet, this one also treats the topic of an instrument. However, the astrolabe is an instrument devoted to the astronomy of daily motion and to spherical astronomy. Interestingly, an autonomous series of diagrams extracted from the *Theorica planetarum Gerardi* is inserted at the end of this treatise. The second large work of this booklet takes up 51 pages, 43 of which are tables and 8 are text. This work is a German adaptation of the *Six Wings* by Immanuel Bonfils, a mid-fourteenth-century treatise on eclipse computation that was originally written in Hebrew.[21] No other copies of this version have been identified.

The third booklet coincides with quire 10 and with the second half of the codex, where Heingarter's intervention is mainly that of a reader and compiler and less that of a copyist. This quire's central work (fols 101^r–111^v) consists of John of Saxony's canons to the Parisian Alfonsine tables with the incipit *Tempus est mensura motus*. This work takes up only 22 pages, all text. The work expounds different procedures for computing planetary positions in longitude and syzygies with the Parisian Alfonsine Tables. It is without any doubt the most copied work of the whole Alfonsine tradition with hundreds of extent copies. Heingarter devoted special attention to the topic of syzygies, which he annotated on fol. 109^r. In this booklet, two supplementary works complement John of Saxony's canons. One is an ascension table for Toledo (45°) on fols 112^r–113^v. This table is extracted from a larger set known as the Toledan Tables.[22] The last

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19 Thorndike and Kibre1963, 949, incipit: *Notandum pro horalogiis in trunco faciendis*.

20 Thorndike and Kibre1963, 1437.

21 Solon 1971, 1–20; Lévy 2003, 283–304; Goldstein 2007; Goldstein and Chabás 2017, 71–108.

22 Pedersen 2002, 1066–1070.

work of this booklet is 3 pages long, all text. This work, with the incipit *Ad intelligendum tabulas astronomie necessario opportet scire quid sit*, defines different concepts of mathematical astronomy that are necessary to work with the table.[23] Here the fragment or small work provides a basic vocabulary helpful for reading the core and larger work of the booklet. The small definitional text is cut into two sections. A first part is found on fol. 99^{r-v}, and a second part is found on fol. 114^r.

The fourth booklet (quires 11 to 13) comprises 6 works. The first extends to 38 pages (fols 115^r–127^r, 128^r–134^v) and contains the Parisian Alfonsine Tables.[24] John of Saxony redacted *Tempus est mensura motus* for this set of tables. This set of tables, computed on the longitude of Toledo, provides the elements for computing planetary longitude. Heingarter added, in marginalia to these tables, two sets of radices for Paris and Vienne (France). These additions make the tables directly useful for two meridians where Heingarter is known to have worked (fols. 117^v-123^r). Apart from these marginalia, many other smaller works supplement the Parisian Alfonsine Tables in this booklet. They are mostly taken from the larger corpus of the Toledan Tables. Heingarter copied in his own hand a planetary latitude table on fol. 127^v. Four other fragments or small works, dealing, respectively, with planetary stations, planetary aspects, Solar and lunar velocities, and finally spherical astronomy fill the last 20 pages of the booklet (including one final blank page). In this booklet the fragments or short works complement the large, core work of the booklet by addressing topics that are not addressed by the Parisian Alfonsine Tables.

Heingarter copied the fifth booklet himself (quire 14). It contains only one work (fols 145^r–152^r). The Planetary latitude tables of Oxford fill 10 pages.[25] They address the issue of planetary latitude in a fundamentally different way than the small tables copied on fol. 127^v in the preceding booklet. The last 5 pages of the booklet are left blank.

The sixth booklet (quires 15-16) contains two works linked to John of Lignères. The first (fols 155^r–171^v) is 34 pages of tables. It is known in the literature as John of Lignères's Tables of 1322.[26] It is a set of astronomical tables compiled by John of Lignères in Paris, dealing mainly with spherical astronomy and eclipse computations. Many of those tables are directly linked to the Toledan tradition, but a few of them also relate to the Alfonsine tradition. Part of the

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23 Thorndike and Kibre 1963, 48.

24 Chabás 2019, 237–276.

25 Chabás 2019, 227–236.

26 Chabás 2019, 175–199.

content of this set is redundant, for instance, with respect to planetary latitude, and to what is found in the preceding booklet. This set of tables closes the tabular section of the codex that was engaged in booklet four. After four blank pages, the second work of this booklet is found (fols 174^r–180^v), occupying the remaining 14 pages, all text. It is the *Priores astrologi* by John of Lignères, a text probably written in connection with the Tables of 1322 and addressing planetary longitude, latitude, and eclipse computation.[27] Heingarter devoted close attention to the topic of planetary latitude in this text. This is evident from the way he rubricated and punctuated the portion of the Lignère's work devoted to this topic (fol. 178^r)

The last booklet of the manuscript (quire 17), mostly copied by Heingarter, begins with two short works. The first, which occupies only a part of fol. 181^r, may be a fragment on eclipse by John of Lignères.[28] The following one (fol. 181^{r-v}) includes text and diagrams. It discusses theoretical issues that have to do with planetary motions and eclipses, drawing on al-Farghani and Ptolemy. The last work of the manuscript, with the incipit *Arabes maxime secudum motum lune* (fols 182^r–193^v), includes texts, diagrams, and small tables on 24 pages.[29] It addresses in a theoretical way many aspects of mathematical astronomy, from trigonometry to eclipses, with reference to Ptolemy, Euclid, al-Farghani, the canons to the Toledan Tables, and the Parisian Alfonsine tables.

Core works and short works interact in two mains ways in the manuscript. In some cases, fragments and short works complement the core works by proposing alternatives to astronomical topics that have already been addressed or by covering entirely different topics. In other cases, fragments and short works provide foundational information, such as definitions or basic arithmetical techniques. Independent of this distinction between core works and short works, a different distinction between works appears. It bears on the way they rely on different combinations of graphical expression. Some works are text only: these are in general procedural texts expounding the use of astronomical tables in computing different kinds of astronomical quantities. Other works consist only of tables. They collect table sets as described above. Finally, a third class of works combines texts, diagrams, and small tables. They address instruments and contain theoretical reflection on planetary models and computation procedures. These works are placed at the start and at the end of the codex, while works that consist only of tables or text are the core of the codex. These

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27 Saby 1987, 173–277.

28 Pedersen 2002, 535.

29 Thorndike and Kibre 1963, 124.

more theoretical works provide meaning and guidance to the long and tedious astronomical computations supported by the manuscript.

Almost each of the main areas of astronomical computation (longitude, latitude, eclipse, spherical astronomy) is addressed many times and through different means with the three types of works distinguished above (in some cases even in a single booklet). Thus, the computation practices under scrutiny here are not only about the consideration of sets of mathematical relations between astronomical quantities, they are about multiple paths among these relations and multiple ways to group and consider them. The result is a thick and flexible computational practice.

5 Conclusion

This survey through the different works of the manuscript, their distribution in the material units of the codex, and their relation to the different graphical expressions teaches many things with respect to the features of toolbox manuscripts and the type of computation practices they support.

From this case study, this toolbox manuscript appears to have a complex material organisation reflecting of the life that the different booklets and quires had before binding. The process of production is opportunistic and strongly linked to a given individual who copies, selects, and organises different elements. This individual interacts differently with the different parts of the manuscript, and the visual organisation of the codex reflects this production process. The hand of the individual responsible for the codex is found throughout, but other hands are found as well. There is no uniformity in ruling, decoration, rubrication, or punctuation marks. Finally, the intellectual organisation of the codex establishes a set of large, core works that are placed in dialogue with many shorter or fragmentary works.

The long and personal production process of the manuscript, certainly at least partly concomitant with Heingarter's student years in Paris, reflects the training required by the computation practices that the codex attests. The different works found in the manuscript are, in the majority of cases, well-established elements in a corpus of mathematical astronomy shared in university and courtly milieus, where Heingarter evolved. By selecting his own set of tools, Heingarter inscribed himself in this tradition. Thus, to some extent this computation practice is also a social practice that is evaluated by peers with respect to the way it is inscribed in a tradition. Finally, the complexity and reflexivity of this computation practice appeared from two distinct features. First,

on the visual level, diagrams and grids of numerical tables display different sets of relations between astronomical quantities. Second, the importance of redundancy and variation in how works of different types are assembled indicates that the exploration of multiple computational paths among astronomical quantities is an important value for historical actors.

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Fig. 1: The layout of texts, tables and diagrams (Paris, BnF, lat. 7295A, fol. 30ʳ). © Bibliothèque nationale de France.
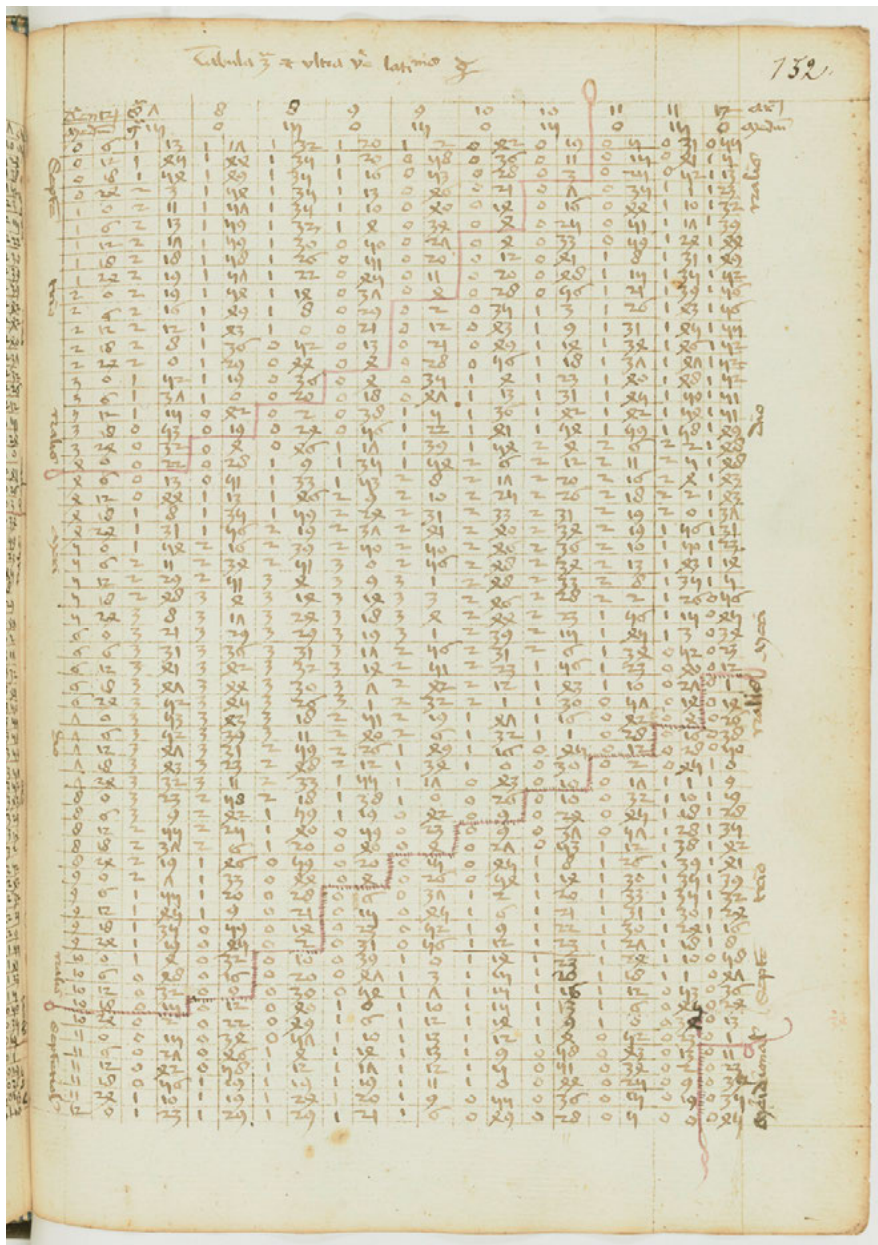
Fig. 3: Third grid for the true latitude of Mercury (Paris, BnF, lat. 7295A, fol. 152ʳ). © Bibliothèque nationale de France.
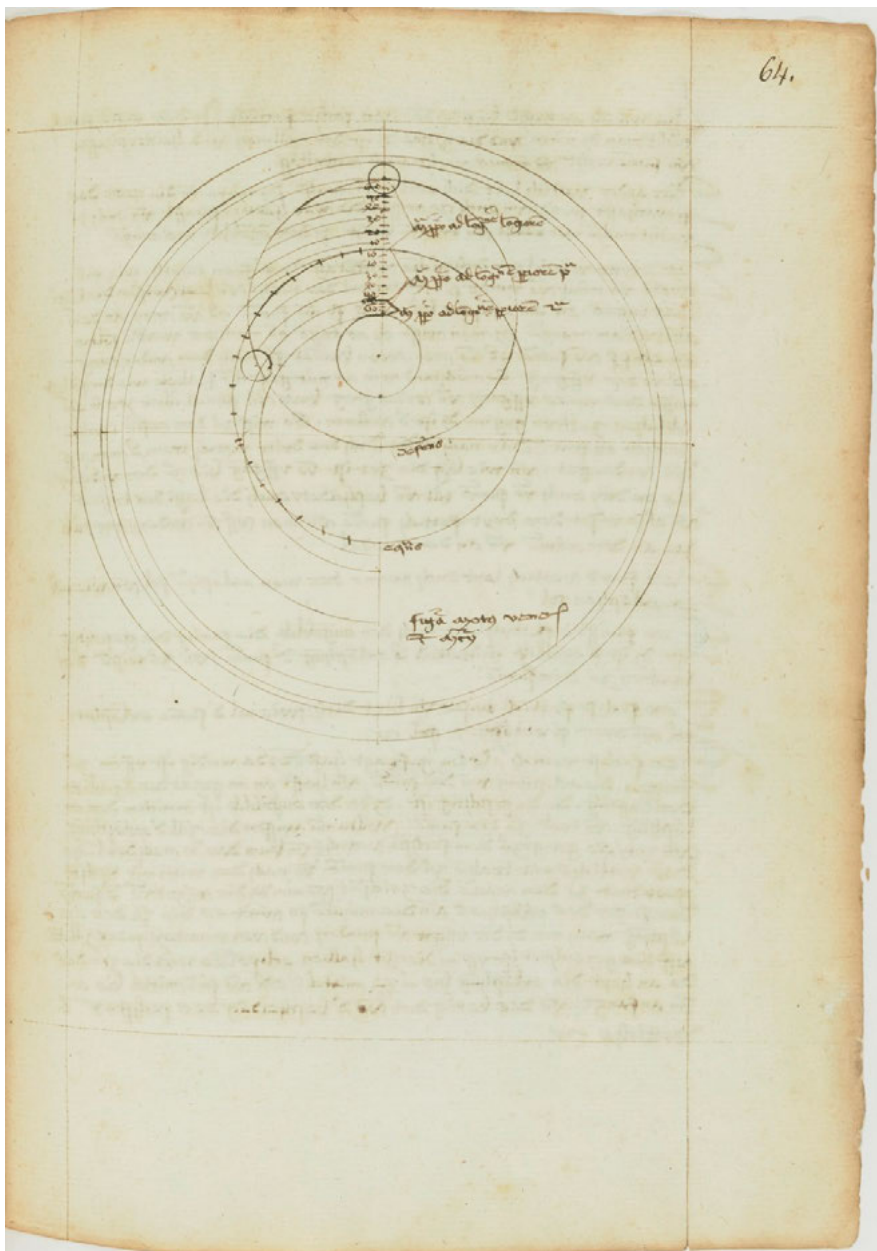
Fig. 4: Figure for the motion of Venus and Mercury (Paris, BnF, lat. 7295A, fol. 64'). © Bibliothèque nationale de France.

Michael Kohs, Giuseppe Veltri

Magic in the Hebrew-Manuscript Collection of the Staats- und Universitätsbibliothek Hamburg: Observations on Cod. hebr. 252

Abstract: The Staats- und Universitätsbibliothek Hamburg holds several Hebrew multiple-text manuscripts of Jewish magic that until now have received only occasional scholarly attention. This paper focusses on Cod. hebr. 252, a seventeenth-century manuscript of Jewish magic from the Hamburg collection. The codex is in a fragmentary state, making a reconstruction of its history difficult. Evidence suggests that the codex was originally produced in Northern Italy and later came to the German lands. The manuscript's original, main content consists of magical recipes and instructions, magical-mystical names, cosmological diagrams, and astronomical drawings. This content has then been supplemented with additional magical texts as well as with various items of paracontent and guest content.

1 Introduction

The collection of Hebrew manuscripts held by the Staats- und Universitäts-bibliothek 'Carl von Ossietzky' in Hamburg (Stabi) is one of the three most important collections of Hebrew manuscripts in Germany, with regard to both the quantity and the cultural significance of the manuscripts.[1] In this respect the Stabi's collection is of equal standing with the collections of the Staatsbibliothek zu Berlin and the Bayerische Staatsbibliothek in Munich. The vast majority of the manuscripts already belonged to the library when the Stabi emerged from its predecessor, the Stadtbibliothek Hamburg, in 1921. Most of the Hebrew manuscripts held by the Stabi are divided into two groups of shelf marks: 'Cod. hebr.'[2] and 'Cod. Levy'.[3] Most of the items bearing the 'Cod. hebr.' shelf mark

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1 For a more extensive history of the collection, see Stork 2014; Steinschneider 1969, V–XIII; and Róth and Striedl 1984, IX–XIX.

2 *Codices hebraici*, 'Hebrew manuscripts'. The manuscripts up to Cod. hebr. 337 have been catalogued by Moritz Steinschneider; see Steinschneider 1969 (originally published in 1878). This shelf-mark group, which remains open for new acquisitions, today comprises more than 350 manuscripts.

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came to the Stadtbibliothek from the manuscript collection of Johann Christoph Wolf (1683–1739).[4] Wolf had bought several collections of Hebrew manuscripts, the largest being the collection owned by Zacharias Konrad von Uffenbach (1683–1734).[5] The manuscripts bearing the 'Cod. Levy' shelf mark were bought as a whole by the Stadtbibliothek from the private collection of Heyman Baruch Levy in 1906.[6]

Both shelf-mark groups of Hebrew manuscripts comprise various items that contain kabbalistic texts as well as material that can be classified as *magical* or as *practical Kabbala*.[7] In many cases it may be difficult to speak of 'manuscripts of magic' or 'magical manuscripts': often purely magical texts are included in manuscript that contains kabbalistic treatises or other genres. Or magic is only a side note in the manuscript, such as when magical recipes are added in empty spaces or on blank pages at the end of a manuscript, thus giving such recipes the status of guest texts. Generally speaking, manuscripts that contain only magical texts in the strict sense, from beginning to end, are a minority.

In research on written artefacts of Jewish magic, a general distinction between 'finished products', which are attributed a direct magical efficacy (i.e. amulets), and 'instructional texts' has been established.[8] The latter are recipes, formulas to be recited, instructions for the preparation of amulets, or model forms to be copied in the production of an amulet. Instructional texts, usually termed *segullot* in Hebrew,[9] are often part of a larger collection of magical texts

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3 *Codices Levy*, catalogued by Róth and Striedl 1984.

4 On Johann Christian Wolf, see Mulsow 2005; on Wolf and Hebrew literature, see especially pp. 97–99. Wolf was the author of the bibliographical work *Bibliotheca Hebraea,* which was published in four volumes from 1715 to 1733 (Wolf 1727).

5 On Zacharias Konrad von Uffenbach and his collections, see Friedrich and Müller 2020. A catalogue of 141 Hebrew manuscripts in Uffenbach's collection was published by Mai 1720, 1–416.

6 See Róth and Striedl 1984, IX–XIX.

7 The distinction between Kabbala as a mystical or theosophic discipline on the one hand and magic on the other is not in every case easy to make clear. See Harari 2019 on the relationship between magic and Kabbala and on the concept of magic as *practical Kabbala*. We stick to the term 'magic' since it has become established as a heuristic concept in the scholarly community working on these phenomena in the context of Judaism; see, e.g. Bohak 2008 and Harari 2017. 'Magic' designates a group of practices that, while they share certain family resemblances, are not amenable to a common definition; nevertheless the proposals for such a definition usually involve relationships of cause and effect; cf. Otto and Stausberg 2013, Veltri 1997, 18–22 and Veltri 2012, 237–240.

8 See Harari 2017, 207–216 and Bohak 2008, 143–148.

9 *Segulla* (plural *segullot*), lit. '(precious) property'; in the context of Jewish magic, the term *segullot* originally designated inherent properties of objects or materials (such as plants or gemstones) that induce an efficacy that could be utilized for magical purposes. The word

contained in a multiple-text manuscript (henceforth MTM).[10] Although there are some established and commonly known text collections of magic or practical Kabbala, many Jewish MTMs that concern magic are more or less individual compilations of often rather short textual units, arranged by the scribe according to his individual needs and interests. In such cases, cataloguers often could not do more than label these passages or complete manuscripts as *segullot* or *refu'ot*.[11] Cataloguing down to the level of individual recipes is usually not the purpose of a catalogue of a manuscript collection. The academic study of magic, on the other hand, would profit tremendously from more detailed accounts of magical texts in manuscript catalogues.

Scholarly research on the magical manuscripts in the Hamburg Hebraica collection started at the end of the nineteenth century. Max Grunwald (1874–1953), who served as a rabbi in Hamburg from 1895 until 1903 and who was a scholar of Jewish folklore ('Jüdische Volkskunde'), was familiar with the manuscripts in what was then the Stadtbibliothek, and he refers to them in several publications.[12] In the 1990s and 2000s, two Hamburg manuscripts were studied in research projects on Jewish magic conducted at the Freie Universität Berlin: Cod. hebr. 136 was included by Rebiger and Schäfer in their edition of the magical manual *Sefer ha-Razim*;[13] and the manuscript Cod. hebr. 156 was identified as an important textual witness to the transmission of another magical handbook, the *Sefer Razi'el ha-Mal'akh*.[14] And in 2014, in cooperation with the Centre for the Study of Manuscript Cultures at the University of Hamburg, the Stabi assembled seventy-eight items from its collection of Hebrew manuscripts for an

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segulla then developed into a technical term for 'magical recipe' or 'magical instruction' in general.

10 A *multiple-text manuscript* (MTM) contains more than one main textual unit. An MTM can consist of one or more codicological units, in which case it is termed a *composite manuscript*. We use the term MTM instead of the ambiguous expressions *miscellany* or *Sammelhandschrift*. On MTMs and their phenomenology, see Friedrich and Schwarke 2016, in particular the introduction by the editors 1–26, and Bausi, Friedrich and Maniaci 2019.

11 *Refu'ot* 'healings' are *segullot* for the purpose of healing illnesses and ailments.

12 For instance, Grunwald refers to Cod. hebr. 222, 296, and 318 in Grunwald 1898, 80 in the context of childbirth amulets; and to Cod. hebr. 135, 166, 175, 251, and 296 in Grunwald 1900. On Max Grunwald, see Daxelmüller 2010; on *Jüdische Volkskunde* in general, see Johler and Staudinger 2010 and Veltri 1997, 11–12.

13 See Rebiger and Schäfer 2009, vol. 1, 19 *et passim*.

14 See Rebiger 2005 and the extensive discussion about the broader context of the transmission of *Sefer Razi'el ha-Mal'akh* in Leicht 2006, 187–294.

exhibition.[15] Besides two amulets, the section on Kabbala and magic featured seven MTMs with magical recipes and mystical-kabbalistic treatises as well as mystical prayer books.[16] Apart from this small number of publications, however, the Hebrew manuscripts from the Staats- und Universitätsbibliothek Hamburg have not been a focus of scholarship on Jewish magic and ought to be regarded as a treasure that awaits discovery.

2 Cod. hebr. 252

With this paper, we would like to contribute to discovering this treasure by taking a closer look at one specific MTM of Jewish magic: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252. Before it came to the library via Johann Christoph Wolf, the manuscript was part of the collection of Zacharias Konrad von Uffenbach and was described by Johann Heinrich Mai in his catalogue of the Uffenbach collection.[17] A Latin description of the content of the manuscript and the exlibris of von Uffenbach, depicting an ideal library that covers all the arts and sciences, have been pasted on the inner front cover (Fig. 1). In Hamburg the manuscript was catalogued in the 1870s by Moritz Steinschneider, whose entry on it is the only existing scholarly account of this codex.[18] We are not aware of any other published research dedicated to this manuscript.[19] Interestingly, the entry – about a page long – occupies more space than many other manuscripts in Steinschneider's catalogue. Starting from Steinschneider's entry and considering the various manuscriptological features of Cod. hebr. 252 – namely, codicology, paracontent, core-content, and guest content – we intend to shed more light on the history of the manuscript – which Steinschneider, on palaeographic grounds, dates to the seventeenth century[20] – as an example of

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15 'Tora – Talmud – Siddur. Hebräische Handschriften der Staats- und Universitätsbibliothek Hamburg, 18. September–26. Oktober 2014'. See Wandrey 2014 for the accompanying catalogue.

16 See Wandrey 2014, 281–308.

17 Mai 1720, 408–416, no. CXLI. The description of the manuscript by Johann Christoph Wolf in his *Bibliotheca Hebraea* (see Wolf 1727, 799–800, no. 24) is to a large extent, as Steinschneider 1969, 99 notes, a direct excerpt from Mai.

18 See Steinschneider 1969, 99–100, no. 248.

19 Except for brief mentions by Grunwald, Trachtenberg, and Scholem; see below. The references by Trachtenberg and Scholem are apparently based on their study of Steinschneider's catalogue only.

20 Steinschneider 1969, 99.

early modern Jewish MTMs with magical content. However, due to limitations of space, we will have to restrict ourselves to selected aspects of this codex.

2.1 Codicology

In its current state, Cod. hebr. 252 comprises 33 folios made of paper and measures 20.1 centimetres in height and 15.5 centimetres in width. Because Mai reports the number of folios as 57,[21] we must recognize that a substantial loss of folios has occurred. Moreover, the original quire structure of the manuscript has been destroyed in the course of time. The manuscript begins with two bifolia. The first bifolium (fols 1–2) contains a page with *probatio pennae* and biblical quotations (fol. 1a) (Fig. 1), a poem alluding to Sabbatai Zevi (fol. 1b) (Fig. 2), and a page containing a title (fol. 2a). The second bifolium (fols 3–4) contains on fol. 3a–b texts that are numbered from 86 to 95 and on fol. 4 a childbirth amulet on the recto and a *segulla* against a storm on the verso, both added later by hand C. The first actual quire, a senion, begins with fol. 5, which is blank (fols 5–16). It can be supposed that this quire retains its original structure and that the entire manuscript originally composed of senions.[22] From folios 6a to 18a, the texts are numbered from 191 to 226. So at least two additional senions must have come before what is now the first senion. The senion which is still extant is followed by a single bifolium (fols 17–18).[23]

The only continuous foliation is in a modern hand and was added in 1876 in the process of cataloguing, maybe by the cataloguer Moritz Steinschneider himself during his stay in Hamburg in July of the same year.[24] The folio numbers that we cite in our paper refer to this nineteenth-century foliation in Arabic numerals, with pencil. On three pages, remains of an older foliation in Arabic

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21 See Mai 1720, 408. Mai prints excerpts from what were then fols 10b, 11a, 14a, and following.

22 Among medieval Hebrew paper manuscripts until 1500, one quarter of the Italian and almost half of the Sephardic codices were composed of senions; see Beit-Arié 2020, 321. As the research on the codicology of early modern Hebrew codices is still at its beginnings, we do not know to what extent senions are typical for this era.

23 We have been unable to determine the exact quire structure after this bifolium. A thorough autopsy of the manuscript *in situ* was impeded by the Corona pandemic. Mai 1720, 409, mentions that after the last numbered text (on today's fol. 17b), eleven folios without text numbering followed.

24 See Steinschneider 1969, VIII, XII n. 11, and XIV.

numerals in ink can be found (Fig. 7).[25] Most of this older foliation probably became the victim of page trimming.

Several verso pages of the collection are blank or were once blank before a different hand added text to them. Interestingly, mostly versos of folios that contained some kind of diagram or drawing on their recto side were originally left blank.[26] Other parts of the manuscript contain a number of blank pages (fols 20b–23a and fols 25b–31a).

2.2 General content and palaeography

The manuscript's primary content consists of a collection of *segullot* (i.e. magical recipes and instructions), magical-mystical names, cosmological diagrams, and astronomical drawings by an Italian hand (hand A).[27] The texts of this collection are numbered by Hebrew letters in the margins and extend, with gaps, from fol. 3a through fol. 18a. Inserted between these texts or added after them, there are magical texts by different Sephardi hands; these inserted texts are not included in the Hebrew numbering of the primary texts.[28] Folios 23b–25a contain an alchemical text in Spanish written in Hebrew characters by another, distinct Sephardi hand (hand F). Additional content includes poems referring to Sabbatai Zevi and lists with names of towns and persons; presumably both the poems and the lists are by the same hand.[29] Codex hebr. 252 thus represents different geo-cultural variants of Jewish manuscript cultures, especially with regard to palaeography.[30] From the mere type of script, however, one cannot always directly infer the geographic provenance of a manuscript.[31] Throughout the codex, the various hands use Hebrew square script or semi-square script for writing magical or angelic names, whereas all other parts of the texts, e.g. passages with instructions, are written in a cursive or semi-cursive script.

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25 Folios 19–21 (new) are marked as 49–51 (old).

26 This concerns fols 7, 9, 12, and 13. Folio 8b was also originally empty; its content was added later by hand D. The recto features a cosmological diagram, which was part of the original production plan and is labelled as text no. 193.

27 Besides Italian palaeographic features, hand A also exhibits Sephardic traits, though it differs significantly from all the unambiguously Sephardic hands in the manuscript.

28 Hand C: fols 4a–b; hand D: fols 6b (lower half of page); 8b, 18b–19a; hand E: fol. 16b.

29 Hand B: fols 1b, 32b, 33b. The hands B, C, and E are possibly the same scribe.

30 On the geo-cultural variants of Jewish-Hebrew manuscript culture (Ashkenazic, Italian, Byzantine, Sephardi and Oriental), see Beit-Arié 1993a, 25–37.

31 Script type and style are usually individual characteristics that persist when a scribe migrates to other regions. See Beit-Arié 1993b, 34–35.

This way of highlighting magically effective textual material is common for most manuscripts that contain Jewish magical material.

3 Paracontent

3.1 Folio 1a: *Probatio pennae*

Folio 1a gives the impression of having been used for writing exercises or *probatio pennae* (Fig. 1). The writing is mostly executed in square script, some of it quite large, and some of the text on the bottom of the page is vertically aligned. In places, the square script used here bears features of the *ktav stam*, i.e. the variants of the Hebrew script that are used to write sacred and liturgical manuscripts such as Tora scrolls, *tefillin*, and *mezuzot*.[32] Only a small number of other notes on the page are in cursive script.[33] There are no columns and no defined areas for writing.

The uppermost line consists of the letters of the Hebrew alphabet, including the allographs for five letters that have a different final form. Directly below we find a short quote from a Talmud passage that extensively discusses the shapes of the letters of the Hebrew alphabet and the meaning and importance of their divergent final forms.[34] A number of biblical verses are cited on this page.[35]

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32 Among these features are the *tagin* 'crowns', which are added on the top of certain letters and the 'broken' upper bar of the letter *ḥet*, making the *ḥet* look like two joined *zayyin* letters. On this folio only few words are written with these features, e.g. the name Ahasuerus and 'Hear, O Israel!' These *tagin* are not executed in the correct, traditional way. Neither is every letter that would require it written with *tagin*; nor is the number of *tagin* per letter correct. On *tefillin* and *mezuzot*, see below.

33 This includes, for instance, the short *segulla* להצליח בכל דבר יזכור שם תיו א׳ ועשרים פ׳ בדוק ומנוסה 'To succeed in everything: Say the name *tav* twenty-one times. Tested and tried.' Further scientific material analysis is required to determine whether some of the cursive writing is from a different scribe than the scribe responsible for the square script. Also, the cursive inscriptions themselves are most likely from two different hands.

34 Babylonian Talmud, Tractate Shabbat 104a: מנצפך צופים אמרום 'the seers [i.e., prophets] called them *Mem*, *Nun*, *Tsade*, *Pe*, and *Kaf* [i.e., the final forms of these letters]'.

35 As is common in the Jewish tradition, not the whole verse but only a single word or a few words are cited. The verses cited are (from top to bottom and from left to right): Psalm 17:7 ממתקוממים '[Display Your faithfulness in wondrous deeds, You who deliver with Your right hand those who seek refuge] from assailants.'; Esther 1:1 ויהי במי אחשורש הוא אחשורש המולך מהודו ועד כוש 'It happened in the days of Ahasuerus — that Ahasuerus who reigned [over a hundred and twenty-seven provinces] from India to Ethiopia.'; Deuteronomy 6:4

Although they appear to be *probatio pennae*, the verses that the one or more owners or scribes chose to cite are surely not arbitrary. The biblical and talmudic citations gathered on this initial page of the manuscript reveal three aspects of Judaism which seem to have been of importance for the scribe(s). The first is the Hebrew alphabet, the Hebrew script, and the writing of sacred manuscripts. The Talmud passage about the final forms of five letters of the Hebrew alphabet and the citation of Psalm 45:2 directly invoke writing practices. Secondly, some of the verses cited relate to central symbols of Judaism: Deuteronomy 6:8–9 is the basis for several *mitsvot*, commandments from the Tora, that observant Jews are obligated to fulfil. These *mitsvot* explicitly involve manuscripts and were already mentioned above: the use of *tefillin*, phylacteries worn on the left arm and on the forehead during the morning prayer, and the *mezuza*, a small oblong container attached to doorposts.[36] These first two aspects of Judaism highlight the importance of writing – or manuscript practices in general – in the practice of Judaism. Thirdly, the initial page cites biblical verses that, on the one on hand, allude to Jews or the Jewish people in distress, such as when they were threatened by persecutors (Book of Esther) or by famine (Book of Ruth) and, on the other hand, emphasize God's everlasting grace and protection for the people of Israel (Psalm 121:4). This dual focus might reflect dangers that the scribe sensed for himself, his family, or the Jews of his time and region.

The content of this page thus evinces an interest in legitimization and self-assertion. The scribe – who is not necessarily identical with the scribe of the manuscript's primary texts – presents himself as a pious Jew. The allusions to religious practices and manuscripts (by citing biblical verses) and the features of the *ktav stam* (the script that is used for sacred writings) extend their sacredness to the magical texts found in this manuscript. The page serves as a

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שומר Psalm 121:4 ;'[.Hear, O Israel! [The LORD is our God, the LORD alone] ישראל שמע
ישראל '[See,] the guardian of Israel [neither slumbers nor sleeps!]'; allusions to Deuteronomy
6:8–9 לטוטפות בין עיניך; מזוזות; וכתבתם ובשערך '[Bind them as a sign on your hand and let them serve] as a symbol on your forehead [;] inscribe them [on the] doorposts [of your house] and on your gates.'; Ruth 1:1 שפוט השופטים '[In the days when] the chieftains ruled [, there was a famine in the land ....]'; the Aramaic word אחשדרפנים 'Satraps' as found in, e.g., Esther 8:9; Psalm 45:2 אומר אני מעשי למלך '[My heart is astir with gracious words;] I speak my poem to a king; [my tongue is the pen of an expert scribe.]' All English translations of biblical verses are based on *Tanakh* 1985.

36 Both the *tefillin* and the *mezuza* contain small slips of parchment with short passages from the Tora, including Deuteronomy 6:4, which is also found on our page and which is the beginning of the *Shema Yisrael*, one of the central Jewish prayers, with a fixed place in the Jewish liturgy.

reassurance that the scribe as well as potential readers are pious and observant and that reading and using these texts is well within the permitted realms of the Jewish religion.[37]

3.2 A new title page

Because it contains lower text numbers (86–95) than the senion consisting of fols 5–16 (beginning with text no. 19 on fol. 6a), we may conclude that the second bifolium (fols 3–4) was once part of one of the quires preceding this senion. The original position of what is now the first bifolium is less clear. Folio 2a features a supposed title ספר הקבלה מהרב רבי משה בר נחמן צז״ל, 'Book of Kabbala by the teacher Rabbi Moshe bar Naḥman, may the memory of the righteous be blessed' (Fig. 2).[38] As already noted by Steinschneider, this title obviously was once an explicit, or the final words of a work: right before the word ספר 'book', the word נשלם 'finished [is]' has been erased, with resulting damage to the paper. What was originally a closing formula has been turned into a title and is therefore placed slightly off-centre on the page. Since the explicit is still quoted as such by Mai, the reworking of the codex must have been done at some time after Mai wrote and before Steinschneider got hold of the manuscript. Maybe the page with the explicit was shifted to a front position (now fol. 2) as a means of coping with the removal of a vast number of folios and the destruction of the original structure of the codex. In the stage of the manuscript as described by Mai, however, this folio was already placed not at the end of the codex but in the middle, as fol. 15.[39]

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37 A comparable page with quite similar functions can be found in the sixteenth-century manuscript of Yoseph Tirshom's compendium of magical and mystical texts, *Shoshan Yesod ha-Olam*, Geneva, Library of Geneva, Comites Latentes 145, p. 21; see Kohs 2016 on this manuscript.

38 Moshe b. Naḥman, (1194–1270), also RaMBaN or Naḥmanides, lived in Spain and was one of the most renowned Jewish thinkers of the Middle Ages. The attribution of this 'Book of Kabbala' to him is, of course, pseudepigraphic. Such an ascription, which is by no means an isolated case, is stimulated by Naḥmanides' interest in mysticism and theurgy; see Schwartz 2005, 56–90 on these aspects of his authentic work.

39 Mai 1720, 408, comments on the position of the explicit: 'Sic enim legimus folio XV. quod ultimum esse debet totius libri, sed a bibliopeia traiectum est'.

3.3 Text numbering and an index on fol. 20a

Just as the manuscript does not contain an original title page, neither does it feature an index or a table of contents. Nevertheless, the Hebrew numbering of the texts, i.e. the structure provided by the arrangement of the *segullot* themselves, was probably part of the original production plan. This numbering resembles hand A and only appears with texts written by hand A. The numbering of texts in the main parts of the manuscript suggests that a navigation system using the text numbers as references, such as an index, was present in the original stage of the manuscript yet is now lost. Folio 20a, however, contains a short list of purposes for *segullot* and their respective text numbers. The folio itself has only half the width of the other folios of the codex. The list, which was written by an Ashkenazi hand that is not identical with any other hand in the codex, contains eleven items. Only one entry refers to a text that is still to be found in the manuscript: לשתות ולא ישתכר בסימן צ״א 'To drink without getting drunk: at sign [i.e. number] 91'. The text referred to is found on the top of fol. 3b, although here it is assigned the number 90 (Fig. 3). The list may thus be a trace of an owner or user of the manuscript who singled out those texts from the manuscript that were of interest to him. Besides 'drinking and not getting drunk', he chose *segullot* for success, especially in business matters, and against forgetfulness.

3.4 Abraham Mercado

On fol. 9b, which is otherwise empty, we find the name Abraham Mercado inscribed in vocalised square script: אָבְרָהָם מֶרְקָדוֹ.[40] This inscription seems to be secondary, i.e. later than the main text. Steinschneider lists Abraham Mercado as a manuscript owner of Cod. hebr. 252 in the index of his catalogue.[41] The name Mercado could be a family name: Mercado or de Mercado has long been a common Spanish family name among Jews.[42] However, a verifiable identification of the name Abraham Mercado with a specific person, for instance with the

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40 The vocalisation of the name Abraham, however, is anomalous and would have to be pronounced *Avarham*. The standard form would be אַבְרָהָם *Avraham*.

41 Steinschneider 1969, 209.

42 See Guggenheimer and Guggenheimer 1992, 189.

well-known, seventeenth-century Sephardi physician Dr Abraham de Mercado or his family,[43] seems rather unlikely.

Alternatively, if taken literally, according to its meaning in Spanish as 'market' or 'purchased', the name Mercado may be evidence of an apotropaic custom: when a mother lost a child, it was assumed that bad fortune was clinging to her. In order to protect the children that would be born to her later, they would be sold symbolically to other parents and receive a byname relating to this sale. Among the Sephardim, the Jews in the Spanish tradition, Mercado or Mercada was the common byname connected with this practice.[44] Because the codex offers no further paratextual information about the name, we cannot decide whether Mercado is to be taken as a family name or as evidence of this apotropaic custom.

4 Core-Content

4.1 A bilingual Italian-Hebrew spell

On fol. 17b, at the very end of the passage with numbered texts, we find at the bottom of the page a bilingual love spell, presumable written by hand A (Fig. 4). In the text, Italian in Latin script and Hebrew in Hebrew script are used alternately:

Transcription[45]	Translation
להאבה [46] שאין כמוהו קח	For [Love/struggling]. There is none like it. Take
filo che non sia tento	a hair which is neither black
Ni bianco di una putta Vergiene[47]	nor white from a virgin girl.

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43 On the Mercado family, whose members lived in Dutch Brazil, various places in Europe, and Barbados, see, e.g. Schreuder 2019, 150, 185–186, 192.

44 See Ben-Ami 2003, 185; Guggenheimer and Guggenheimer 1992, XVII–XVIII, 509; and Kaganoff 2005, 103–104. On an actual case of this apotropaic practice, see below, chapter 4.4.

45 The transcription offered by Steinschneider 1969, 100 is erroneous. We thank Saverio Campanini (Bologna) for his help in reading this *segulla*.

46 להאבה is probably a scribal error and a metathesis of לאהבה 'for love'. One could also read להאבק 'for struggling'. Steinschneider reads לקאבק which makes no sense.

47 See Malavasi 2005, 198, where another *putta vergiene*, 'virgin girl', is mentioned in Italian magic.

ועשה ל״ג קשרים בידך לאחור	And make thirty-three knots in your hand backwards [or: behind your back?]
ובכל קשר וקשר תאמר אלו דברים	and with every knot and knot say the following words:
Lo stringo e lego nel nome di עז שטן il core di Tala filia di la tala	I tighten it and bind in the name of the mighty devil The heart of N.N., daughter of N.N.
Come ela stenta fin'a che mio cor non contenta	How she struggles as long as she does not make my heart happy.
ובחון ומנוסה	[It is both] tested [and] tried.

This kind of code-switching within one *segulla*, code-switching that includes a both a change of language and a change of script, is the only such case within this codex and is quite rare among magical manuscripts.[48] Code-switching without changing the script, however, can be observed more often: it may happen that the instructional part of a *segulla* is, for instance, in Aramaic or Yiddish, while the spells to be pronounced or written down are in Hebrew. The Italian of the love charm in Cod. hebr. 252 points to the Northern Italian region of Veneto. With regard to content, it should be conceded that terming such spells 'love charms' might be regarded euphemistic, as they are mainly concerned with the unilateral exercise of power over another human being.[49]

4.2 Astronomical and cosmological diagrams

Apart from magical texts, the original compilation executed by hand A includes a number of diagrams and drawings, some of a more scientific nature, some of a more mystical-cosmological nature. Folio 12a, for example, contains an astronomical diagram that illustrates the four phases of the moon (Fig. 5). On top the sun is depicted with a face, whose rays of light strike the four moons in four different positions relative to the earth, which is right in the centre of the page. Below the diagram four spheres are labelled: שמים 'heaven', ארץ 'earth', מים 'water', and תהום 'abyss, underworld'. On earth and below the heavens we can

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48 A different type of bilingual and multi-script manuscript can be found in Italian-Hebrew codices that contain every *segulla* in a Hebrew as well as an Italian version, e.g., the manuscripts Tel Aviv, Gross Family Collection, IT.011.016 (formerly 325) and New York, Jewish Theological Seminary, MS 1729; on the former see Bellusci 2018.
49 Such spells can thus be termed 'aggressive erotic magic'; cf. Bohak 2008, 123–135 and 153–158. For a comprehensive account of Jewish love magic, see Saar 2017.

make out what look like stylized humans. An almost identical diagram – though without the anthropomorphism of the sun – can be found in the much earlier geographical-astronomical work *Tsurat ha-arets* 'The form of the Earth' by Abraham bar Ḥiyya (*c.* 1070 – *c.* 1136), who was the first Jewish mathematician and astronomer to write scientific treatises in the Hebrew language.[50]

In contrast to the diagram on fol. 12a, the scheme on fol. 8a delineates a broader cosmological notion (Fig. 6). This folio displays the different spheres of the cosmos with their respective celestial bodies: at the very top – four spheres potentially symbolizing four aspects of divine creation (from the top): אצילות 'nobility', בריאה 'creation', יצירה 'formation', and עשיה 'making'. Below them – the גלגל חוזר 'returning wheel' with the twelve signs of the Zodiac spanning to the left and the right, and directly beneath them is the sphere of the fixed stars. Below the fixed stars we find, in descending order, the planets and the sun and at the very bottom there are the four elements, fire, wind, water, and earth. The scheme has slightly anthropomorphic features, with the ends of the uppermost four spheres giving the impression of the curls of a wig and with the spheres of the zodiac signs and the fixed stars reaching out like arms.

4.3 'Non-Jewish' magic

On fols 6b and 8b, hand D has added material that caught the attention of Moritz Steinschneider as well as that of rabbi and folklorist Max Grunwald. On fol. 6b, the scribe has written down two magical triangles or 'vanishing acts'[51] against fever; these triangles use the names אברקולס, possibly 'Abraqolas', and אברקלוע 'Abraqaloa'. The second is labelled by the scribe as an alternative version to the first: או על דרך זה 'or this way'. The triangles are accompanied by an incantation formula in the style of a liturgical supplication. The formula makes direct reference to the magical triangle and the way the magical formula is supposed to work:

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50 E.g. the manuscript Munich, Bayerische Staatsbibliothek, Cod. hebr. 36, which contains *Tsurat ha-arets*, has the diagram on fol. 113a; cf. Busi 2005, 73–75. On Abraham bar Ḥiyya, see Wigoder 2007.

51 In a magical triangle or vanishing act (in German *Schwindeschema*), a magic word or formula is written down, and in each line the word is repeated but subsequently reduced by one letter until only one letter is left. By symbolically erasing the word, an illness, typically fever, is believed to become eradicated from a sick person. See, e.g. Faraone 2012 on vanishing acts in Greek magical texts.

יהי רצון מלפניך יהוה אלהי ואלהי אבותי רבון העולמים כשם שהשם הזה הולך
ומתמעט כן יהא הקדחת הזה הולך ומתמעט מיפלוני בן פלוני אכי״ר[52]

The formula is written in square script, which again indicates its efficacy, and is accompanied by a magical square.[53] On fol. 8b, the same scribe noted a *segulla* for a woman having difficulties during birth (Fig. 6). The instructions demand that magical names be written on kosher parchment as an amulet. What is referred to as names here is the so-called Latin *Sator* square '*sator arepo tenet opera rotas*',[54] but written in Hebrew letters, inserted directly beneath the instructions. As with the magical triangles on fol. 6b, the scribe gives an alternative version of the *Sator* square which also includes other instructions. The instructions and the second square are separated from the first by a thin line. The letters of the second square are written in a tabular grid, while the first square, written without a grid, is designed more in the shape of a column, with a vertical size larger than its horizontal size. The accompanying instructions do not demand the production of an amulet: או על זה הדרך או תלחוש באזנה השמלית 'Or in this way. Or whisper in her left ear'. The only textual difference between the two squares is the spelling of the last letter of the fourth line or word, which in the Latin version of the palindrome is *opera*. The second square has an *Aleph*, while in the first square it seems that the *Aleph* was later altered to a *He*. This alteration, however, breaks the symmetry of the palindromic square. In his catalogue entry for the manuscript, Steinschneider lists the content of these pages and adds 'auch sonst erkennt man den nichtjüdischen Ursprung sofort'.[55] The remark refers not only to these two pages but also to other parts of the manuscript and reflects Steinschneider's apologetic stance

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52 Hamburg, Staats- und Universitätsbibliothek, Cod. hebr. 252, fol. 6b. 'May it be your will, Lord, our God and God of our fathers, ruler of the worlds: Just as this name is diminishing, so shall the fever of N.N. diminish. Amen! Let it be your will' [or: אבי״ר 'Our Lord, our creator, our maker, our healer'].

53 On magical squares, see, e.g. Comes 2016. The defining feature of a magical square is that the sums of all its columns and all its rows (and usually also the diagonals) are equal.

54 The palindromic phrase, which is usually written in the form of a square, goes back to Roman Antiquity. It is ascribed hidden mystical meaning and magical efficacy; see Hofmann 1978.

55 Steinschneider 1969, 100: 'also elsewhere the non-Jewish origin is immediately apparent'. Scholem 1984, 97 n. 142, too, resolutely und unequivocally insists on the non-Jewish origin of the phenomenon of magical squares. Trachtenberg 1939, 296 n. 14, mentions our Cod. hebr. 252 as providing an example of magical squares in a Jewish manuscript. He also posits a non-Jewish background for these squares, claiming that Jews adopted them from Christians, in particular from Agrippa von Nettesheim (see p. 143).

with regard to Jews and magic. He regularly describes magical texts and practices both as 'non-Jewish' in origin and character, and as the result of Christian and Muslim influences on the Jews during the Middle Ages.[56] The folklorist Grunwald also mentions the magical triangles on fol. 6b of Cod. hebr. 252.[57] In contrast to Steinschneider, it seems that he does not intend to single out non-Jewish elements in Jewish magical texts. On the contrary, he appears to acknowledge the syncretistic nature of magic and a potential Jewish influence on the formation of the magical name Abrasax that is also the supposed origin of אברקולס 'Abraqolas', as found in our manuscript.

4.4 A childbirth amulet containing the story of Elijah and Lilith

On fols 18b and 19a, we find a well-known text for a Jewish childbirth amulet (Fig. 7).[58] This version of the text, however, contains a passage near the end that is not to be found in most printed versions of this amulet, as they are known to us from Central Europe. Introduced by the description 'Poem for women in labour and [against] the evil eye. True and tried', the legend about an encounter of the prophet Elijah with the child-murdering demoness Lilith and her demonic entourage follows.[59] Lilith tells the prophet that she is on her way to a woman and her newborn child to kill the infant. When Elijah threatens to bind Lilith with a ban, Lilith begs Elijah to let her go. She promises not to go after the woman and her child. In addition Lilith agrees to reveal her secret names to Elijah, and she swears that whenever in the future someone uses her names, neither she nor her minions will be able to harm the newborn or its mother. On fol. 19a, we see the fourteen names of Lilith, written in square script. At this point, the printed amulets usually go on with standard magical formulas for

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56 See Steinschneider 2012, 591 and Veltri 2012.

57 Grunwald 1902, 122–123 n. 1. In the same article (p. 140), Grunwald also mentions Cod. hebr. 252 as containing an example of magical squares in a Jewish manuscript, though he does not remark on the supposed non-Jewish origin of the squares.

58 Printed Jewish childbirth amulets containing the story of the encounter between the prophet Elijah and the demoness Lilith, a story which is also found in our manuscript, Cod. hebr. 252, were ubiquitous in early modern Central Europe. On such amulets, see, e.g. Sabar 2002, 681–682 and Folmer 2007. A comprehensive study of this type of printed Jewish amulet has yet to be written.

59 The myth of the demoness Lilith was fed by various sources. From the Middle Ages on, Lilith was established in Jewish folklore as the legendary first wife of Adam that is now roaming around as a demoness to strangle newborn children. On Lilith, see Scholem and Heschel 2007; on Lilith's threat to children, see Naveh and Shaked 1998, 111–122 and Veltri 2001.

childbirth amulets and Psalm 121. Our manuscript, however, continues with an adjuration of Lilith by the prophet Elijah. This augmented textual version of the encounter is also known from other sources, though its evidence is rather scarce when compared to the version that lacks the adjuration. The adjuration is first found in print in a 1710 edition of David ben Aryeh Leib of Lida's ספר סוד ה' 'Book of the Secret of the Lord'.[60] The text can also be found in print in some nineteenth-century editions of the Psalms that include a treatise *Mishpat Tsedeq*.[61] Our text furthermore appears in Montgomery's volume on Aramaic incantation texts from Nippur.[62] Naveh and Shaked were able to identify the name of a beneficiary in Montgomery's text: 'Mercada, known as Vida'.[63] The use of a name instead of a placeholder indicates that the text published by Montgomery derives from an amulet; the Spanish name itself points to a Sephardi context. And the names Mercada 'sold' and Vida 'life' likely point to the very same custom that might be attested by the name Abraham Mercado in our Cod. hebr. 252 on fol. 9b.[64] Another full text of the Elijah-Lilith encounter, i.e. with Elijah's adjuration of Lilith, can be found in the collection of the Smithsonian National Museum of Natural History in a handwritten amulet from nineteenth-century Tunisia.[65] All in all, we find that the printed Ashkenazi amulets usually do not feature the adjuration by Elijah as a second part of the amulet

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60 David ben Aryeh Leib of Lida 1710, 20a. Kaspina 2014, 190, points to this source. David ben Aryeh Leib of Lida's (*c.* 1650–1696) *Book of the Secret of the Lord* deals with circumcision and customs associated with it. The amulet text including the adjuration is found on fol. 20a as the last part of a section of *segullot* and *refu'ot*. This section seems to have been appended to the main text of the book only in this specific Berlin edition of the book. It is neither part of the *editio princeps* (Amsterdam 1694) nor of any later edition that we were able to consult.

61 E.g. in *Tehillim 'im sefer mishpat tsedeq* 1830, 307 and *Sefer tehillim* [...] *ve-gam sefer mishpat tsedeq* 1877, 148b(?). Here an instruction says that the text should be written on parchment with *ktav ashurit*, lit. 'Assyrian script'. This term usually designates the Hebrew square script and occasionally even the *ktav stam*, the variant of the square script used for sacred writings such as Tora scrolls, *tefillin*, and *mezuzot*.

62 Montgomery 1913, 258–264 (no. 42). He had received the text from his colleague Richard Gottheil and sensed that it was not likely to come from an incantation bowl. However, he might not have been aware that he was dealing with a rather late, post-medieval text; see Scholem 1948, 166, n. 25.

63 Naveh and Shaked 1998, 118, n. 18.

64 See above, chapter 3.4. The presumable background of the name 'Mercada, known as Vida' was not addressed by Naveh and Shaked 1998, but it was addressed by Kaspina 2014, 198, who cites the lecture 'When Elijah Met Lilith–Magic Healing Incantations in Judeo-Spanish', which was delivered by Tamar Alexander at the Sixteenth World Congress of Jewish Studies in 2013.

65 Washington, DC, Smithsonian National Museum of Natural History, 217693. See Cohen Grossman 1997, 154–156.

text,[66] while we have some evidence for the text in Ashkenazi printed books and in Sephardi or Mediterranean manuscript amulets. The manuscript Cod. hebr. 252 has a slightly abridged version of the adjuration (fol. 19a):

והשיב לה אליהו הנביא ז″ל הנני משביעך ולכל כת דילך ביי″ ובשם שכינתו הקדושה
ובכח ד′ שרפים ואופנים וד′ כרובים וחיות הקדש וי′ ספרי תורות ובשם אלהי צבאות
שלא תלך לא את ולא כת דילך להזיקה היולדת או בנו ולא ליגעת בה ברמ″ח אבריה או
שס″ה גידיה וערקיה כמו שאינך יכולה לספור את כוכבי השמים ולא להוביש את מי
הים ובשם קרע שטן אמן סלה מכשפה לא תחיה לא תאונן ו″כ

> And Elijah replied to her [i.e. Lilith], I adjure you and all of your class, by the Lord and by the name of his holy Shekhina, and by the power of the four Serafim and Ofanim and the four Cherubs and the Holy Beasts, the ten books of teaching, and in the name of the Lord of Hosts: that you will not go, neither you nor those of your class, to harm the woman in labour or her child, and that you will not afflict her, her 248 limbs, and her 365 tendons and bands, as you are able neither to count the stars in the sky nor to dry the waters of the sea. With the name *qera' satan*. Amen, sela. 'You shall not let a sorceress live' (Ex 22:17) [...].

With the inclusion of the Elijah and Lilith episode, Cod. hebr. 252 features an expanded version of one of the most prominent amulet texts of Jewish childbirth magic. This expanded version is attested much less frequently than the standard version, and in particular appears only rarely in actual amulets. The expanded version's general transmission history invites more thorough inspection by future researchers.

5 Guest content, with a Sabbatean background

Besides the magical and mystical-cosmological texts, which are the core-content of the manuscript, Cod. hebr. 252 contains additional material, which can be considered guest content, namely, the poetic texts on fols 1b (Fig. 2) and 33b, and the lists of towns and people on fol. 32b (Fig. 8), the latter being written upside-down.[67] The poems use a variant of the acrostic: certain lines are

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66 Kaspina 2014, 201, ascertains the same finding for Eastern European amulets from the nineteenth century.

67 On the terms 'guest text' or 'guest content', see Gumbert 2004, 32 and 42 and Ciotti et al. 2018, 1 and 3. Gumbert's definition of a guest text as content that has been 'added, as an enrichment into an existing codicological unit' is mostly temporal and structural. As understood by Ciotti et al. guest content can be distinguished from core-content and especially from paracontent by not being linked or related at all to the manuscript's core-content and by not

marked by thin strokes. On fol. 1b, the initial letters of the marked lines spell out חז שבתי, understood by Steinschneider as standing for שבתי חזק 'Sabbatai is strong'. In the poem on fol. 33b, the marked lines spell out שבתי חי 'Sabbatai lives'. Steinschneider interpreted this notation as referring to Sabbatai Zevi, an alleged Jewish messiah.[68] His appearance and activities in 1665 and 1666 caused an uproar in all major Jewish communities in Europe and the Mediterranean area. After being imprisoned by the Ottoman authorities, his subsequent conversion to Islam left most of his followers in shock. The Sabbateans, i.e. those adhering to the belief in Sabbatai even after his death in 1676, interpreted his apostasy as part of a mystical plan for the redemption of the world and were regarded as heretics by mainstream Judaism.[69] Because of the acrostic referring to the name Sabbatai, Steinschneider supposed that the scribe of this guest content was such a Sabbatean.[70] As the lists of towns and names found on fol. 32b seem to have been written by the same hand as the poems, Steinschneider speculated the possibility that a Sabbatean traveller had noted down Sabbateans that were living in various places.[71] The page contains four lists of towns. The lists are divided from each other by lines drawn with ink. The first list represents a journey down the Rhine starting in Frankfurt am Main and ending in Kleve in the Lower Rhine region. The second list consists mostly of

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providing any substantial data on the manuscript. In this respect, content that was added to a manuscript later can be part of the core-content, if it thematically matches the original core-content. The texts added to the manuscript Cod. hebr. 252 by hands C (fol. 4a–b: a childbirth amulet and a *segulla* to calm a storm at the sea) (Fig. 3) and E (fol. 16b: instructions for the preparation of a ritual) concern magic and can therefore be considered core-content. The content added by hand B (fols 1b, 32b, 33b: the poems and lists of towns with names of persons) does not relate to magic nor does it provide specific data on the manuscript itself. This content is therefore to be regarded as guest content. This determination would still be true if hands B, C and E were all the same scribe, which may be the case, as these hands are quite similar.

68 On Sabbatai Zevi, see Scholem 1973.

69 In the Jewish history of Hamburg, there is a particularly noteworthy episode concerning Sabbateanism. During his time as the chief rabbi of the triple community Altona–Hamburg–Wandsbek, Rabbi Jonathan Eybeschütz (1690–1764) faced accusations by his adversary Jacob Emden (1697–1776) that certain amulets Eybeschütz had issued were of Sabbatean origin and that he himself was a Sabbatean. In the course of what is now known as the Emden-Eybeschütz controversy, Emden even had to leave Altona for some time since Eybeschütz was popular among the Jewish community. Even the Christian authorities, wishing to prevent any upheaval, tended to act in favour of Eybeschütz. On this controversy, see, e.g. Maciejko 2017. Our manuscript Cod. hebr. 252, however, most likely is not to related to these Hamburg events.

70 Even though Sabbatai Zevi was the most prominent one, he was certainly not the only bearer of this name.

71 See Steinschneider 1969, 100.

towns in Franconia but ends with Frankfurt. The fourth list also contains four towns in Franconia, but more to the south-east of those in the second list. We have not yet been able to precisely identify the places of the third list. Some names of towns are followed by the name of a person, all male except for one. The names are given names only, without patronym. Often, they are preceded by ר׳ for *rav* 'master, teacher, rabbi', and sometimes by ח׳ for *ḥakham* 'sage, wise man'. In some cases, a name is followed by the adjectives עשיר 'wealthy' or זקן 'old, esteemed'. A query for these names with their respective places in the Epidat Research Platform for Jewish Epigraphy did not produce a match with existing entries in the database.[72]

While at this point the purpose of the lists and the circumstances under which they were written must remain a matter of speculation, these lists do add a local and personal dimension to the manuscript Cod. hebr. 252, a dimension that is not often found in magical texts. We are nevertheless unable to determine whether these lists stand in any relation at all to the magical strata. If these lists, as supposed by Steinschneider, were indeed written by the same hand as the Sabbatean poems (and if these poems are indeed Sabbatean), a *terminus post quem* for the lists and the poems would be 1666, the year of Sabbatai Zevi's dramatic rise and fall.

6 Conclusion: A short history of Cod. hebr. 252

The presumably Sabbatean guest texts help to contextualize Cod. hebr. 252 in a time and locale, especially since the manuscript does not feature substantial paracontent, such as a colophon, that might otherwise provide such information. But what else can we ascertain about the life of the manuscript, its production, and use?

Based on the script and, above all, on the linguistic features of the Italian in the bilingual spell on fol. 17b, the parts of the manuscript that belong to the original production plan and were executed by hand A can be located in Northern Italy, probably Veneto. It can be supposed that the original manuscript was produced in this region. Analysis of the codex does not reveal any concluding features that would allow us to date these original parts of the manuscript more precisely than to the seventeenth century, as already suggested by Steinschneider. Based on the contents written by hand A, it is obvious that the project of the

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72 <http://www.steinheim-institut.de/cgi-bin/epidat> (accessed on 14 Dec. 2020).

original scribe was not to compose a mere handbook or manual of magic that would contain only practical knowledge. Rather, these parts of the codex mirror the broad, multifaceted interests of this owner-scribe and his ambition to create a universal compendium that was not limited to esoteric knowledge. Besides noting down magic proper, i.e. recipes and instructions for specific purposes such as protection, finding lost items, or against fever – which still makes up the largest part of the manuscript – the scribe arranged magical names in diagrams, made mystical-cosmological drawings, and copied scientific-astronomical illustrations.

Because the scribe included text numbers in the margin, it is highly likely that he produced (or at least intended to do so) some kind of table of contents or index. Although he numbered the manuscript's texts – which would make the overall structure of its content less open to additions – he left a lot of pages blank, both in between items as well as, presumably, at the end of the original manuscript. These blank pages were an invitation for additional content, a phenomenon that can be viewed as an affordance. We do not know if the creation of this affordance was intended by the scribe. Nevertheless he must have been aware that later owners could fill these spaces with content, or he may even have intended to do so himself on occasion. Subsequently, later Sephardic hands added material that matched the topics of the existing texts, e.g. the childbirth amulets for protection against Lilith; the result of this process is a temporally layered manuscript. It cannot be determined where the manuscript was when the various additions of magical texts by Sephardic hands were made, since Sephardim lived and travelled in various parts of Europe. At some point in its history, however, the manuscript was brought from Northern Italy to the German area. The guest content, i.e. the lists of towns located mostly in the Middle Rhine area and Franconia in combination with the Sabbatean poems by the same hand, indicates that the manuscript was in the German lands when this guest content was incorporated into the manuscript. The references to Sabbatai Zevi would date this incorporation to the second half of the seventeenth century. But the manuscript was still in Jewish hands then.

In the list of towns on fol. 32b, Frankfurt is mentioned twice and is situated quite centrally amidst the other towns that we could identify. This proximity to Frankfurt could then be the next step in the manuscript's life, i.e. the acquisition by the Frankfurt-based collector Zacharias Konrad von Uffenbach. We may suppose that Uffenbach bought the manuscript in the early eighteenth century,

as it is included already in Mai's catalogue, which was published in 1720.[73] At some point in time between becoming part of Uffenbach's collection and being catalogued by Moritz Steinschneider in the 1870s, the manuscript lost many of its folios, though the precise number of them cannot be determined. The re-working of a former explicit into a new title page can be interpreted as an attempt to heal these wounds.

As unique as Cod. hebr. 252 is in the specific compilation of its primary content, paracontent, and guest content, the manuscript can nevertheless be considered a rather typical case of a Jewish magical MTM from early modern Europe: this manuscript started as the project of a single scribe, most likely for his own purposes. In the course of time, further layers of content accumulated, added by later owners and users. Our manuscript illustrates that Jewish manuscripts – and Jewish magical manuscripts in particular – often have a rich history of migration. The syncretistic, magical-mystical content comprises 'genuine' Jewish magic as well material that is common to the magical traditions of many Jewish and non-Jewish cultures in Europe and the Mediterranean. At the same time, the manuscript's fragmentary state and the scarcity of hard facts deducible from its paracontent makes it currently impossible for us to draw a definitive picture of the manuscript and its history. That said, our examination of Cod. hebr. 252 was also intended to illustrate that scholarly research on magical Hebrew manuscripts from the Staats- und Universitätsbibliothek Hamburg as a whole is still in its beginnings, and there is much more to be discovered.

Acknowledgements

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73 On Uffenbach's acquisition of Hebraica, see Franke 1967, 62–69. Uffenbach's correspondence does not reveal the name of the Jewish manuscript dealer from whom he received large parts of his Hebrew manuscript collection.

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Fig. 1: Hamburg, Staats- und Universitätsbibliothek, Cod. hebr. 252, inner front cover (right) and fol. 1a (left). All pictures (Figs 1–8) are under Creative Commons Licence: CC BY-SA 4.0: <https://creativecommons.org/licenses/by-sa/4.0/>.
Figs 1–7: <https://resolver.sub.uni-hamburg.de/kitodo/PPN873729153>.
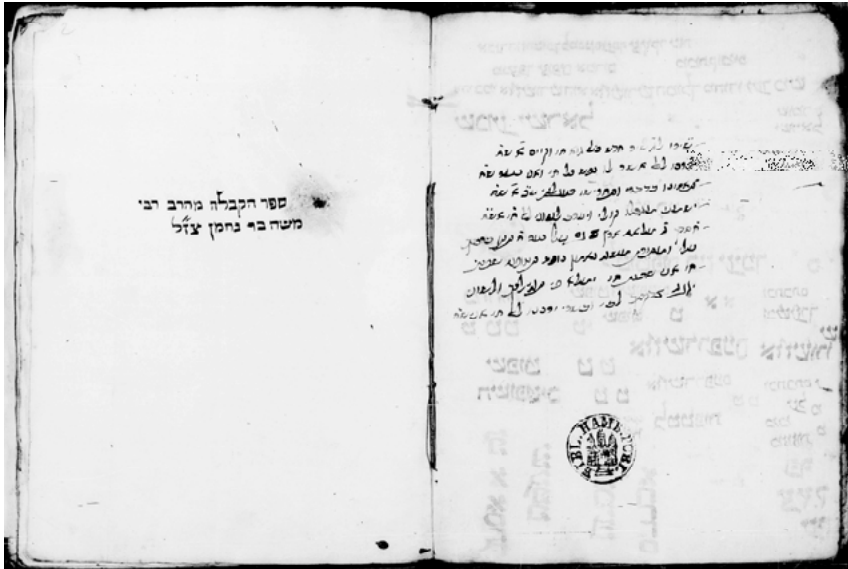
Fig. 2: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 1b (right, poem referring to Sabbatai Zevi), 2a (left, an explicit that was reworked into a title).
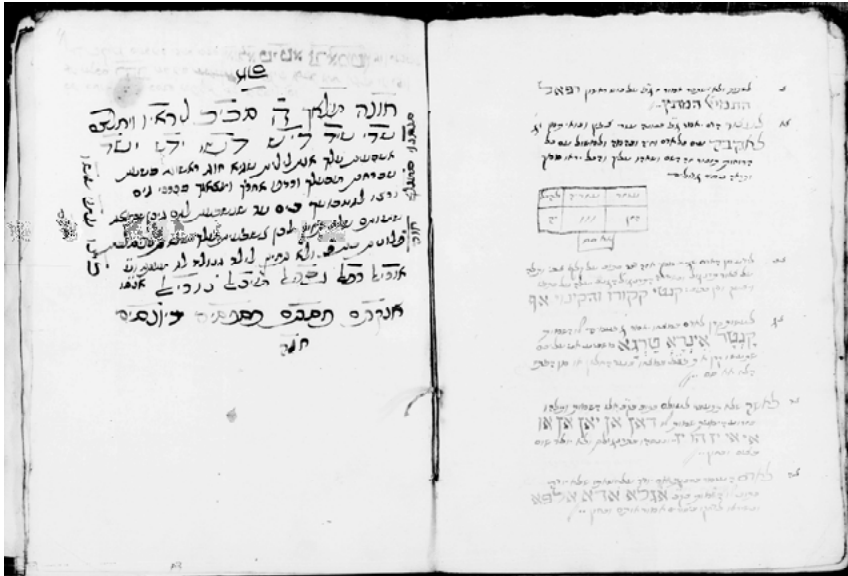
Fig. 3: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 3b (right, *segullot* nos 90–95), fol. 4a (left, childbirth amulet with an adjuration against Lilith).

Fig. 4: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 17b (the last numbered *segullot*; at the bottom a *segulla* in Hebrew and Italian).
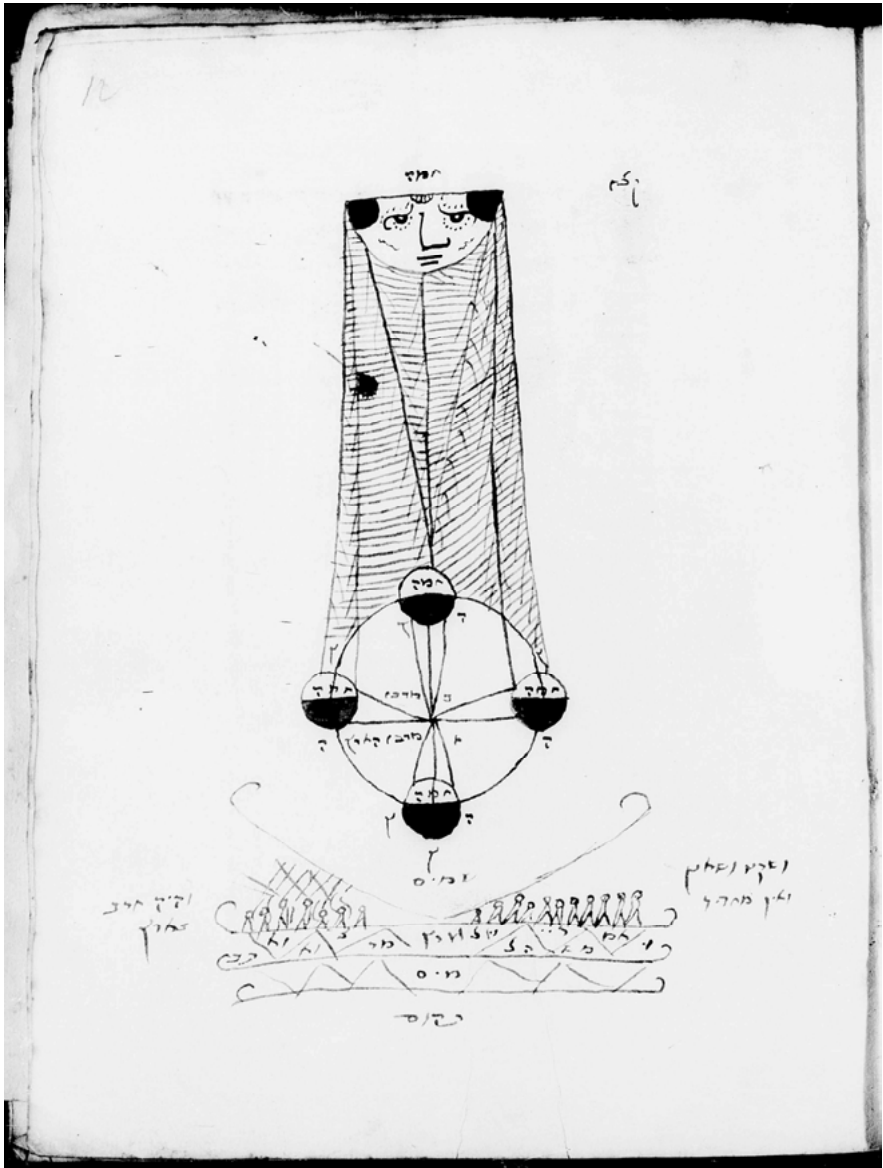
Fig. 5: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 12a (astronomical diagram explaining the four phases of the moon).
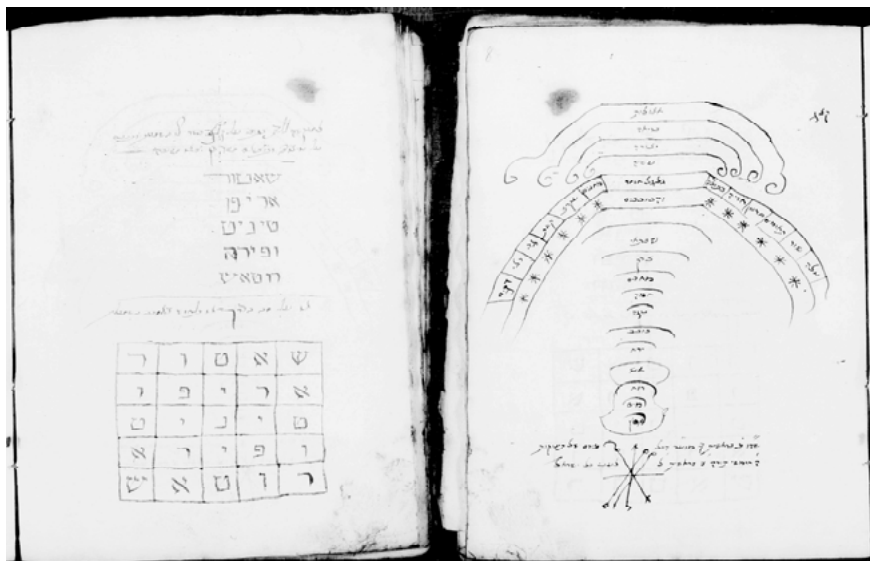
Fig. 6: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 8a (right, cosmological diagram), fol. 8b (left, *Sator* squares for a woman having difficulties during childbirth).
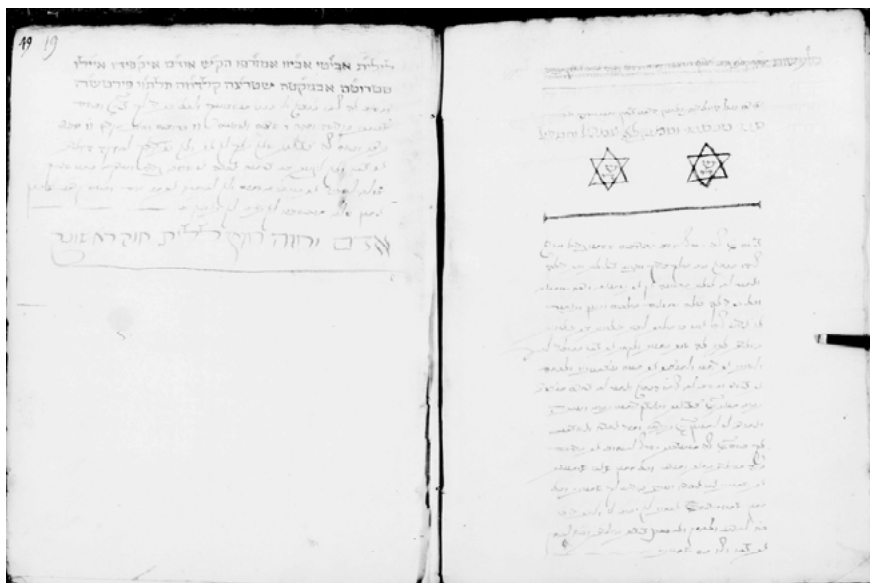
Fig. 7: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 18b (right), 19a (left), childbirth amulet with the story of the prophet Elijah and the demoness Lilith.
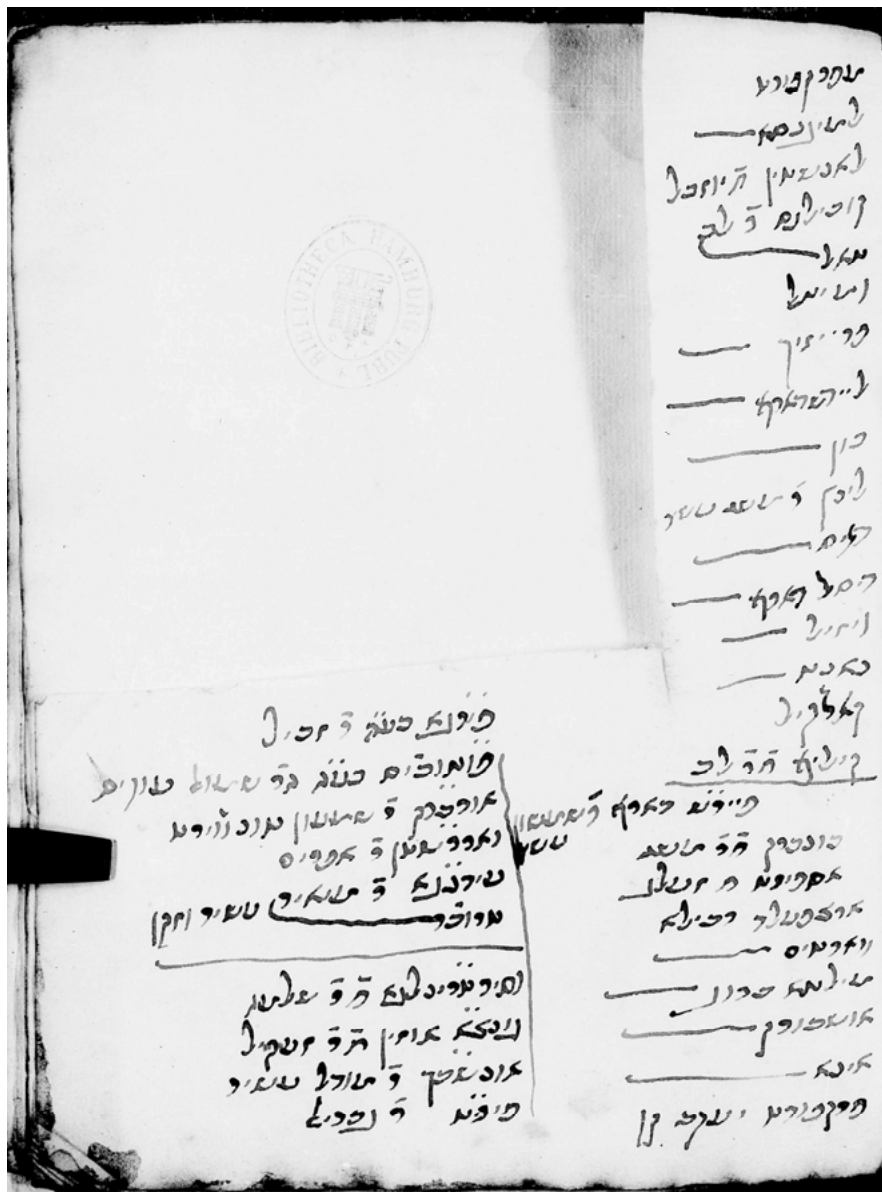
Fig. 8: Staats- und Universitätsbibliothek Hamburg, Cod. hebr. 252, fol. 32b, lists of places, sometimes accompanied by names of persons; turned 180 degrees. <https://resolver.sub.uni-hamburg.de/kitodo/PPN873729269>.

Jürgen Paul
Notes on a Central Asian Notebook

Abstract: Among the personal notebooks from nineteenth-century Central Asia, the manuscript NLR PNS 561 (National Library of Russia, Persian – New Series), kept at Saint Petersburg, occupies a special position. It is a multilayered manuscript with two main layers from the 1870s and the 1920s–1930s, respectively. In the second layer in particular, the manuscript is both a multi-script and a multigraphic artifact. Some parts of this layer are quite likely autographs of a leading Bukharan intellectual, Abdarrauf Fitrat (1885–1938). This paper is a detailed description of the manuscript that also assesses the ascription of discrete manuscript sections to Fitrat as autographs.

1 Introduction

Sometimes a single manuscript offers a window into a wide array of research questions. One such manuscript will be presented here. The questions are related to the manuscript's own history and to the history of alphabet changes in the Soviet Union. The manuscript also prompts consideration of the nature of composite manuscripts more generally and of autographs in particular.

The manuscript is kept at the National Library of Russia (NLR), with the shelf number PNS 561. The acronym PNS stands for 'Persian – New Series' (*Persidski – Novaia Seriia*). The manuscript was acquired by the library in 2002 together with a number of other manuscripts from a Russian citizen with family roots in Tajikistan.[1]

The manuscript is dated to the end of the nineteenth century and the 1920s–30s and comes from Central Asia: 'viii and 66 fols, 25,5 × 15 cm. Oriental and European paper. Different hands. Entries are written with qalam in black ink, (European) pen, and pencil.' The catalogue description also notes that the cover

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1 I owe this information to Olga Yastrebova, who is responsible for the Persian collection at the NLR and was also involved in writing the corresponding parts of the New Acquisitions catalogue (Personal e-mail message from Olga Yastrebova, 15 Oct. 2020). I thank her for pointing this out to me, and also for making the catalogue (see note 3) available to me.

was made by Mīr Ṣāliḥ Ṣaḥḥāf ('the Bookbinder') and is dated 1274 AH / 1857–1858 CE.[2] As for the content, the description has the following:

> A booklet with various entries and excerpts from different periods. The older entries include: a folkloric, fairytale-like story without beginning (2–4ᵛ); models of various qadi decisions and other official documents (11–25ᵛ); models of letters to high-ranking persons, members of the family, friends, and so on (26ᵛ–37ᵛ); recipes of folk medicine (60–61ᵛ); poems in Persian and Turki [in different places in the manuscript] [the description then names the authors of the poems; they are left out here]. On fol. 53 there are four notes, in pencil, on the birth dates of four persons (20 Feb. 1904; 24 Feb. 1906; 9 Jan. 1913; 17 Jan. 1915). The verses on fols 38–40, 41ᵛ, 47ᵛ–52, 55ᵛ–56 apparently are autographs by Abdarrauf Fitrat (1885–1938), which he wrote in the 1920s or 1930s. Probably, he also wrote the grammatical and syntactic analyses of sentences on fols 40ᵛ–41. There are entries in Tajik written in Roman script on fols 53, 54, 55. Empty space on the pages is filled with computations and the solution to equations.[3]

The last remark in the description is that there are eight sheets loosely deposited into the volume at its beginning; these sheets include fragments (single pages) of lithographed books, in both Persian and Turki.

This specimen is thus a multilayered manuscript: it was not written in one go by one or several persons, but at different stages, with a considerable lapse of time between the layers. It also is a multilingual manuscript since it has entries in Persian and Tajik, Arabic, and Turki; there also is one entry in Russian. Moreover, it is a multi-script manuscript: entries are in Arabic as well as Roman script, and the Russian entry is in Cyrillic script. It is furthermore a multigraphic manuscript: it contains not only text but also numerals, computations, and arithmetic.

Besides that, the description claims that the manuscript has autograph sections, which would indicate that at least these sections are an original. More specifically, this manuscript is a personal notebook or rather has parts of two personal notebooks, one in each layer, as will be shown.[4]

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2 This bookbinder is known: another manuscript from his workshop is in Tashkent, Institute of Oriental Studies, Fond 2 ('dubletnyi fond') 524, dated 1268/1851–2. Gulomov et al. 2000, 145 no. 1584.

3 Yastrebova and Vasil'eva 2017, 146–7. All translations are my own. The description is quoted at length because it emphasizes the heterogeneous nature of the manuscript. I have not seen the manuscript itself, but am working from reproductions. Thanks to the National Library of Russia for making the reproductions available to me so speedily.

4 The term 'original' is used here with reference to the debate surrounding it within the Cluster of Excellence 'Understanding Written Artefacts' at Hamburg University, and in particular within the relevant research field, 'Creating Originals'. A very preliminary explanation was

And finally, the manuscript is a composite manuscript because it was rebound: the object now kept at Saint Petersburg is not the one bound by Mīr Ṣāliḥ; the binding was in fact refashioned, and perhaps the binding made by Mīr Ṣāliḥ was not intended for the book we have today.[5]

Thus, even though this is a small manuscript – a mere 66 plus 8 sheets – it has lots of interesting features.

2 Details of the description

2.1 The first layer

The description in the catalogue is correct, but it does not do justice to the complexity of the manuscript.

The date on the cover can be read clearly: 1274 AH (1857–1858 CE). This means that the cover is considerably earlier than the first dated entries in the manuscript, which come from the 1290s AH / 1870s CE. It is of course possible that nothing was written in the book for roughly fifteen years after it was produced, but that seems improbable. It is more likely that in the beginning the cover did not belong to the manuscript at all, and that the cover was instead reused at some unknown point for the present manuscript. This conclusion is supported by the observation that the manuscript was indeed rebound (see below). This question and other questions raised by the catalogue description – e.g. regarding the paper: the description states that different papers were used – can only be tackled if one has access to the material object. I have not seen the manuscript itself but am working from reproductions which I obtained from the National Library of Russia (see Fig. 1).

For what follows, the loose sheets at the beginning will be disregarded as well as the various entries on the first ten folios. The analysis starts with the

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given in the research proposal (June 2019). The following passage is a starting point for a longer debate, which is far from having reached any conclusion: 'In many manuscript cultures, however, some written artefacts are assigned a special status, the status of an original, and such objects are given a higher value in many different ways: they are collected, bought and sold at high prices, carefully preserved, treated with respect and even awe; they have great efficacy in legal, religious, economic, literary and other contexts. [...] The numerous types include autographs, art works, legal documents, letters, diaries, notes, test and experiment reports, minutes and proceedings, among many others.' In this understanding, autographs and notebooks would both qualify as originals.

5 Friedrich and Schwarke 2016, 1–26.

transition from fol. 10 to 11. These two folios clearly do not belong together. The block is broken, the binding threads seem disordered. And the format of fol. 11 is a bit larger than that of fol. 10. Moreover, the paper does not match; there is a difference in colour. Fol. 10^v is empty, and the text on fol. 11^r does not start with a heading, but rather transitions straight into a legal document. This break in continuity between fols 10 and 11 shows that the manuscript is a composite manuscript: a manuscript with various parts which were not produced in a single effort, but were joined together later, in most cases through binding. This definition applies to what happened here as well, and as mentioned before, it is altogether possible that an older cover was used.

On fol. 11^r, a collection of models or copies of qadi documents begins. As a general rule, in nineteenth-century Central Asian practice, such documents start with the date on which the corresponding action took place. In the case of models or copies, the dates are replaced by 'so and so', in Arabic *kadhā*.[6] This is also the case in our document. The writer of these pages overlined the first words of an item. The last words are a formula which is also typical for qadi documents, 'and this was in the presence of Muslims [as witnesses]', *wa-kāna dhalika bi-maḥḍar min al-muslimīn*. In this manuscript, the formula is characteristically written in an abridged form, as is frequently the case elsewhere. The next item begins on a new line, with the first words again overlined and so forth. The compiler therefore took care to mark the beginnings and the endings of the individual entries.

The majority of entries in this part are undated, but there are some exceptions, most of which date to the 1290s AH /1870s CE. These dates are in line with other dates in this part of the manuscript – all from the 1290s AH.

The catalogue description quoted above enumerates other parts with very diverse content, and it can be added that the layout changes a great deal as well. Poetry is written in two or more columns, with the script going at a 45 degree angle to the left, and an occasional perpendicular line in the middle of the page. The older layer in the present manuscript therefore resembles other manuscripts – most of them much larger – which have been categorized as personal notebooks.

Notebooks kept by legal practitioners, qadis and muftis, survive from Central Asia in relatively large numbers. In Tashkent alone, in the library of the Institute for Oriental Studies, there are about fifty of them. They vary enormously,

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6 Arabic was the main language for legal treatises. The legal terminology in Central Asia is all in Arabic, even in legal documents that are otherwise in Persian or Turki. A kind of shariatic legalese is the result.

but many have one feature in common: their heterogeneity. They reflect the multifarious activities of their writers. These notebooks contain not only legal matter, but also poetry, texts and drawings on occult sciences, guidelines for healing – mostly these guidelines involve the writing of amulets and other magical agents. Such elements are also present in the manuscript under review here.[7] For instance, there is some poetry in Turki.[8] Bilingualism – Persian and Turki – was widespread in Central Asia, and to have multilingual manuscripts (with two or three languages: Persian, Turki, and possibly Arabic, as in our manuscript) is the rule rather than the exception.

To sum up for the first layer or layers: The cover was made in the 1270s AH / 1850s CE, but the oldest dated text entries are from the 1290s AH / 1870s CE. The entries with dates all come from the 1290s AH and are mostly legal matter. This older layer also has letter samples, poetry, personal notes, and so on, as the description points out. It is hard to tell how much in this layer was written in one hand only. The writer is nowhere identified; there is no name or names, no signature, no seal. Some texts carry place names, and the place where something was written is always Bukhara. So it is certain that this layer was written in Bukhara, by a man active in the legal system, most probably as a qadi, who also had other interests, mainly in poetry.

2.2 The second layer

The second layer – dated in the description to the 1930s – is even more complicated. There is no point in the manuscript where the first layer stops and the second starts. Quite the opposite: the first layer appears again and again until the very end of the manuscript. The second layer is first visible on fol. 26[r] (see Fig. 2).

On the left side, fol. 26[r], there is an entry in black ink, but probably written with a European pen, made of steel instead of reed. The script is Roman, the language Tajik. Closely related to Persian, Tajik was the first language for a

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7 These notebooks are called *jung* in Central Asia. This is an understudied genre in Central Asian manuscriptology. Pioneering studies have been undertaken by Gulomov 2012 and Saidakbar Mukhammadaminov 2017. James Pickett's PhD dissertation, now published as a book (Pickett 2020), is a groundbreaking contribution to the intellectual history of nineteenth-century Bukhara. It is through Pickett's work that I became aware of the manuscript examined in this article. I have myself examined some other *jung* manuscripts in more detail in Paul (forthcoming).

8 MS NLR PNS 561, fols 56[v]–57[r].

majority of the urban population in Bukhara during the late nineteenth century. Tajik was written in Roman script from 1928/1929 to 1939/1940, when Cyrillic was introduced.[9] Thus, the entry could hardly have been written earlier than the mid to late 1920s and was certainly not written later than 1940. There is, then, a distance in time of about fifty years between the two layers, that is, two generations. And since there is no information about the writer of the first layer, nothing can be said about the possible relationship between the writers. In general, it is unknown how the book made its way from the first writer and owner to the second.[10]

The hand which wrote the lines is clearly not at ease with the script. The forms of the letters betray that the teachers themselves (about whom no information is available) must have been unfamiliar with Roman script and were probably Russians or otherwise literate in Cyrillic. The writing in the first line breaks off in the middle of a word, and the second line repeats the first and then goes on a bit further. The text is probably an exercise: 'Open steppe and beautiful garden and fine weather' and so on.

A bit below the writing exercise there are exercises in arithmetic. These exercises are written in pencil, a writing tool unknown in Bukhara until the nineteenth century but clearly there in the twentieth. The numerals used are both the 'Oriental' and the 'European' Arabic numerals. For the exercises in Oriental numerals, there are explanations in Arabic script and language.

And there is another, longer text in Tajik, in Roman script; written in pencil, it is hardly legible in the reproduction. There are some mistakes in this section: the writer repeats syllables in what is an attempt at writing verse.[11]

This layer offers a glimpse of what a script reform can mean to intellectuals, to writers whose hands were used to writing without having to think about how, only about what, they wrote. And the script reform also meant a reform of numerals.

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9 Script reform in the Soviet Union is best covered by Baldauf 1993. For Tajik in particular, see Rzehak 2001.
10 The several notes which we find on the inner side of the cover are not helpful. There is a note about the birth of a son, dated to the Year of the Pig 1305 (1887–1888), and another one, dated to 1276 AH / 1859–1860 CE. The older note is in keeping with the date of the cover, which was made just two years earlier, while the later one could refer to a later owner.
11 The first two lines read: 'Man az bigzaşata ma'zuram * man az ajanda masrūrūram' ('I am free from the past * I am happy with the future' [or: 'I am looking forward to the future']). The repetition of the syllable *rū* in the last word is a mistake; it should be *masrūram* ('I am happy'). The reading *bigzaşta* is doubtful. The writing of the long vowels (such as *ū*) is not always observed.

Writing Tajik in Roman script occurs on quite a number of folios in the manuscript, as detailed in the catalogue description quoted above. Moreover, there is also one item written in Cyrillic: a postal address on fol. 39ᵛ (see Fig. 3).

The town of Uratiube in Tajikistan is mentioned, as well as a location in the region of Ural'sk, today in western Kazakhstan.[12] The Russian elements in the address – e.g. the name of the street, Pionerskaia ulitsa – are written phonetically.[13] Tajikistan is called an 'SSR', which provides us a clue as to the dating: Tajikistan was made an SSR only in 1929, and therefore this entry must be later than that.

Next to the address, there is an entry in a completely different hand, a kind of intellectual scribble. But since the ink is the same colour – a pale violet or purple – it is quite possible that the writer was the same. The Cyrillic letters are larger, written with more impact, and certainly more slowly than the Arabic script next to them, but the pen could also be the same. Or did writers use different pens for writing in European scripts, from left to right, and in Arabic script, from right to left?

A part of the page has been cut off, just below the address. This has happened in various places in the manuscript; such cuts can be observed in other Central Asian notebooks as well. Probably such manuscripts also served as a reservoir for paper.[14] In this case, perhaps the address was written again, and then the corresponding part of the page cut out and glued to the object which was being sent.

The hand next to the address reappears in many places in the second layer of the manuscript: this is the script that Yastrebova attributes to Abdarrauf Fitrat.[15] Fitrat was a leading representative of the Bukharan modernist intellectuals of the early twentieth century. He joined the Bolsheviks after the revolution, was part of the Bukharan revolutionary government, but soon came into conflict with the leadership of the Communist Party. After 1924, when he came back to Central Asia following a forced stay in Moscow, he spent some years in Samarqand and Tashkent, working in the nascent Soviet academic system, and he was also involved in the Romanisation of Tajik: it was his proposal for the

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12 The name of the place could be read as Shadrin or Tadrin. I have been unable to identify such a place in the region of Ural'sk. The Russian word *oblast'* ('administrative unit') comes with a non-Russian ending, *oblaste*, which may represent a Turki form.

13 The writer has Пиянирск. Улитса instead of Пионерск. Улица. Tajikistan comes as 'Tojikston', which sounds either Uzbek or Tajik.

14 An extreme example is the manuscript Tashkent, Institut for Oriental Studies no. 9767, where more than 40 sheets are missing. See Paul (forthcoming).

15 Outside of quotations, I write the name 'Fitrat' without diacritics.

script reform which was eventually adopted.[16] His literary reputation is mostly due to his dramatic works, but he was a prolific writer in many fields, writing in both Turki and Persian. At the end, he fell victim to the Stalinist state terror and was executed without trial in October 1938 in Tashkent.[17]

3 An autograph by Fitrat?

For a number of reasons, Yastrebova's inference seems sound. Some entries indeed were probably written by Fitrat himself, and these entries are proof that he used this manuscript as a notebook for drafts, mostly of poetry, but also of letters, journal articles, and speeches. If the grammatical explanations are also his, as Yastrebova believes, their presence may relate to his work on Tajik grammar.

My analysis of the second-layer components in this hand starts with this short poem, four lines in all (Fig. 4a). At first the poem looks like a quatrain. Since the lines are written in a careful hand, they should be easy to read, but this impression is deceiving because nearly all the diacritical dots are missing. There are, however, other versions of the same text on other folios. By comparing the versions, it becomes clear that this is no quatrain, but a longer poem of ten lines (five verses, ten hemistichs). There are notable variants. In one version, we have *Tājikistān* instead of *ʿālam* at the beginning of line 6 (fol. 51ᵛ, Fig. 4d), a more nationalist outlook: it is the home country instead of the whole world that ought to be filled with light. In two versions, lines 7 and 8 have been erased (Figs 4b and 4d); in one version, a word in line 4 (*mullāyān*, 'mullahs') has been blackened (Fig. 4c), and attempts at blackening that word are evident in another version (Fig. 4d). Most probably, this was done years after the poem was written (see below). What follows is the complete poem in Persian and in translation:

أهل إستثمار را مقهور مي بايست كرد	*Ahl-i istithmār-rā maqhūr mī-bāyast kard*
لطف پر رحمتكش مزدور ميبايست كرد	*Luṭf pur raḥmatkish muzdūr mī-bāyast kard*
تا بدنيا چشم بگشايند ديگر بعد از اين	*Tā ba-dunyā chashm bu-gushāyand dīgar baʿd az īn*
چشم ملايان خوابين كور ميبايست كرد	*Chashm-i mullāyān-i khwābīn kūr mī-bāyast kard*
از ضياء شعل عرفان نو شمع علم	*Az ḍiyāʾ-i shuʿl-i ʿirfān-i naw-i shamʿ-i ʿilm*

عالم را پر ضیاء نور میبایست کرد ‏ *ʿĀlam-rā pur ḍiyāʾ-i nūr mī-bāyast kard*

تانسازد زاهد دخول بچشم بد نظر ‏ *Tā na-sāzad zāhid dukhūl ba-chashm-i bad-naẓar*

دختران خوب از دستور میبایست کرد ‏ *Dukhtarān-i khūb az dastūr mī-bāyast kard*

فطرتا از پرتو خورشید عدل شوروی ‏ *Fiṭratā az partū-yi khūrshīd-i ʿadl-i shūrawī*

ظلمت ظلم شرر را دور میبایست کرد ‏ *Ẓulmat-i ẓulm-i sharar-rā dūr mī-bāyast kard*

Translation:

> The exploiters must be smashed
> Workers must be treated with kindness and compassion
> In order to make people open up their eyes again to the future
> The eyes of the sleeping mullahs must be blinded
> With the light of the flame of new knowledge, the flambeau of science
> The world must be made full of light
> In order to keep the ascetic [the religious zealot] from interfering, with his evil eye
> The pretty girls must be freed [?] from the order [of veiling?]
> Fiṭrat! From the sunlight of Soviet justice
> The darkness of oppression and evil must be kept away[18]

One argument that these entries are in Fitrat's own hand is that this name occurs at the beginning of the last verse (penultimate hemistich). In classical Persian poetry, this is the place where the poet identifies himself, more often than not in an invocation, addressing himself. The form of this short poem is altogether classic in spite of its revolutionary content.[19]

Another argument is that when multiple versions of a single text appear in a single manuscript, many of them in the same hand, the entries are probably drafts. It is remarkable, however, that the neat version is so short – one would expect it to have been written at the end, when the poet had decided which version he would eventually publish or present or otherwise consider more or less final. It is possible, however, that Fitrat also wrote the neat version – calligraphic writing after all was part of a standard education.

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18 The stress on girls and veiling makes one think of the campaign for the unveiling of women, the so-called *ḥujūm* campaign which started in 1927.

19 Fitrat wrote poetry in both Persian and Turki. After writing in Persian earlier in his career he turned to Turki, and it is his works in that language that are best known. But after the mid 1920s, he started to write and publish in Persian again, as well as in Tajik. Borjian 1999 remarks that Fitrat's works in Turki have been widely studied but that there is much less on his Persian and Tajik works. A literary analysis of the poem printed above is beyond the scope of the paper. See Hodgkin 2015. (I owe this reference to James Pickett.) I am unaware of any printed edition of this text.

The manuscript contains another example of a draft and a neat version of the same text, on fol. 53[r]. This is perhaps a draft for a poster, a journal article, or a speech. In it, the addressees – 'Dear comrades' – are called upon to work for the distribution of the newspaper 'The Tajik Voice', which is a paper that appeared in Samarqand during the 1920s. Fitrat is known to have contributed to this newspaper, for instance, with two articles in 1927 on the Romanisation of Tajik.[20]

Together, these factors make the character of the manuscript even clearer. In the second layer as well, it served as a notebook. Perhaps it was even a notebook for more than one person – on the bottom part of this page, someone noted his own birthdate and that of others, perhaps his brothers and sister: 'I, Ḥamīd, was born on Friday, Dhū l-Ḥijja 17, 1321 hijrī, corresponding to February 20, 1904, of the Christian era'.[21] These are the notes mentioned in the description in the catalogue, quoted above.

In general, however, the entries in the second layer reflect some of the main preoccupations of Abdarrauf Fitrat: revolutionary propaganda, the Romanisation of Tajik, and the use of Persian literary models for Soviet politics. Taken together, these features are strong evidence that the manuscript in question belonged to him during this period, perhaps from the mid 1920s into the 1930s. In the light of this conclusion, it is altogether possible that Fitrat also wrote the exercises in Roman script.

Most of the entries in this hand, likely that of Fitrat, are in a cursive script, written in pencil or copying pencil, not easily legible, at times with ligatures and special forms of letters. The layout changes from page to page, from entry to entry. This variability is indicative of the strictly personal use for which these entries were intended.

4 Final phase

There are still other entries which come from the final phase of the manuscript's documented use: another writer made entries after Fitrat's death, thus later than 1938. This man wrote on fol. 40[r], in Arabic: *arqamahu Fiṭrat ghaffara ʿanhu*, 'Fitrat wrote this, may God pardon him', and similarly on fol. 52[r]: *rāqamahu Fiṭrat ghaffara ʿanhu wa-sattara ʿuyūbahu*, with the formula 'and may God cover

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20 Borjian 1999, 566.
21 The Christian date is given according to the old pre-revolutionary calendar, the Julian one, still used today by the Russian Orthodox Church.

up his sins' added. Both notes are written in pencil, the note on fol. 40^r is to be found in the upper right corner of the page (Fig. 4a). The same person was possibly responsible for blackening the word 'mullahs' in one of the versions of the poem quoted above (fol. 39^v), attempting to do so in another (fol. 51^v) in order to make the word illegible, and in erasing a verse in two places (fols 49^r, 51^v, Figs 4b and 4d). Lines 7 and 8 therefore survive in one version only (fol. 38^v, Fig. 4c), which possibly escaped the eraser's attention. This man was very probably a mullah himself, with some knowledge of Arabic, and on the other side of the barricades as far as veiling and unveiling is concerned: he did not want the lines on veiling to survive, and he wanted to 'correct' Fitrat's anti-clerical polemics. Nevertheless, he thought it worth while to identify Fitrat as the author and writer of these lines. Thus, his remarks betray a certain respect for the personality of Fitrat, even if he also distances himself from Fitrat on some points.[22]

A case can therefore be made for ascribing several parts of the manuscript to Fitrat's own hand. More research is required, in particular into other papers possibly written in his hand, but that investigation is beyond the scope of this contribution. If the ascription is correct, this manuscript offers a glimpse into the working routines of a leading Central Asian intellectual and political actor.

5 Conclusion

The manuscript shows that handwriting plays an important role even after the end of a manuscript culture. With the rise of print – introduced in Muslim Central Asia around 1900 – people did not stop writing manuscripts. Except that the manuscript books they wrote were no longer meant to be copied, since copying was no longer the central form of distributing texts. Fitrat also had many of his works printed and even worked for the printed press. But of course personal notebooks still served as diaries and contain drafts, letters, and many other kinds of notes.

The manuscript sits astride the transition from Arabic to other scripts for Tajik, the transition from the traditional qalam to steel pen and pencil, and the transition from manuscript to print culture. This transition also had an impact on the writing of notebooks: they seem to have fewer excerpts and copies, and instead contain more drafts.

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22 The Arabic formulae quoted are standard and do not necessarily imply a judgement on the character of the deceased person.

Acknowledgements

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Fig. 1: MS NLR PNS 561, fols 10ᵛ–11ʳ. All figures courtesy of NLR.
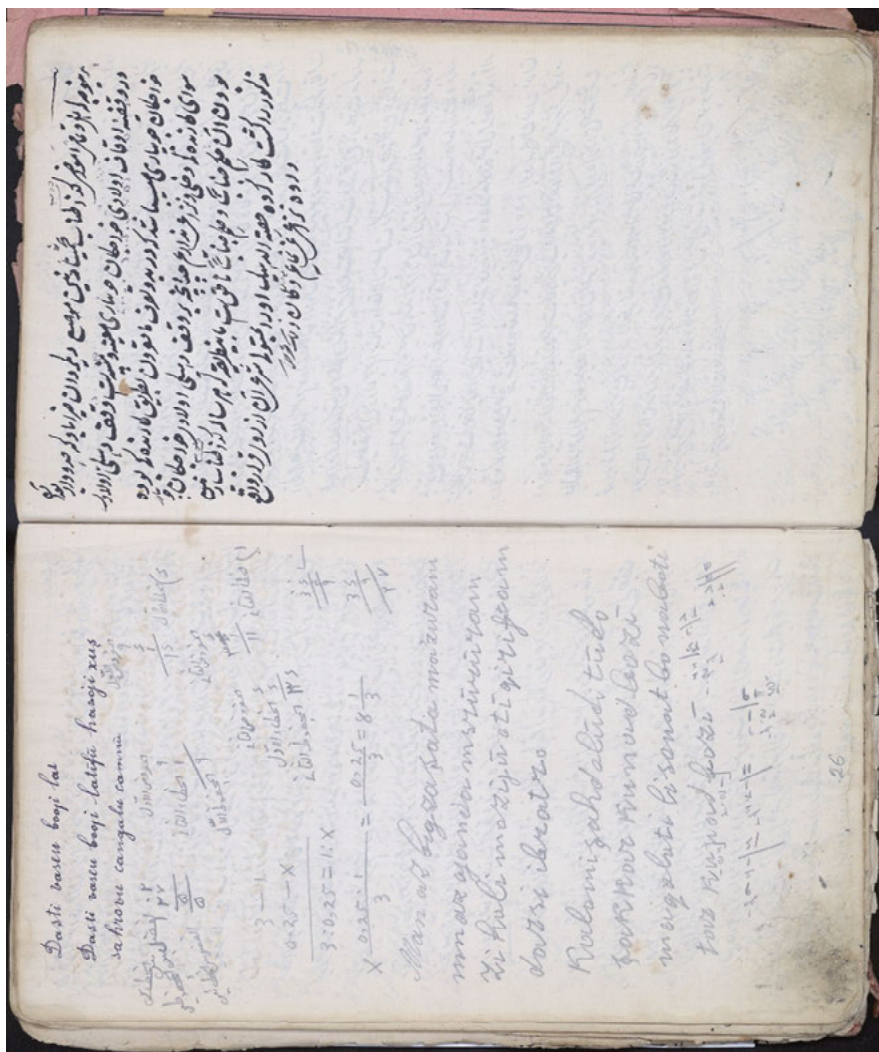
Fig. 2: MS NLR PNS 561, fols 25ᵛ–26ʳ.
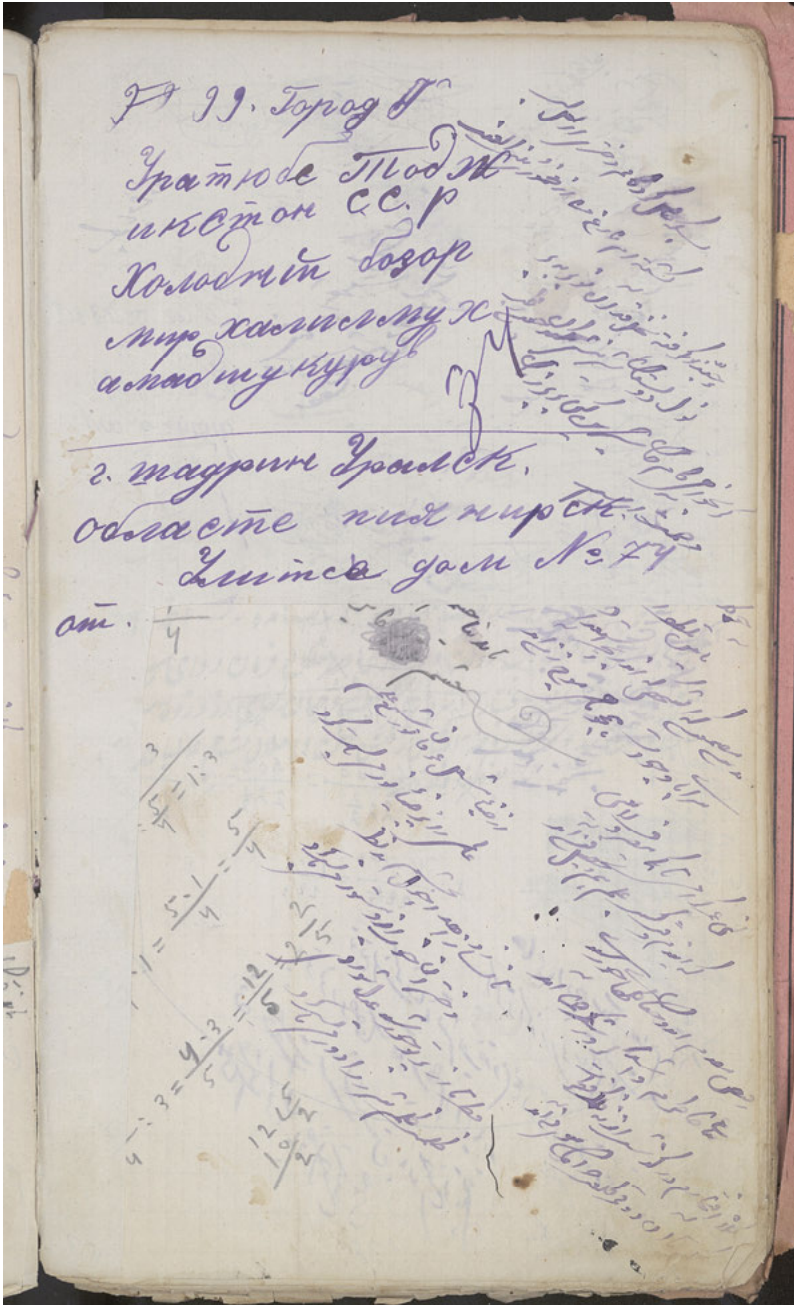
Fig. 3: MS NLR PNS 561, fol. 39ᵛ.
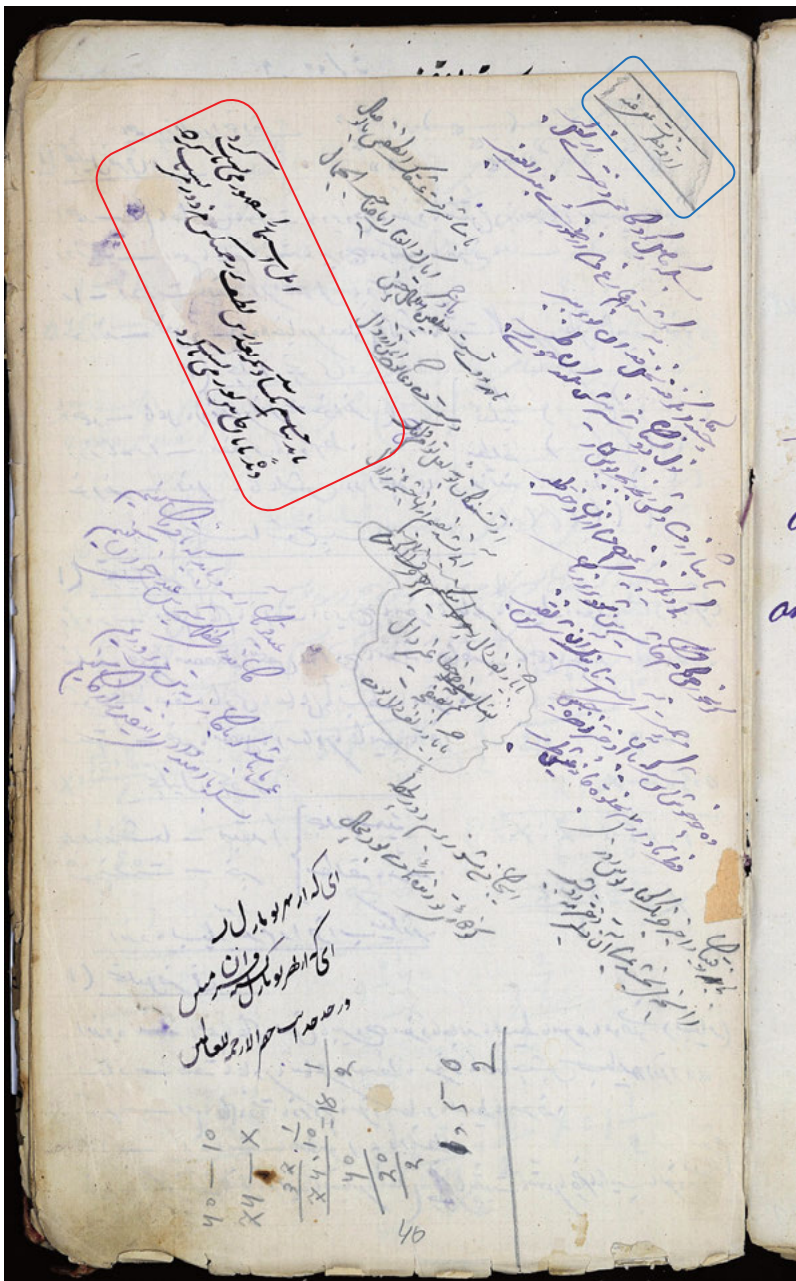
Fig. 4a: MS NLR PNS 561, fol. 40ʳ. Four lines of a poem in careful hand (red) and the note *'arqamahu Fiṭrat ghaffara 'anhu'* (blue).
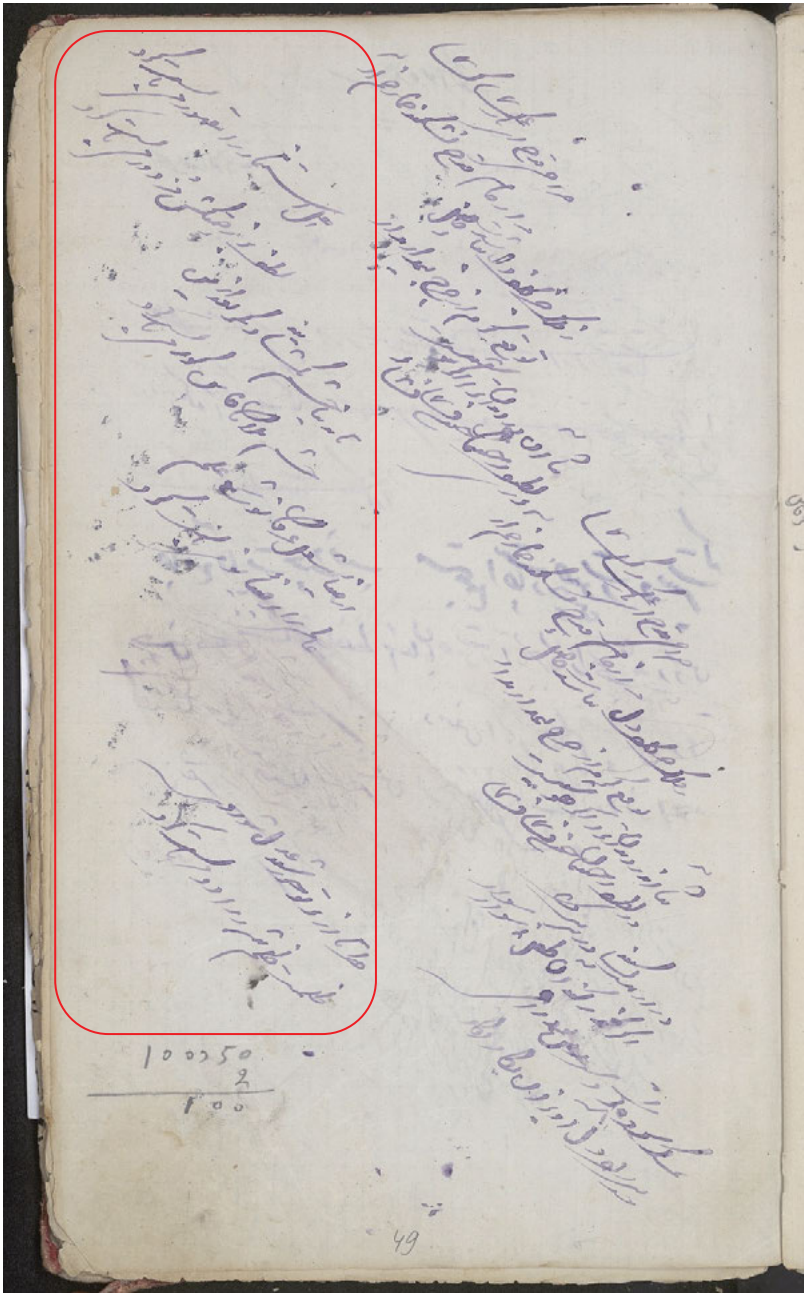
Fig. 4b: MS NLR PNS 561, fol. 49ʳ. Longer version. Lines 7 and 8 erased.
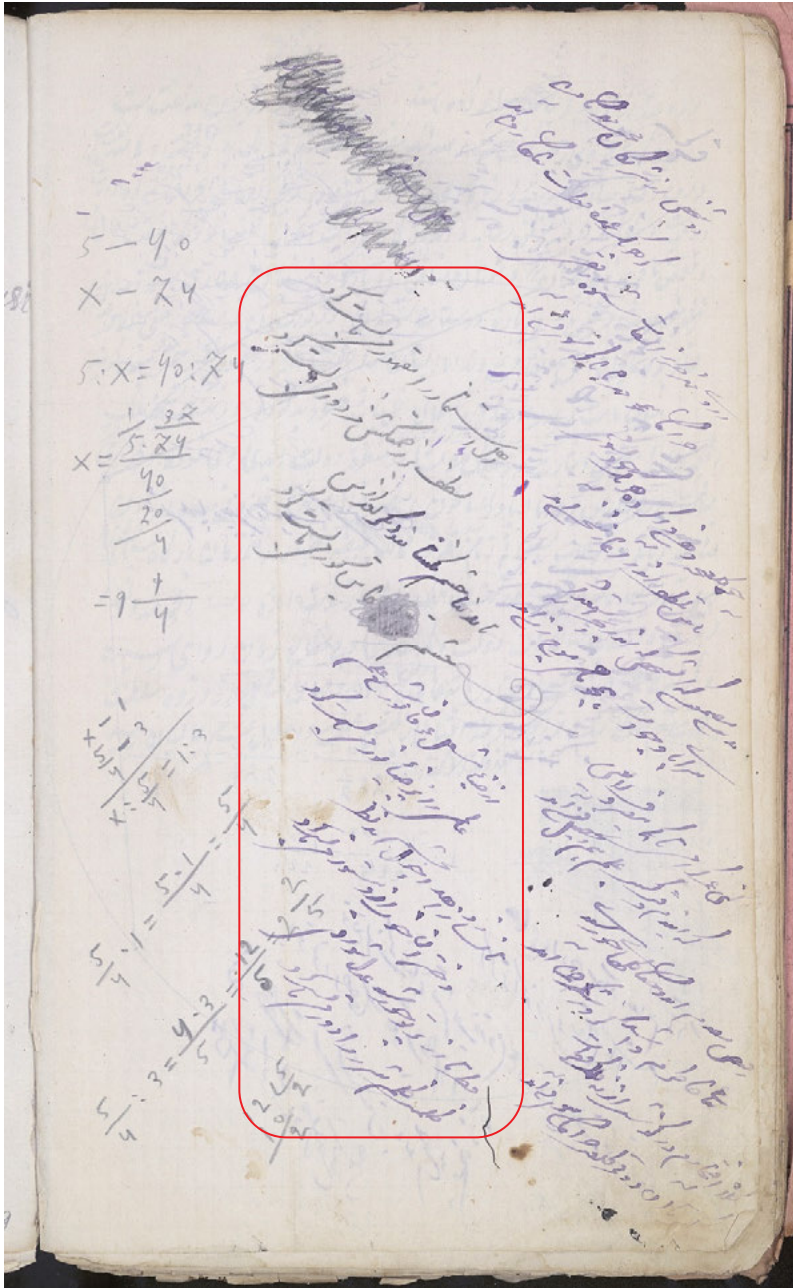
Fig. 4c: MS NLR PNS 561, fol. 38ᵛ. Longer version. One word blackened (line 4): *mullāyān*.
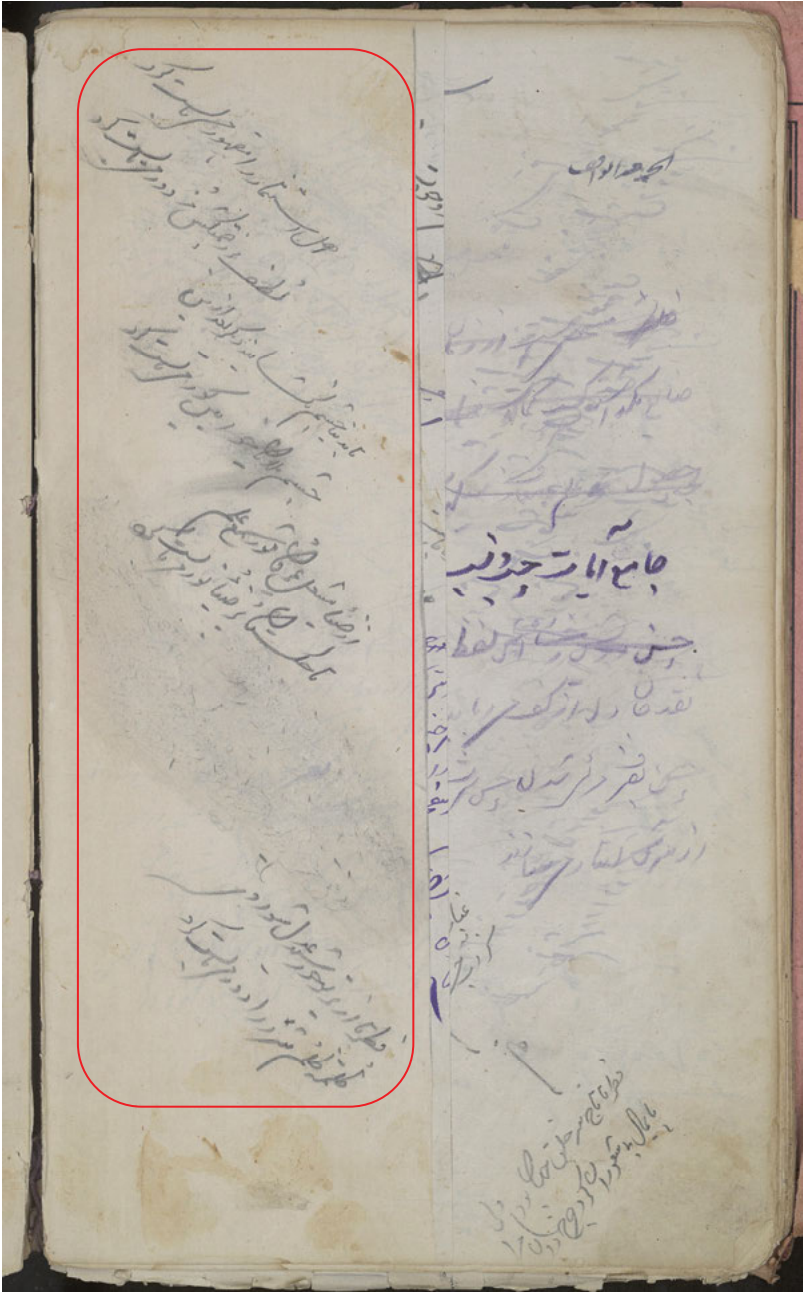
Fig. 4d: MS NLR PNS 561, fol. 51v. Longer version, lines 7 and 8 erased, attempt at blackening one word in line 4 (*mullāyān*).

Stefano Valente

Creating an Original of a Greek Lexicon in the Middle Ages: Notes on the Manuscript *Vaticanus Barberinianus* gr. 70 of the *Etymologicum Gudianum*

Abstract: The creation of a lexicon in the manuscript culture of the Greek Middle Ages was a complex and difficult enterprise. It required access to different manuscript sources and to writing materials in which the selected information could be copied and structured. To illustrate this practice, some features of the manuscript Vatican City, BAV, *Vaticanus Barberinianus* gr. 70 (eleventh century CE?) transmitting the original of the so-called *Etymologicum Gudianum* will be investigated.

1 Introduction

'Lexicography is an endless task',[1] wrote Robert Scott on 9 April 1862 in a letter to the German classical scholar Wilhelm Dindorf. Scott is the co-author – with Henry George Liddell – of the seminal Greek-English lexicon (first edition: Oxford 1843) that remains the most authoritative lexicographic tool for the study of Ancient Greek.[2] More generally, Scott's sentence is consonant with almost every kind of lexicographic work produced in every time and culture.[3] However, this 'endless task' applies not only to the intellectual act of collecting, selecting, and explaining lexical items, but also concerns the material operations of transferring and transmitting them in a written artefact.

In this regard, the activity of a lexicographer working in the medieval Greek manuscript culture was particularly challenging and required access to different

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1 Stray 2019b, 11 (and n. 1 for the source: 'Robert Scott letter books, OUP Archive').
2 Usually abbreviated 'LSJ', viz. 'Liddell, Scott, Jones', the latter being Henry Stuart Jones (1867–1939), who authored the revision of the lexicon. On the different editions of and supplements to the *Greek-English Lexicon*, see Stray 2019a. Dindorf himself and his brother Ludwig were also experts in lexicographic matters, since they were part of the team of scholars in charge of updating the nine volumes of Stephanus' *Thesaurus Graecae Linguae* (Paris 1831–1863): see e.g. Müller 1903, 706.
3 For an overview on some lexicographic cultures of the past, see the papers collected in Considine 2019 with further literature.

manuscript sources, to writing materials, and sufficient time to select and organise the contents. To illustrate some aspects of this complex scholarly activity, I will focus on a single manuscript which lends itself as an exceptional case study for understanding how an original of a lexicon was created.

The history of Greek lexicography begins in the Hellenistic Age (from about the third century BCE onwards):[4] for centuries, manuscripts containing lexica of various kinds have been produced and copied for different purposes. Not only did scribes and scholars copy already existing lexica of the past, with every new manuscript being a more or less faithful adaptation of the contents to the needs of the producers and/or users, but they also compiled new lexica using previous works as sources of information. The huge number of extant Greek lexicographic manuscripts offers a fruitful field of investigation for studying adaptation processes through the centuries and within different scholarly communities. That said, few surviving manuscripts allow us to perceive and to reconstruct how the material process of creating a brand new lexicon took place: such written artefacts represent provisional and preliminary textual stages, thus constituting one stage in a complex intellectual and material work-in-progress.[5]

2 How to compose a new lexicon? Some theoretical remarks

Creating a new lexicon in the Greek Middle Ages was a complex enterprise. Firstly, the producers were confronted with the difficult task of gathering information from different manuscript sources, in particular previous lexica, commentaries to literary texts, grammars, and other specialised literature, as well as from manuscripts transmitting literary works. They then had to select the information they considered interesting and necessary for their purposes. Afterwards, this selection was transferred into a new manuscript and converted into a usable form. Alphabetical order was adopted to aid quick consultation of this new text.[6] The lexical items were thus arranged according to different degrees of alphabetisation, from the easiest, i.e. to the first letter of the lemma, to the most

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4 See among others Ferri 2019 and Valente 2019 with further literature.

5 See e.g. Valente 2017, 45.

6 For an overview of alphabetisation in Greek and Latin Antiquity and Middle Ages, see Daly 1967 and Alpers 1975. See also Valente 2014.

refined, i.e. the full alphabetisation.[7] In Antiquity and the Middle Ages, this latter lexicographic structure was a difficult and expensive task in terms of time, intellectual energy, and material costs.

The German classical scholar Carl Wendel (1874–1951) described such a painstaking operation in his entry in the *Paulys Realencyclopädie der classischen Altertumswissenschaft* on the Late Antique grammarian Orion from Thebes in Egypt (fifth century CE).[8] Orion compiled the first Greek etymological lexicon that has survived, collecting grammatical-etymological explanations of words he found in different source texts.[9] As already acknowledged, some of these source texts were not alphabetically arranged. As Wendel suggests, it is possible that the lexicographer had a separate set of sheets or quires for each letter of the alphabet, in which he copied the different etymologies he found in his sources according to their first letter.[10] The lexicographer performed the process of extracting information from his source texts in sequence (that is to say first exploiting a source, then a second one, etc.). This perhaps explains how groups of entries originating from one and the same source (originally not alphabetically arranged) appear in the same sequence within each alphabetic section of Orion's lexicon.[11]

Starting from this working hypothesis, an even more complex compositional process is required for creating an original of a fully alphabetised lexicon.

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7 Generally, surviving Greek and Byzantine lexica are arranged up to the third letter, many others just according to the first or second one: see Valente 2014.

8 On this lexicographer, see Wendel 1939; Ippolito 2008; Matthaios 2015, 287–288.

9 On etymology in Greek antiquity, see e.g. Sluiter 2015 with literature. It should be noted that ancient etymologies have nothing to do with modern linguistic studies.

10 Wendel 1939, 1086–1087: 'Da die meisten der von O[rion] benutzten Werke selbst nicht alphabetisch geordnet gewesen sind, haben wir uns sein Verfahren so vorzustellen, daß er für jeden Buchstaben des Alphabets ein besonderes Rollenstück vor sich niederlegte und bei der Lektüre die ihm begegnenden Etymologien, so weit sie ihm wichtig erschienen, auf diese Blätter übertrug. So entstand eine nach den Anfangsbuchstaben der erklärten Worte alphabetisch angelegte Kompilation, die weder Eigenes enthält noch irgendeine der Vorlagen in ihrem ursprünglichen Zusammenhang wiedergibt'. On this hypothesis, see also Daly 1967, 89 n. 1: 'This description is based purely on inference from the character of the text of Orion rather than on any direct evidence, but it is plausible in the light of the evidence cited above [*ibid.* 85–89, but see also Wilson 1969, 366 on p. 88]'. Wendel mentions the use of papyrus rolls, but there is no evidence for what kind of material support Orion really used. However, it seems more likely that the lexicographer worked with single sheets or loose quires. For further literature and another hypothesis concerning the composition of a version of the so-called Zonaras's lexicon (first half of thirteenth century), see Alpers 1981, 19 with n. 23. On the compositional methodology of Guarinus Favorinus Camers' lexicon, see Ucciardello 2017, 181.

11 See Kleist 1865, 16; Wendel 1939, 1086; Theodoridis 1976, 16f.

Each list of entries for every alphabetic letter must be revised, the items checked many times, then, in a further step, they can be copied according to a more or less refined alphabetical order into a new manuscript. Bringing together different sources transmitting similar materials also caused problems in terms of locating the information correctly, by introducing new lemmata or extending the explanations of already existing items. Mistakes such as placing an entry in the wrong position were common and had to be corrected by revising the text or producing a new version of it. The longer a text, the more complicated this process turned out to be.

3 From theory to practice: the case of MS Vatican City, BAV, Vat. Barb. gr. 70

Thus far the theory. In reality, the possibility of verifying this hypothesis in a manuscript and of studying how such an intellectual and material process took place during the production of a given written artefact is limited and relies upon the very few manuscripts that preserve drafts of lexicographic texts. One such text is the manuscript Vatican City, BAV, Vat. gr. 7 (diktyon: 66638), dated to 1310: it contains the first five letters of the Greek alphabet (from *alpha* to *epsilon*) of a lexicographic collection compiled by Georgios Phrankopulos, a scholar active in Constantinople at the beginning of the fourteenth century.[12] The scribe of this manuscript – possibly Phrankopulos himself – supplemented the main text by adding further materials in the margins and in extra sheets that he glued or bound to the original manuscript. The other manuscripts containing the remainder of this collection are unknown or lost. Furthermore, there are no traces of the Vatican manuscript ever having been copied.[13]

Another manuscript that preserves a working copy of a lexicon is now kept in the Vatican Library as well: the Vatican City, BAV, Vat. Barb. gr. 70 (diktyon: 64618), possibly to be dated to the eleventh century.[14] It is a small manuscript

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12 See Mercati and Franchi de' Cavalieri 1923, 4f.; Ucciardello 2007, 431–435; Gaul 2008, 178–181; Ucciardello 2013 (in particular, 12–16); Valente 2017, 52. A full digitisation of the manuscript is online: <https://digi.vatlib.it/view/MSS_Vat.gr.7> (all internet sites mentioned in the present article were accessed on 24 Feb. 2021).
13 For another manuscript fragment with a preliminary version of a lexicon, see Ucciardello 2021.
14 On this manuscript, see Reitzenstein 1897, 91–103; Capocci 1958, 77–78; Maleci 1995; Sciarra 2005, 359–363; Arnesano and Sciarra 2010, 430–433. For an earlier dating to the end of

(*c.* 200 × 170 mm) now composed of 22 parchment quires (quaternions). In its present state, there are some quires and some leaves missing[15] and most of the remainder is also damaged, especially near the margins. This makes the deciphering of the writing in these parts of the manuscript particularly difficult.[16] The general consensus among the Greek palaeographers and scholars who studied this manuscript is that at least six different scribes co-operated in writing its different textual layers, working together in the same place and at the same time.[17]

With the exception of the last quire,[18] the surviving leaves transmit the text of a Greek etymologicon with conspicuous additions in the margins and between the lines, written at subsequent stages and by different scribes.[19] The German classical scholar Richard Reitzenstein (1861–1931) was the first to study this manuscript in-depth and to acknowledge its pivotal importance as the original of a seminal Byzantine etymologicon known under the name of *Etymologicum Gudianum*.[20] In his pioneering *Geschichte der griechischen Etymologika*, published in Leipzig in 1897, Reitzenstein highlighted the main manuscriptological and textual features of the *Barberinianus* and was able to trace the main

the tenth century, see Alpers 2015, 295–296. This topic is currently under investigation within the project *Etymologika*. A full digitisation of the manuscript is online: <https://digi.vatlib.it/view/MSS_Barb.gr.70>.

15 See Maleci 1995, 13–25.

16 In these cases, the later manuscripts descending directly or indirectly from the *Barberinianus* are essential for reconstructing the text.

17 The production place is still to be identified with certainty. According to the *communis opinio*, the manuscript was produced in Southern Italy, namely in Salento (Terra d'Otranto): see e.g. Maleci 1995, 33–45, Sciarra 2005, 355–359 and 363–371. This has recently been questioned by Ronconi 2012, 86. Further investigations are needed in order to clarify the exact origin of this codex and the number of scribes.

18 The final quire (fols 149–155, the first folio is lost) transmits a lexicon of synonyms: see Reitzenstein 1897, 90–91; Nickau 1966, LIII–LIV; Palmieri 1987; Maleci 1995, 24, 71–72; Sciarra 2005, 363. This lexicon is alphabetically arranged to the first letter. Among the quite extensive production of synonymic lexica from the Antiquity and Middle Ages still preserved, the text of the *Barberinianus* turns out to be a *unicum* and may be a product of the same cultural *milieu* as the etymologicon, since the same compositional process that was used in the first part is recognised (for this, see below). Furthermore, in some cases, the scribes of the main text and of the marginal annotations are the same ones as those of the rest of the manuscript.

19 Reitzenstein 1897, 91–92; Maleci 1995, 24, 45–67; Sciarra 2005, 359–363.

20 On this lexicon, which is the most widespread etymologicon in Greek manuscript culture, see Reitzenstein 1897, 70–155; Cellerini 1988; Sciarra 2005; Alpers 2015, 295–296.

lines of textual transmission of this etymologicon. His later studies, and those of other scholars, refined the picture.[21]

For the purposes of the present paper, it should be emphasised that the *Barberinianus* is a multi-layered manuscript, as revealed by the different strata of annotations. As previously mentioned, a group of learned scribes, likely working in the same workshop, revised and augmented the main text by consulting not only further manuscript sources, but also re-using the same ones as those used for compiling the main text. An examination of any folio of this manuscript leaves one with the impression of facing a creative but organised chaos.[22]

But what can we say about the main text itself? And is it ultimately possible to reconstruct what lies behind it, i.e. the earlier composition stages of this lexicon? It has been acknowledged that three scribes are responsible for copying the main text of the lexicon.[23] All three – but in particular the first scribe – used a quite calligraphic handwriting, while the scribes of the supplements in the margins and between the lines used more informal and cursive handwriting.

Let us try a thought experiment. If the margins of the *Barberinianus* had remained blank – that is, if there were no additional material in the free spaces – we would face a well-written manuscript that we would probably consider to be an accomplished piece of scholarship. It is only because of the later layers of writing that we perceive this written artefact to be a working manuscript of an anonymous group of scholars. If we disregard for a moment these successive layers, we can try to understand the first layer as the main text, without the later additions and corrections.

Firstly, the main text seems to be the result of an act of copying 'in one take', that is to say, a text copied from a model and not produced during its writing. In particular, we observe that entries are almost fully alphabetised; a few minor misplacements can be detected towards the end of the lexicon but these were usually corrected by the main scribe.[24] Consequently, we can assume

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21 Especially Reitzenstein 1907, 814–815. See Alpers 2015.

22 Further examples of other scholarly works in van der Valk 1971, XII–XXIV; Alpers 1981, 20.

23 Reitzenstein 1897, 92 (see also Capocci 1958, 77) and Maleci 1995, 33–45 (esp. 45 for an overview) distinguished three scribes, but do not agree in the distribution of their work. See also Sciarra 2005, 360 n. 16.

24 See Reitzenstein 1897, 93: 'Die Reihenfolge der Glossen im Haupttext ist [...] streng alphabetisch, und zwar nach allen Buchstaben des Lemmas; wo diese Ordnung einmal gestört ist – besonders oft im letzten Teil – hat häufig der erste Schreiber selbst durch Zeichen und Zahlen eine beabsichtigte Umordnung der Glossen angedeutet'. Alessandro Musino (*per litteras*, 6 March 2020) remarks that something similar also occurs in relation to the marginal notes of the

a careful intellectual operation of selecting and structuring scholarly materials from different manuscript sources in order to compile a new lexicon. While a source text can be recognised with a degree of certainty for many entries, there are many others where this is not the case.[25] In general, the text of the first layer does not seem to be a copy of any preserved lexicon that had already existed.[26] We can deduce, therefore, that the main text of the *Barberinianus* represents a copy of an original work. This means that we can also assume that there may have been at least one previous working stage in a now lost manuscript preceding the first textual layer of the *Barberinianus*. As Reitzenstein suggested, the *Barberinianus* would therefore represent the neat copy of a prior working manuscript whose form was probably similar to that of the *Barberinianus* itself.[27]

Some new evidence for this can be found when considering a textual feature that, to date, has received scant attention. Many entries of the main text do not include an etymology of the lemmatised word, but rather feature a cross-reference to one or more entries occurring above or later in the text in which the

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Barberinianus: for instance, on fol. 141ᵛ, a scribe adds numerals from α′ (1) to η′ (8) next to the lemmata in the text and in the left margin to indicate the correct positions for inserting the entries from the margin into the main text in the correct alphabetical order (from χεῖα to χεῖρον). As he properly remarks, this marks a further step towards the production of a new, fully alphabetised manuscript of this lexicon.

25 See the first apparatus of De Stefani 1909–1920 for details concerning the letters *alpha* to *zeta* (beginning). See also the specimen published by Reitzenstein 1897, 109–136.

26 Reitzenstein 1897, 104 also suggested this as one of two working hypotheses for explaining the production of the *Barberinianus* (for the other one, see below, n. 27): 'Kopierte der Schreiber des Haupttextes im wesentlichen nur ein vor seiner Zeit schon entstandenes älteres Werk und existierte eine Urform des Etymol. Gudianum schon vor ihm, so beweist die zwar begonnene, aber nie vollständig durchgeführte und oft durch Zeichen erst nachträglich hergestellte streng alphabetische Ordnung, daß er dasselbe erheblich umgestaltet hat' (see also above, n. 24).

27 Reitzenstein 1897, 105 (see above, n. 26): 'Ist er [i.e. the scribe of the *Barberinianus*] dagegen selbst zugleich, wie ich glauben möchte, der Verfasser des Werkes, das erst durch ihn entstand, so ist bei der klaren und zierlichen Schrift wie des ganzen Textes, so auch derjenigen Glossen, welche sich uns als schon bei ihm aus mehreren direkt benutzten Quellen kontaminiert erweisen werden, wenigstens das eine sicher, daß unserer Handschrift ein Entwurf, ein Unreines, voraus liegt, welches ähnlich wie jetzt die erweiterte Handschrift ausgesehen haben mag. Eine sichere Entscheidung vermag ich nicht zu geben'. Some years later, Reitzenstein gave the preference to this latter hypothesis: 'Ein älterer, sehr kurzer Text, der schon abgeschlossen war und daher kalligraphisch sorgfältig auf einem relativ kleinen Teil der Seiten eingetragen ist, ist von mehreren (fünf?) Schreibern nachträglich überarbeitet und erweitert worden (etc.)' (1907, 814).

cross-referenced word is mentioned and/or commented on. For instance, let us consider the following entry:[28]

> γῆρυς· εἰς τὸ κῆρυξ καὶ διακηρυκεύεται.

> *gêrys* ('voice'): [see] at the entry *kêryx* ('herald') and at the entry *diakērykeýetai* ('it is proclaimed by a herald').

The cross-references are correct, since we find the meaning of the lemmatised poetic name for 'voice' in the other two entries mentioned: in both of them, it is explained as φωνή (*phōnḗ*, 'voice'), the more common word for this.[29]

Furthermore, as the case below demonstrates, some entries contain an accumulation of such information:[30]

> γῶ· εἰς τὸ γαστήρ καὶ γεγῶσα καὶ γῆ καὶ γυνή καὶ γωρυτός καὶ διακηρυκεύεται καὶ ἐγγυαλίζω καὶ ἐγγύη καὶ χθών.

> *gô*:[31] [see] at the entries *gastḗr* ('belly'), *gegôsa* ('she, who has become'), *gê* ('earth'), *gynḗ* ('woman'), *gōrytós* ('quiver'), *diakērykeýetai* ('it is proclaimed by a herald'), *engyalízō* ('to put into the hand'), *eggýē* ('surety') and *chthṓn* ('earth').

All but one of the cross-references are correct.[32] Such a coherent and precise system pointing both backward and forward in the text should therefore be seen as the result of an intense engagement with the contents of the lexicon. It served the needs of both the producers and the users of this new lexicon, assisting them in navigating the manuscript to easily find the information they were looking for. The producers created a compact network of information within their original. Furthermore, this careful system of cross-references presupposes at

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28 De Stefani 1909–1920, 310.8. The entry occurs on fol. 44ᵛ, l. 11 of the main text: for a digital reproduction, see <https://digi.vatlib.it/view/MSS_Barb.gr.70/0078>. I do not discuss here either the literary source identified by De Stefani or the meaning of the marginal *siglum* in the manuscript.

29 Respectively fol. 98ᵛ, main text, ll. 11–16, esp. 15–16 (text partly in Sturz 1818, col. 320.32–41, esp. 38–41) and fol. 48ʳ, main text, l. 2 from below–48ᵛ l. 2 from above (text in De Stefani 1909–1920, 365.20).

30 Fol. 44ᵛ, main text, l. 11, text in De Stefani 1909–1920, 327.5.

31 It is a fictive verbal form created by ancient grammarians for the sake of explaining the origins of different words (see LSJ *s.v.*). The grammarian Philoxenus (first century BCE) may have treated this form in his treatise *On monosyllabic verbs* (Περὶ μονοσυλλάβων ῥημάτων): see Theodoridis 1976, 8–9, 129–131 (frags 79–82) and 133 (frag. 88).

32 The reference to γεγῶσα (De Stefani 1909–1920, 301.15) is mistaken, the correct one should be to γεγαυῖα (De Stefani 1909–1920, 300.7).

least one preceding textual layer in manuscript form in which it could have been implemented while revising the text. Otherwise, it would have been quite difficult to know exactly what information would be present in still unwritten subsequent alphabetic entries. We can deduce, then, that the scribes of the main text did not compose it while writing the *Barberinianus*; rather, they reproduced it from another manuscript, in which such a consistent cross-reference system had already been developed.[33]

As already remarked, Reitzenstein suggested that the manuscript used as a model for producing the *Barberinianus* may also have been a working manuscript that looked similar to the *Barberinianus* in its current appearance.[34] Such a manuscript may have been conceived within the same cultural *milieu*. There is evidence for this in the fact that the producers of the *Barberinianus* often used the same source texts for entries both in the main text and for supplements; that is to say, they had access to the same manuscripts over a certain span of time. Furthermore, they continued to supplement entries in the main text with further cross-references, taking into account the additional materials they had added into the margins.[35]

A number of entries provide further textual evidence that the scribe of the first layer was not creating the text for the first time but rather copied it from a model. For instance, let us consider an entry under the letter *zeta*.[36] It occurs on fol. 75ʳ, ll. 11–14, and reads (De Stefani 1909–1920, 580.1):[37]

ζαχρειῆς·[38] κυρίως ζαχρειές ἐστι τὸ βιαίως ταῖς χερσὶ πραττόμενον· παρὰ γὰρ τὰς χεῖρας πεποίηται ἡ λέξις· ὡς ἀπὸ τῆς τῶν βοῶν πρὸς ἀλλήλους μάχης μὴ συμφώνως ἐργαζομένων· ἐκεῖνοι γὰρ πολλάκις, ὅταν ἕλκωσι, κάμνοντες ἐπερείδουσι τὸ βάρος πρὸς ἀλλήλους.

raging (*zachreiês*, masc. and fem.): properly, the adjective *zachreiés* (neutrum) is what is accomplished by violence with the hands: in fact, the word is formed from the term 'hands' (*cheîras*), just as (*hōs*) from the struggle of oxes against each other, when they do not work harmoniously: for when they draw (the plug), they often push the weight mutually on each other when getting tired.

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33 A similar complex system of cross-references is also attested in Stephanus of Byzantium's geographic lexicon (see Neumann-Hartmann 2014; Billerbeck and Neumann-Hartmann 2017, 162–163) and in the *Etymologicum Genuinum* (see Reitzenstein 1897, 49–53).

34 Reitzenstein 1897, 105 (see above, n. 27).

35 See below, p. 596 with n. 63.

36 This is the sixth letter of the Greek alphabet.

37 See the digital image at <https://digi.vatlib.it/view/MSS_Barb.gr.70/0120>.

38 I print the accent as in the manuscript. The right form according to grammar is ζαχρειῆς. See also below, nn. 41 and 48.

The explanation is difficult to understand as it stands. In the first half, the adjective *zachreiés* ('raging') is explained as being derived from the root of the word χείρ (*cheír*, 'hand'). The source for this information is an earlier etymologicon, the so-called *Etymologicum Genuinum* (produced in the mid-ninth century in Constantinople).[39] The relevant entry reads (overlaps underlined):[40]

> <u>ζαχρειῆς</u>·[41] οἷον 'ἔμπης δ' ἐγρομένοιο σάλου ζαχρειῇσιν αὔραις'.[42] <u>κυρίως ζαχρειές ἐστι τὸ βιαίως ταῖς χερσὶ πραττόμενον· παρὰ γὰρ τὰς χεῖρας πεποίηται ἡ λέξις</u> ζαχερής καὶ ὑπερθέσει[43] ζαχρεής καὶ ζαχρειής κτλ.

> <u>raging</u> [*zachreiés*, masc. and fem.]: such as in the verse 'Nevertheless, when a swell was awakened by the raging winds'.[44] <u>Properly, the adjective *zachreiés*</u> [neutrum] <u>is what is accomplished by violence with the hands: in fact, the word *zacherés* is formed from the term 'hands'</u> [*cheîras*]: with a transposition of letters, it becomes *zachreés* and then *zachreiés* [etc.].

The producers of the *Barberinianus* selected only the information from the longer entry of the *Etymologicum Genuinum* that they considered useful for their new lexicon. They omitted some learned materials such as a literary quotation from the *Argonautica* by the Hellenistic poet Apollonius Rhodius (third century BCE).

What follows after the particle ὡς (*hōs*) in the *Barberinianus*, however, is puzzling and does not occur in the aforementioned entry of the *Etymologicum Genuinum*. Moreover, the content seemingly bears no relation to the lemma. The last editor of the *Etymologicum Gudianum*, Edoardo Luigi De Stefani, was right in emphasising that this explanation comes from another entry of the *Etymologicum Genuinum* concerning the verb ζυγομαχεῖν (*zygomacheîn*, lit. 'to struggle with one's yoke-fellow'). In it, we find part of the explanation that is used in the *Barberinianus* (overlaps underlined):[45]

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39 See Reitzenstein 1897, 1–69; Alpers 2015.
40 See also De Stefani 1909–1920, 580 in his apparatus.
41 I print the text as in Vat. gr. 1818 (diktyon: 68447), fol. 162ʳ; the right accent ζαχρειής occurs in Florence, Biblioteca Medicea Laurenziana, S. Marco 304 (diktyon: 16882), fol. 121ʳ both in the main text (as a correction for ζαχρειῖς) and in the margin. On this point, see nn. 38 and 48.
42 These words, omitted in Laur. S. Marco 304, are a literary quotation from Apollonius Rhodius' *Argonautica* (Book 1, verse 1159) to illustrate the use of the lemmatised adjective. The form ζαχρειῇσιν is however metrically mistaken instead of the right ζαχρήεσιν.
43 Laur. S. Marco 304 reads καθ' ὑπερβιβασμόν, having the same meaning of ὑπερθέσει ('with a transposition of letters').
44 See above n. 42 for the reference.
45 I print the text of the *Etymologicum Genuinum* as in Vat. gr. 1818, fol. 163ᵛ and Laur. S. Marco 304, fol. 123ʳ.

ζυγομαχεῖ: στασιάζει, ὡς οἱ βόες ἐζευγμένοι. μετῆκται δὲ ἡ λέξις <u>ἀπὸ τῆς τῶν βοῶν πρὸς</u> <u>ἀλλήλους μάχης</u> καὶ <u>μὴ συμφώνως ἐργαζομένων· ἐκεῖνοι γὰρ πολλάκις,</u>[46] <u>ὅταν ἕλκωσι,</u> <u>κάμνοντες ἐπερείδουσι τὸ βάρος πρὸς ἀλλήλους</u> κτλ.

'to struggle with one's yoke-fellow' [*zygomacheîn*]: to quarrel, as the oxen when they have been yoked. The word is borrowed <u>from the struggle of oxes against each other</u> and <u>when</u> <u>they do not work harmoniously: for when they draw</u> (the plug)<u>, they often push the weight</u> <u>mutually on each other when getting tired</u> [etc.]

Here, the explanation is inserted into a much more consistent context[47] and the previously puzzling text of the *Barberinianus* becomes intelligible.[48] But how can we explain this mistake?

It is difficult to assume that the scribe of the first textual layer of the *Barberinianus* made this mistake while copying the text directly from the manuscript of the *Etymologicum Genuinum* he was consulting, since the two entries in the latter are written quite distant from each other.[49] Rather, the mistake becomes easier to explain if we assume that the two entries appeared in this very sequence in another manuscript that later served as a model for the *Barberinianus*. Alphabetisation may not have been completely achieved in such a working manuscript and was possibly limited to the first letter with several entries for this letter extracted from one source followed by corresponding excerpts from other sources. Thus, the order of the working manuscript may have reflected the sequence in which different sources were consulted, according to the methodology mentioned above (p. 585–586).

We can try to reconstruct the genesis of the error as follows. When preparing the text of this working manuscript, a scribe first copied the entry ζαχρειῆς (*zachreiês*).[50] After having written the word λέξις, *léxis* ('word'), he overlooked

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46 Instead of πολλάκις, Laur. S. Marco 304 has the false reading πολλούς ('many', acc. m. pl.)

47 In turn, this entry of the *Etymologicum Genuinum* has a complex origin. A full account of it would go beyond the scope of the present paper. See Theodoridis 1998, 245, apparatus to the entry ζ 57 in Photius' lexicon for details.

48 Concerning the *Etymologicum Gudianum*, De Stefani was well aware of the textual problem while critically editing the text. He therefore suggested the radical solution of splitting the entry in two, adding the lemma ζυγομαχεῖν (*zygomacheîn*) on the basis of the *Etymologicum Genuinum*. In so doing, however, he disregarded the strong alphabetical order, since the new item begins with ζυγ- (*zyg-*) in the series of entries beginning ζαχ- (*zach-*). For reason of consistency, he was also forced to delete the particle ὡς (*hōs*, 'just as'): see below, p. 594.

49 Respectively Vat. gr. 1818, fols 162ʳ and 163ᵛ, Laur. S. Marco 304, fols 121ʳ and 123ʳ: see above n. 41 and n. 45.

50 He also reproduced the wrong accent of the lemma ζαχρειῆς as in the excerpts from the *Etymologicum Genuinum* he had at his disposal.

the beginning of the new entry ζυγομαχεῖ (*zygomacheîn*) and omitted its lemma together with the beginning of the explanation. It may not be a coincidence that the missing text ends with the same word λέξις (*léxis*) also occurring at the end of the previous explanation; indeed, this is a common copying mistake called *saut du même au même* (omission by *homoioteleuton*). This working manuscript thus contained quite heterogeneous explanations merged in one gloss that turned out to be difficult to understand. Such a working manuscript was later used by the scribe of this part of the *Barberinianus* who did not recognise the exact mistake but tried to straighten out the text by introducing the particle ὡς (*hōs*, 'just as').

These considerations may give a glimpse at the complexity of this manuscript not only in terms of acknowledged later additions, but also in terms of the problems of reconstructing previous material and textual stages.

Another entry from the letter *zeta* on fol. 75ᵛ offers us an example of the scholarly work relating to the production of the *Barberinianus*.[51] It concerns the substantive ζῆλος (*zêlos*), which covers a broad spectrum of meanings, including 'zeal', 'desire', 'emulation', 'jealousy', and 'pride'.[52] The text of the first layer of the *Barberinianus* without supplementary information reads as follows:[53]

> ζῆλος καὶ ζηλοτυπία διαφέρει· ζηλοτυπία μὲν γάρ ἐστι τὸ ἐν μίσει ὑπάρχον, ζῆλος δὲ ἡ μίμησις τοῦ καλοῦ· 'ζηλοῖ δὲ γείτονα γείτων'.

> zeal (*zêlos*) and jealousy (*zēlotypía*) have different meanings: for jealousy is a feeling consisting of hate, zeal is the imitation of the good. 'The neighbour competes with the neighbour'.[54]

This entry concerns the disambiguation of two terms that may be considered synonyms. In Greek Antiquity and the Middle Ages, many lexica with synonym-distinctions circulated, most of them re-elaborations of the first lexicon of this type written by the grammarian Herennius Philo in the first/second century CE.[55]

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51 See the digital image at <https://digi.vatlib.it/view/MSS_Barb.gr.70/0119>.

52 See LSJ s.v.

53 The Greek text is also available in the printed (but non-critical) edition by Sturz 1818 based on the later manuscript Wolfenbüttel, Herzog August Bibliothek, *29–30 Gud. gr.* (a. 1293; diktyon: 72073–72074), now preserved in two volumes, transmitting a strongly re-worked version of the text: see Sturz 1818, col. 231.7.

54 Quotation from Hesiod's *Works and days*, verse 23, to illustrate the use of the verb ζηλόω ('to compete with'). In this paper, I will not analyse the relation between literary and lexicographic text in depth.

55 On these lexica, see e.g. Matthaios 2015, 286–287.

In fact, the producers of the *Barberinianus* gathered this entry from one of those synonymic lexica:[56]

ζῆλος καὶ ζηλοτυπία διαφέρει. ζηλοτυπία μὲν γάρ ἐστι τὸ ἐν μίσει ὑπάρχον· ζῆλος δὲ ἡ μίμησις τοῦ καλοῦ· ʻζηλοῖ δέ τε γείτονα γείτων'. ζηλοτυπεῖ δὲ ἡ Ἥρα τὸν Ἡρακλέα καὶ τὴν Σελήνην καὶ τὴν Σεμέλην.

zeal (*zêlos*) and jealousy (*zēlotypía*) have different meanings: for jealousy is a feeling consisting of hate, zeal is the imitation of the good. 'The neighbour competes with the neighbour'. Hera is jealous of Hercules, Selene and Semele.

The entry in the *Barberinianus* reproduces the source text almost verbatim, except for the last part, since the mythological example for the use of the verb 'to be jealous of' (ζηλοτυπέω, *zēlotypéō*) is missing. On the other hand, the anonymous quotation from the poem *Works and Days* of Hesiod (eighth/seventh century BCE) concerning the related verb 'to compete with' (ζηλόω, *zēlóō*) is preserved.[57]

While revising the main text, a different scribe was able to access another manuscript of a different synonymic lexicon, namely the one later attributed to the grammarian Ammonius.[58] In it, we read a similar, but more extensive entry, albeit with some significant differences:[59]

ζῆλος καὶ ζηλοτυπία διαφέρει. ζηλοτυπία μὲν γάρ ἐστιν αὐτὸ τὸ πάθος ἤγουν τὸ ἐν μίσει ὑπάρχειν· ζῆλος δὲ μίμησις καλοῦ, οἷον ζηλοῖ τὸν καθηγητὴν ὁ παῖς. ʻζηλοῖ δέ τε γείτονα γείτων', Ἡσίοδος[60] ἐπὶ καλοῦ. ζηλοτυπεῖ δὲ ἡ δεῖνα τόνδε.

zeal (*zêlos*) and jealousy (*zēlotypía*) have different meanings: for jealousy is the passion itself, that is to say the feeling consisting of hate; zeal is imitation of good, such as in the phrase 'the pupil emulates the master'. Hesiod says 'and the neighbour competes with the neighbour' for what is good. 'Some woman is jealous of this given man'.[61]

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56 Text in Palmieri 1988, 174, entry no. 83.

57 See West 1978, 96 (apparatus on v. 23).

58 See Nickau 1966, L–LIII.

59 Text in Nickau 1966, 55 (entry no. 209). This may also be considered as the source of the entry in the synonymic lexicon in the *Barberinianus* (see above, n. 18): *Barb. gr.* 70, fol. 150ᵛ l. 9 (Palmieri 1987, 56, entry no. 58): ζῆλος ζηλοτυπίας διαφέρει. ζῆλος μὲν γάρ ἐστι μίμησις καλοῦ, ζηλοτυπία δὲ τὸ ἐν μίσει ὑπάρχειν ἑτέρου.

60 See above, n. 54.

61 The last sentence serves to explain the syntax of the verb, i.e. that it is constructed with an accusative. This is a quite common exegetic pattern in Greek lexicography and grammar.

The scribe who supplemented the main text in this part collated the text of the *Barberinianus* with the help of a second manuscript transmitting Ammonius' lexicon. He was thus able to supplement the missing information in the interlinear space. He also marked with dots the articles in the phrase 'zeal is <u>the</u> imitation <u>of</u> the good' (ζῆλος δὲ ἡ μίμησις <u>τοῦ</u> καλοῦ, *zêlos dè hē mímēsis toû kaloû*). Such critical signs usually serve to indicate that letters or words should be deleted. In this particular case, however, I would tend to interpret them as critical signs indicating that the marked articles were absent in the text the scribe was collating. The following text is the result (supplements are underlined, dotted words in double square brackets):

> ζῆλος καὶ ζηλοτυπία διαφέρει· ζηλοτυπία μὲν γάρ ἐστι τὸ ἐν μίσει ὑπάρχον, ζῆλος δὲ [[ἡ]] μίμησις [[τοῦ]] καλοῦ <u>οἷον ζηλοῖ τὸν καθηγητὴν ὁ παῖς</u>· 'ζηλοῖ δέ <u>τε</u> γείτονα γείτων' <u>ἐπὶ καλοῦ· ζηλοτυπεῖ δὲ ἡ δεῖνα τὸν δεῖνα.</u>

> zeal (*zêlos*) and jealousy (*zēlotypía*) have different meanings: for jealousy consists of hate, zeal is [[the]] imitation of [[the]] good, <u>such as 'the pupil emulates the master'</u>. '<u>And</u> the neighbour competes with the neighbour' <u>for what is good. 'Some woman is jealous of some man'</u>.[62]

The scribe therefore intended to update the first layer by adding further information that would later assist in producing a new manuscript featuring a 'final version' of the lexicon.

This intention is also visible in many other entries in which the same scribe who wrote the main text inserted a cross-reference after the colon which usually marks the end of the item. Let us take the short entry on ζωγράφος (*zōgráphos*), 'painter':[63] after the explanation of the meaning 'he who paints by imitating living beings (*zôa*)', the scribe added 'and see below at the entry "historiographer" (ἱστοριογράφος, *historiográphos*)'. In fact, we find this entry later in the manuscript on fol. 93ᵛ, ll. 22–25. In it, there is a similar but not identical definition of the term 'painter': 'he who paints images of living beings'.[64] When copying the entries beginning with the letter *iota*, the scribe noticed the similarity of

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62 The source text shows a little difference: 'somebody else' (τὸν δεῖνα) *vs.* 'this man' (τόνδε). This change may be regarded as intentional, in order to make the syntactic construction clearer, or as a mistake (<u>τὸν δεῖνα</u> => <u>τόνδε</u>).
63 Fol. 76ʳ, main text, l. 4 from below: ζωγράφος· (another hand adds here the particle διὰ) ζῷα μιμούμενος γράφει (the same scribe of the main text corrected the verb into the infinitive form γράφειν and added after the colon the words καὶ εἰς τὸ ἱστοριογράφος). Text also in Sturz 1818, 233.28–29.
64 Text also in Sturz 1818, 283.55: (...) ζωγράφος δὲ ὁ ζώων εἰκόνας γράφων.

the definitions and referred back to the already copied entry in the letter *zeta* where he then added a cross-reference to the entry 'historiographer' in order to guide the readers through the meanders of the lexicon.

The practices described provide evidence for the continuous scholarly activity performed on this manuscript by a group of scholars who worked together and with access to a number of lexicographic and literary manuscripts. These manuscripts served as a source-texts for producing a new scholarly work that would have been useful for their own cultural interests.[65]

The *Barberinianus* is only a snapshot of a more complex intellectual operation. More generally, this manuscript allows us to enter a medieval scholarly workshop and to understand how intellectual procedures for creating originals were performed within the boundaries of a concrete and multi-layered written artefact.

Acknowledgements

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65 See also Sciarra 2005, 363.

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Christian Brockmann

A Multilayered Greek Manuscript of Learning: Some Glimpses into the Scribal Practices Evident in the Aristotelean Codex *Vaticanus graecus* 244

Abstract: In the Greek study manuscripts of the Aristotelean tradition, the goal of combining and relating extensive core content and extensive para-content in such a way that constant interaction becomes possible, has been achieved in an exemplary manner. After introductory remarks on the complex and often multi-layered formatting of this type of manuscripts, a closer look is taken at the *Organon* codex Vat. gr. 244. The way in which Aristotle's *Analytica Posteriora* are explained in this manuscript in large marginal commentaries is illustrated by the analysis of a sample passage.

1 Introduction

During Byzantine times and the Renaissance, the active study of and interaction with Aristotelean texts and their extensive commentaries gave rise to an unusually rich manuscript production. Since these texts, particularly the *Organon*, but other works from philosophy of nature, ethics and metaphysics as well, were studied and taught in the context of the commentaries, from the Late Antique ones to those contemporary, their users required new and specific kinds of manuscripts. Teaching and learning was facilitated by 'textbook' manuscripts aiming to combine the challenging core texts with those commentaries and exegetic materials most central to their understanding. This required presenting the source texts section by section, if not sentence by sentence, along with the paratexts, thereby striving for the best possible arrangement to represent their interrelatedness on the available space of each individual page. Considering the often significant length of the Aristotelean treatises themselves, and by how much the extent of the relevant commentaries exceeded this, the production of

such combined study manuscripts must have required substantial planning and considerable aptitude in book production.[1]

The most common and effective method of formatting the interrelated content was to arrange the accompanying texts around the centrally located main text. The possibilities offered by this layout were exploited to the utmost in the production of Aristotelean study manuscripts. To accommodate the ever increasing space required by the paratexts, the room reserved for the core text was reduced more and more, leaving the larger share of the page to the former.[2] Yet even this was frequently insufficient for the extensive commentary, thus one or even several subsequent pages were set aside just for the commentary. In effect, this was almost an inversion of the relation between core content and paracontent, even though their hierarchy was still indicated by the use of larger script for the core text.

A relevant example of such a written artefact is codex Venice, Biblioteca Nazionale Marciana, Marc. gr. Z. 227 (Diktyon: 69698), from the latter half of the thirteenth century. It combines Aristotle's *Physics* with Simplicius' commentary as well as with parts of that of John Philoponus (both end of fifth or sixth century). The manuscript is for the most part an autograph of George of Cyprus (*c.* 1241–1289), who later became patriarch Gregorius II of Constantinople.[3] As a further example, during the second third of the fourteenth century, the learned scribe Malachias created a corpus of four manuscripts that covered all Aristotelean treatises and the most central commentaries.[4] For some of the

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1 On general considerations concerning the page layout of Greek manuscripts, cf. Cavallo 2000; Maniaci 2000; Vianès 2000; Maniaci 2006; Bianconi 2011. Daniele Bianconi discovered instructions on partitioning the page and distributing the text to create an *Organon* manuscript on some folios of the manuscript Vatican City, Biblioteca Apostolica Vaticana, Vat. gr. 604.

2 A similar approach was used in creating bible manuscripts to accommodate extensive catenae, as found e.g. in two splendid tenth-century manuscripts: Vatican City, Biblioteca Apostolica Vaticana, Vat. gr. 749 (<digi.vatlib.it/view/MSS_Vat.gr.749.pt.1>) and the *Psautier de Paris*: Paris, Bibliothèque nationale de France, Grec 139 (<gallica.bnf.fr/ark:/12148/btv1b10515446x.image>). On the origin of the catena commentary, see the new thesis developed in Goeke-Mayr and Makris 2020, who posit that this particular kind of manuscript first arose around 900 in Constantinople rather than during the sixth century. For the opposing view, see Vianès 2000.

3 Harlfinger 1987, 277-278, 286. Digital images can be consulted via <www.internetculturale.it/it/1317/venezia-biblioteca-nazionale-marciana-manoscritti>. See also the manuscript description by Ciro Giacomelli for the CAGB project of the Berlin-Brandenburg Academy of Sciences and Humanities: <cagb-db.bbaw.de/handschriften/handschrift.xql?id=69698> (accessed on 10 March 2021).

4 The scribe Malachias, referred to as 'Anonymus Aristotelicus' in earlier scholarship, was identified by Brigitte Mondrain (Mondrain 2004; Koch 2017, 174–183; Martínez Manzano 2019). The four codices comprising his corpus of Aristotelean manuscripts are: Jerusalem, Βιβλιοθήκη

treatises, Malachias faced the additional challenge of having to arrange two columns (even three or more in one case) of commentary and annotational layers around the core texts, which lead him to exhaust the spatial limits of the manuscript page, as evident in the images from Paris, BnF, Coislin 166 (Figs 1 and 2). These examples are from the *Meteorology*. In addition to the commentary, the lower part of fol. 396ᵛ (Fig. 2) is enriched by a graphical representation of the wind rose. Here, the commentary section encroaches on what was actually a generously calculated area reserved for the core content and pushes it back, as if there were a virtual strife between the two text types over dominating the page. By contrast, the upper part of the page retains unclaimed areas for commentary.[5] The scribe evidently expected to have further commentary to add from additional manuscripts.[6]

Besides this prevalent method of aggregating and structuring a large set of content and para-content in a meaningful way, we occasionally see another, opposed method that presents the main content alternating with the pertinent additional material by sections.[7] The interrelatedness of the layers is still

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τοῦ Ὀρθοδόξου Καθολικοῦ Πατριαρχείου, 150 (Diktyon: 35387) (logic); Paris, Bibliothèque nationale de France, Coislin 161 (Diktyon: 49300) (ethics, *Politics*, *Metaphysics*); Coislin 166 (Diktyon: 49305) (natural philosophy) and Grec 1921 (Diktyon: 51548) (biology, *De anima*, *Parva Naturalia*) (cf. Harlfinger 1971, 55–57). The manuscripts held in the BnF can be consulted digitally via the Gallica website, a digitized microfilm of the codex Panaghiou Taphou 150 is provided on the website of the Library of Congress. On the Jerusalem manuscript, see the manuscript's description by Paul Moraux, in Moraux et al. 1976, 385–387, also available via the CAGB site <cagb-db.bbaw.de/handschriften/handschrift.xql?id=35387>, which also has a description of Par. gr. 1921 <cagb-db.bbaw.de/handschriften/handschrift.xql?id=51548>.

5 On several pages and even entire quires of the manuscript this area remains empty, cf. Devreesse 1945, 148, Mondrain, 2000, 21 and the digital images via Gallica.

6 It is evident that the area left blank does not represent a missing part in the commentary by Alexander of Aphrodisias, which was the main one used by Malachias in this section, for the commentary in the middle marginal column continues the four lines from the top margin, thus the uninterrupted commentary of Alexander's on the *Meteorology* is split up between these areas, and in fact reference marks and lemmata have been inserted to point to certain parts of the core text. The reserved space underneath the lemma alpha that has been prominently put in the four top lines of the upper margin suggests that Malachias was planning to add material from another commentary not available to him at the time of composing the manuscript. On the excerpts from Alexander's commentary on the *Meteorology* see Hayduck's edition 1899, 108. The top margin contains the text up to 108,12, followed by a line from the *Meteorology* as lemma alpha (2, 6, 363b11–12). The middle part of the commentary continues from the very same location, i.e. ed. Hayduck 1899, 108, line 12 after lemma beta. The inserted lemma beta matches Aristotle, *Meteorologika* 2,6, 363b26.

7 For the use of this approach in catena manuscripts, cf. e.g. Vianès 2000, 80; Lorrain 2020.

indicated by changes in script size and use of reference marks as with the other method. The two codices of the *Organon* Paris, Bnf, Grec 1972 (Diktyon: 51599), and Paris, BnF, Coislin 157 (Diktyon: 49296) from the first half of the fourteenth century are particularly noteworthy examples. Both are written in Metochites style, with Coislin 157 in the hand of well-known Metochites-scribe Michael Klostomalles himself (Fig. 3).[8] Both core content and para-content of either manuscript are derived from Vatican City, BAV, Vat. gr. 244 (Diktyon: 66875), on which we will focus in this article.[9] The latter method of arranging the texts in these two more recent codices re-structures the layout of a manuscript that used the former method: the Vatican manuscript presents the core content in windows of varying size positioned centrally on the double page spread, whereas the commentary or commentaries utilise the wide space left around these reserved areas. Thus, the transition from the original manuscript of this branch of transmission, i.e. the Vat. gr. 244, to the later manuscripts derived from it saw a fundamental reformatting of the interrelated layers of text.

2 Commenting Aristotle in the Vat. gr. 244

A closer look at the Vatican manuscript is in order. This is the main manuscript of the commentaries by Leo Magentinus on Aristotle's logical treatises. As in many other *Organon* manuscripts, Porphyry's *Isagoge* has been prepended to the Aristotelean works. This additional text is also framed by explanatory remarks of Magentinus in the margins, as well as having some added pages just for further commentary. At the start of this commentary, on fol. 3ʳ, the title line not only names Magentinus, but identifies him as the metropolitan of Mytilene, as is also the case in some of the other manuscripts transmitting his commentaries.[10] Beyond this pointer to his ecclesiastical position on Lesbos, we

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8 On codex Coislin 157, see Prato 1994, 129, 131 and Table 23. The Metochites scribe was identified as Michael Klostomalles by Lamberz 2000, 158–159, see also Lamberz 2006, 44–47. Additionally, see the description of Par. gr. 1972 by Diether Roderich Reinsch on the CAGB site <cagb-db.bbaw.de/handschriften/handschrift.xql?id=51599>.

9 Cf. Kotzabassi 1999, 53–57. The exact stemmatic relations are as follows: Par. gr. 1972 goes back to Vat. gr. 244 via a lost intermediary manuscript, and Coisl. 157 is an apographon of Par. gr. 1972.

10 Cf. the digital images available from Biblioteca Apostolica Vaticana: <https://digi.vatlib.it/view/MSS_Vat.gr.244>. Further cf. Mercati and Franchi de' Cavalieri 1923, 313; Ebbesen 1981, 302–303; Kotzabassi 1999, 47–48; Brockmann 2019, 219–220; Valente forthcoming b and c.

have practically no information on the life of this Aristotelean commentator. The manuscript can be dated to the twelfth century[11] and is thus the oldest manuscript containing these commentaries of Magentinus. It appears to not be far removed from the time of Magentinus himself and might have been created by him personally or by a member of his circle. This suggests that the lifetime of Magentinus would have been in the twelfth century as well.[12]

While Magentinus' commentaries on *Categories*, *Sophistikoi Elenchoi*, *Topics* and *Prior Analytics* have seen scholarly research and in some cases even (partial) editions over the last decades, the one on *Posterior Analytics* was mostly neglected and is now the focus of a project in the Hamburg Centre for the Study of Manuscript Cultures.[13] Though the author of this particular commentary in Vat. gr. 244 is not named, from Leo Magentinus' name being associated with the preceding commentaries in the manuscript it can be safely deduced that the extensive paratexts surrounding the core text of *Posterior Analytics* are also his.[14] It is a striking feature of the *Vaticanus* that the exegetical paratexts of Magentinus are divided into sections treatise by treatise and book by book, with the sections sequentially numbered using Greek letters. These Greek numerals are simultaneously used as reference marks, and the same numbers are added in the area of the core text to indicate the passages to which the commentary refers. As a later step, the scribe added further marginal notes to the remaining outermost parts of the margins, mostly excerpting commentaries on Aristotle from Late Antiquity and linking them to the existing content using a different kind of reference marks.[15]

In the following, an attempt will be made to further determine the nature of the commentary of Leo Magentinus on the *Analytica Posteriora* by analysing a sample passage. Previous research has shown that on the one hand Leo follows the exegetic tradition of John Philoponus and frequently uses the latter's work as a source, on the other hand, though, he frequently also adds material of his own.[16] However, the exact relations between dependencies or reuse versus amendment, extension and change of focus in the commentary have yet to be elucidated. The final step of later adding earlier commentary, including literal excerpts from Philoponus on some pages, attests to Magentinus' commentary

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11 Hunger 1990/1991, 33–34 and Hunger 1991, 74–75.

12 See the forthcoming edition by Agiotis.

13 Cf. Ebbesen 1981; Bülow-Jacobsen and Ebbesen 1982; Kotzabassi 1999; González Calderón 2015, 361–376; Brockmann 2019; Valente forthcoming a, b and c.

14 Cf. Ebbesen 2015, 13–14; Brockmann 2019, 220; Valente forthcoming a, b and c.

15 Cf. Valente forthcoming b.

16 Cf. Brockmann 2019, 223–227, Valente forthcoming b.

being recognised as a distinct and independent work. The scribe would hardly have gone to the trouble of adding Philoponus in what looks like an attempt to further increase the usefulness of the main paratext, if he had considered Leo's commentary, to which he had assigned the main parts of the marginal areas, not as a work in its own right, but as substantially identical to that of Philoponus.

Now we will turn to the sample passage, it is the commentary numbered μζ (= 47) on fol. 311ᵛ (cf. Fig. 4), in reference to *An. Post.* I 4, 73a37–38. This is in the context of Aristotle drawing the distinction between four cases of belonging *in itself*, i.e. between four different kinds of how A can belong to B *in itself*, with the selected passage referring to the second kind. To add further context, let us contrast how Aristotle distinguishes between the first and second kind of belonging *in itself*.[17] The first kind of these propositions are those where that, what is being predicated (A) is part of the definition of what is underlying (B), e.g. 'animal belongs to man in itself' or 'delineated by three straight lines belongs to the triangle in itself', for the terms 'animal' and 'delineated by three straight lines' are part of the definition of 'man' and 'triangle', respectively. Looking at this in a more contemporary way rather than the customary Aristotelean formulas: in the statement 'all men are animals', the predicate (A) 'animal' applies to the subject (B) 'man' because the predicate occurs in the definition of the subject. The second kind of these propositions are those where what is underlying (B) is present in the account of what is being predicated (A), i.e. where the subject is required to define the predicate. Aristotle uses the examples of 'straight' and 'curved' (A) applying to 'lines' (B), and 'even' and 'odd' (A) applying to 'numbers' (B). In this sense, the attributes 'odd' and 'even' belong to 'numbers' *in their own right*, since the term 'number' is required to explain what 'odd' and 'even' mean, e.g. 'odd' is a property of numbers not divisible by two.

The sample of the commentary by Magentinus from Vat. gr. 244 is an explanation of the phrase used by Aristotle to introduce the second kind of propositions *in themselves*. That phrase as transmitted presents a difficulty that Philoponus and Magentinus observed in a similar way and tried to improve upon, and that continues to be discussed in modern commentaries.

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17 Detailed discussions of this part of the text and its numerous issues can be found in Bonitz 1866, 366–368; Aristotle's *Prior and Posterior Analytics*, ed. Ross 1965, 518–521; Mignucci 1975, 59–68; Aristotle, *Posterior Analytics*, tr. Barnes 1993, 112–114; Detel 1993, II, 100, 107–109, 122–126; Bronstein 2016, 43–50.

In the *Vaticanus* the Aristotelean sentence that is commented on here reads:

καὶ ὅσοις τῶν ἐνυπαρχόντων αὐτοῖς, αὐτὰ ἐν τῷ λόγῳ ὑπάρχουσι τῷ τί ἐστι δηλοῦντι […]

and (I call in itself) all those of the attributes that inhere in them, for which they themselves (in turn) belong to the account that explains what it is.[18]

Let me now present a first edition of the corresponding commentary (cf. Fig. 4):[19]

μζ´ : – "καὶ ὅσοις τῶν ἐνυπαρχόντων αὐτοῖς·" τοῦτο τὸ δεύτερον σημαινόμενον τοῦ καθ' αὐτό· τὸ δὲ *αὐτοῖς* ἀντὶ τοῦ τισὶν ὑποκειμένοις ληπτέον· ὅσοις γοῦν τῶν συμβεβηκότων τῶν ἐνυπαρχόντων τισὶν ὑποκειμένοις αὐτὰ τὰ ὑποκείμενα ἐνυπάρχουσι καὶ λαμβάνονται ἐν τῷ λόγῳ καὶ ὁρισμῷ τῶν κατηγορουμένων τῷ δηλοῦντι τί ἐστι τὸ κατηγορούμενον, καὶ αὐτὰ καθ' αὑτὰ λέγονται ὑπάρχειν τῷ ὑποκειμένῳ· οἷον ἡ σιμότης καθ' αὑτὸ λέγεται ὑπάρχειν τῇ ῥινί. λαμβάνεται γὰρ ἡ ῥὶν τὸ ὑποκείμενον εἰς τὸν ὁρισμὸν τοῦ κατηγορουμένου ἤγουν τῆς σιμότητος· σιμότης γάρ ἐστι κοίλανσις ἐν ῥινί. καὶ ἡ εὐθεῖα καθ' αὑτὸ ὑπάρχει τῇ γραμμῇ· εὐθεῖα γάρ ἐστι πάθος γραμμῆς, ἥτις ἐξ ἴσου τοῖς ἐφ' ἑαυτῇ[20] σημείοις κεῖται. καὶ τὸ περιφερὲς καθ' αὑτὸ κατηγορεῖται τῆς γραμμῆς· περιφέρεια γάρ ἐστι πάθος γραμμῆς, ἀφ' οὗ σημείου ἀρχομένης εἰς τὸ αὐτὸ πάλιν καταληγούσης· τὸ δὲ περιφερὲς δηλοῖ τὸν κύκλον : –

Nr. 47: *And all those of the attributes that inhere in them, for which*: This is the second meaning of 'in itself'. The term 'them' is to be understood as 'the respective underlyings' ('the subjects'). In any case, all those among the accidental attributes that belong to certain underlyings, to which these very underlyings (in turn) themselves adhere and for which they are employed in the account and definition of the predicates, which explains the 'what-it-is' of the predicate, they too are said to belong in themselves to the underlyings.

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18 In its reading ὑπάρχουσι instead of ἐνυπάρχουσι, the Vat. gr. 244 follows codex Paris, Coisl. 330, which is its model for the core text. A further point: Both in the core text and in the lemma of the commentary, the Vatican manuscript has the reading ἐνυπαρχόντων, which is that of the main tradition. Hermann Bonitz pointed out that this is a small mistake: according to Aristotelean terminology that clearly distinguishes between ὑπάρχειν and ἐνυπάρχειν in such contexts, ὑπαρχόντων should be read here rather than ἐνυπαρχόντων (Bonitz 1866, 367–368). William David Ross concurred and chose ὑπαρχόντων in his edition, for his reasons see Aristotle's *Prior and Posterior Analytics*, ed. Ross 1965, 520–521.

19 The text has been cautiously updated to modern conventions as regards accents, punctuation, and the use of iota subscript. In its constitution, the further manuscripts transmitting it have been taken into account, i.e. Vatican City, BAV, Reg. gr. 107 (Diktyon: 66277) Paris, BnF, gr. 1972, Coisl. 157, and Coisl. 167 (Diktyon: 49306), as have the excerpts added by a twelfth-century scribe to Vatican City, BAV, Urb. gr. 35 (Diktyon: 66502). However, all of these offer only very minor variants for the section under discussion.

20 In the version of part of this commentary added to Urb. gr. 35 by a later hand, the reading is ἐφ' ἑαυτῆς, cf. the digital images of the Vatican Library, fol. 198ᵛ.

> As e.g. snub-nosedness is said to belong to the nose in its itself. For the nose is used as the
> underlying in the definition of the predicate, i.e. of snub-nosedness. For snub-nosedness
> is a hollowing of the nose. And straightness belongs to the line in itself. For straightness is
> a quality of a line that falls levelly onto its points. Being curved is also used of the line in
> itself. For curvedness is a quality of a line that ends on the same point again from which it
> began. Being curved indicates the circle.

In a second pass over the commentary passage μζ′, the scribe added three supplements in a colloquial, less restrained script, one to the top right near the spine, two to the outermost left margin (cf. Fig. 4). The first supplement adds to the initial statement of this being the second meaning of 'in itself' by stating that Aristotle lists a total of four kinds (τέσσαρας γὰρ τρόπους παραδίδωσι). In the supplements to the left, the scribe first adds a second description of the quality of a straight line to the first, traditional one, i.e. that of one whose inner points are in a line with the outer points (ἢ ἧς τὰ μέσα τοῖς ἄκροις ἐπιπροσθεῖ). In this case, he starts his addition by inserting the conjunction ἢ between the core text and the right side of the commentary and then continuing it in the outer part of the left margin (cf. Fig. 5, detail of Vat. gr. 244, fol. 311ᵛ).
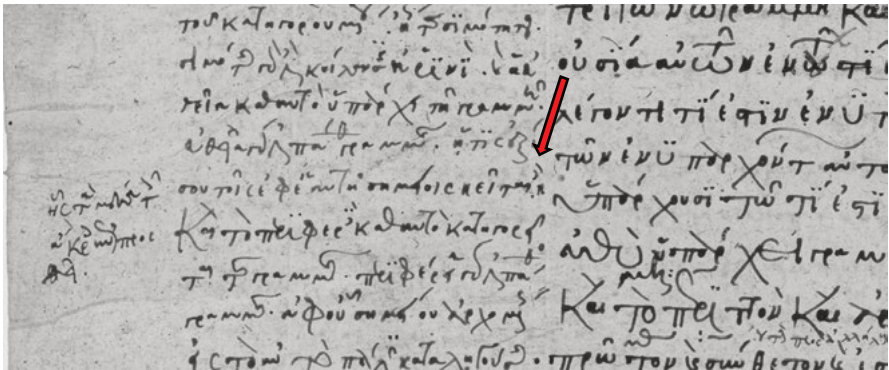
Fig. 5: Vatican, Biblioteca Apostolica Vaticana, Vat. gr. 244, fol. 311ᵛ (detail); 12th c. © Biblioteca Apostolica Vaticana.

The third supplement is added straight to the end of the μζ′ passage, commencing in the small margin between commentary and core text as well, with its first word being directly adjacent to the final term τὸν κύκλον, and continuing once more in the left margin. The short introductory particles and conjunctions are thus also used as a kind of reference marks. The third supplement dwells on the connection of the curved line to the circle: 'However, the section of the circle

should be called bent rather than curved, as can be understood from that which Aristotle says here. For the circle is an encompassing curve ("circumference"), as the geometer also decreed'.[21]

In some of the other manuscripts transmitting this commentary of Magentinus, the three supplements have been cleanly integrated into the exegetic passage. This matches the stemmatic observations of Sten Ebbesen and Sofia Kotzabassi on his commentaries on *Sophistikoi Elenchoi* and *Topics*.[22] For the three four-teenth-century manuscripts that Ebbesen and Kotzabassi have shown to be linked to the Vat. gr. 244 via a lost intermediary manuscript, i.e. the Reg. gr. 107, the Paris gr. 1972 and the Coisl. 157, all have the extended version of this exeget-ic passage.[23] It would thus already have been inserted by the scribe of the inter-mediary manuscript. While the general formatting of content and para-content of the Vat. gr. 244 is to be found also in the *Reginensis*, the two Paris manu-scripts alter it completely. For these latter manuscripts alternate between the layers of text and commentary in the central part of the page. Accordingly, they have the discussed passage from the commentary as number two (β′) in smaller script following the corresponding Aristotelean core text passage (cf. Fig. 3).

An additional manuscript from Paris, the Coislin 167, also from the four-teenth century, is independent of the codices discussed above, including the intermediary. Its scribe probably had access to Vat. gr. 244 itself, but was not interested in creating a new Aristotelean study manuscript that intertwines core text and para-content. On the contrary, he left out the core text and exclusively copied the commentary of Leo Magentinus. Thus, he transformed the para-content into a new core text, creating a manuscript that has the commentary as its main (and only) content, however ignoring the supplements previously discussed. As evidence that they were nevertheless present in his exemplar, and that this exemplar probably was the Vat. gr. 244, we offer the following textual peculiarity. Towards the end of the exegetic passage we discussed, this manu-script has an additional ἤ ('or') on fol. 191ʳ, a conjunction interfering with the

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21 τὸ μέντοι τμῆμα τοῦ κύκλου καμπύλον μᾶλλον κληθείη ἢ περιφερὲς ὡς ἔστιν ἐντεῦθεν ἐξ ὧν ὁ Ἀριστοτέλης λέγει γνῶναι· περιφέρεια γὰρ ὁ κύκλος ἐστὶν ὡς καὶ ὁ γεωμέτρης ὡρίσατο.

22 Cf. Ebbesen 1981, III, 71; Kotzabassi 1999, 57; and see note 9 above.

23 See the images on the Vatican Library and Gallica (BnF) sites: Vat. Reg. gr. 107, fol. 217ʳ; Par. gr. 1972, fol. 335ʳ; Coislin 157, fol. 291ʳ. The Vat. Reg. gr. 107 is based on the lost intermedi-ary independently of the two Paris manuscripts and forms a different branch of the transmis-sion. In the *Analytica Priora* and the *Analytica Posteriora*, the Reginensis only took over the commentaries from Vat. gr. 244 (via the intermediary). In the core content it is a descendant from (an)other manuscript(s). I am grateful to José Maksimczuk, who has established this re-sult for the *Analytica Priora*.

sense and clearly intrusive in this place: ἢ καὶ τὸ περιφερὲς καθ᾽ αὑτὸ κατηγορεῖται τῆς γραμμῆς. This clearly traces back to the palaeographical layout of Vat. gr. 244, for it is the exact place where the second supplement was introduced by the single ἤ ('or') that was added to the right of the commentary, while the remaining supplemental text appeared to the left. The appearance of the text (cf. Fig. 5) with the single word as a reference mark could easily be misread in the way the scribe of codex Coisl. 167 did, particularly since he ignored the supplements to the left, making the composition of the page even less comprehensible to him. Thus, he would have regarded the ἤ ('or') as part of the original commentary.

To conclude this inquiry, let us compare this sample from Leo's commentary to its somewhat more extensive counterpart in Philoponus' exegetical treatise.[24] First, it should be noted that all central content of it is already present in Philoponus, however Magentinus added his own personal touch through certain changes.

Philoponus' commentary on *An. Post.* I 4, 73a37 is structured thus:

– classification as pertaining to the second meaning of 'in itself'
– concise general explanation of this meaning
– first example: snub-nosedness defined as concavity of the nose
– second example: the definition of 'straight' uses the term 'line'
– definition of the straight line (as in Magentinus)
– additional definition of the straight line (as in the supplement to Magentinus) and the suggestion that there are further possible definitions
– third example: accurate definition of 'circular' (more appropriate than Magentinus')
– contrasting with a section of the circle and the term 'bent' (as in the third supplement to Magentinus)
– definition of 'even' and 'odd' using the term 'number'
– detailed analysis of the textual difficulty in the Aristotelean text, including a full quotation of the part in question
– another succinct description of the second meaning of 'in itself' to conclude the argument.[25]

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24 Ioannis Philoponi *in Aristotelis Analytica Posteriora*, ed. Wallies 1909, 61.
25 Ioannis Philoponi *in Aristotelis Analytica Posteriora*, ed. Wallies 1909, 61: Τοῦτο δεύτερον τοῦ καθ᾽ αὑτὸ σημαινόμενον. φαμὲν γὰρ καθ᾽ αὑτὰ καὶ ὧν ἐν τοῖς ὁρισμοῖς τὰ ὑποκείμενα αὐτοῖς παραλαμβάνονται· οἷον ὁριζόμενοι τὴν σιμότητα παραλαμβάνομεν ἐν τῷ ὁρισμῷ αὐτῆς τὸ ὑποκείμενον, λέγω δὴ τὴν ῥῖνα, λέγοντες σιμότητα εἶναι κοιλότητα ἐν ῥινί. ὁμοίως καὶ τὸ

Whereas Leo's commentary on the same passage is structured like this:

- classification as pertaining to the second meaning of 'in itself'[26]
- immediately followed by a suggestion on how to resolve the textual difficulty, albeit without further discussion
- somewhat laborious rephrasing of the Aristotelean thought
- first example: snub-nosedness defined as concavity of the nose, explained in his own words
- definition of 'straight' as in the first of Philoponus' examples on that item (the latter's second example on this is only added during the later supplementation of the text)
- unsatisfactory definition of 'circular'
- since the commentator seems to have realised the shortcomings of his definition, he adds the slightly clumsy remark that the term 'curved' refers to the circle
- he later supplements the contrasting with the section of the circle and between the terms 'bent' and 'curved' from Philoponus, however adding his own pointer that this could be understood from the text of Aristotle's.

The processes of revision that are evident in this passage and characteristic of the commentary in the manuscript Vat. gr. 244, can be summarised as follows: Leo Magentinus changes the order of annotation. He commences with the

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εὐθὺ ὁριζόμενοι παραλαμβάνομεν τὴν γραμμὴν εὐθὺ λέγοντες εἶναι πάθος γραμμῆς ἥτις ἐξ ἴσου τοῖς ἐφ᾽ ἑαυτῆς σημείοις κεῖται, ἢ ἧς τὰ μέσα τοῖς ἄκροις ἐπιπροσθεῖ, ἢ ὅπως ἄλλως ὁρίζεται. ὁμοίως δὲ καὶ περιφερὲς ἤτοι περιφέρειάν φαμεν εἶναι πάθος γραμμῆς πρὸς ἣν ἀφ᾽ ἑνὸς σημείου τῶν ἐντὸς αὐτῆς κειμένων πᾶσαι αἱ προσπίπτουσαι εὐθεῖαι ἴσαι ἀλλήλαις εἰσί. καὶ δῆλον ὅτι οὐ τὸ τμῆμα τοῦ κύκλου αὐτὸ καλεῖται περιφέρεια, ἀλλὰ μᾶλλον καμπύλον κληθείη κυρίως ἐκεῖνο ἢ περιφέρεια. περιφέρεια δὲ ὁ κύκλος, ὥσπερ καὶ ὁ γεωμέτρης ὡρίσατο. ὡσαύτως καὶ ἄρτιόν φαμεν ἀριθμὸν τὸν διαιρούμενον δίχα καὶ περιττὸν ἀριθμὸν τὸν μὴ διαιρούμενον δίχα· καὶ ἐπὶ τῶν ὁμοίων ὡσαύτως. τὸ μὲν οὖν δεύτερον σημαινόμενον τοῦ καθ᾽ αὐτὸ τοῦτο. ἔχει δέ τινα ἀσάφειαν ἡ λέξις, ἣν καταστήσομεν τοῦτον τὸν τρόπον. φησὶ γὰρ καὶ ὅσοις τῶν ἐνυπαρχόντων αὐτοῖς αὐτὰ ἐν τῷ λόγῳ ἐνυπάρχουσι τῷ τί ἐστι δηλοῦντι. τὴν δὲ ἀσάφειαν ἐνεποίησε τὸ αὐτοῖς· διὸ ἀντὶ τούτου τὸ ᾽τισί᾽ παραλάβωμεν, καὶ σαφὴς γίνεται ὁ λόγος ἔχων οὕτως. καὶ ὅσοις τῶν κατὰ συμβεβηκὸς ἔν τισιν ὑπαρχόντων αὐτὰ ἐν τῷ λόγῳ ἐνυπάρχουσι τῷ τί ἐστι δηλοῦντι, τουτέστιν αὐτὰ τὰ ὑποκείμενα, οἷς ὑπάρχουσι τὰ συμβεβηκότα, ἐν τῷ λόγῳ παραλαμβάνονται τῶν συμβεβηκότων τῷ δηλοῦντι τὸ τί ἐστι, τουτέστι τὸ εἶναι ἐν τοῖς ὁρισμοῖς αὐτῶν, ὡς εἶναι τὸ ὅλον τοιοῦτον· ταῦτα, φησί, λέγω καθ᾽ αὐτὰ τῶν ἐν ἄλλοις τὸ εἶναι ἐχόντων ὅσων ἐν τοῖς ὁρισμοῖς τὰ ὑποκείμενα αὐτοῖς παραλαμβάνεται. Since the main points of Philoponus' commentary have been highlighted in the structural analysis, I do not include a translation here (but see the rendering by Richard McKirahan: Philoponus, *On Aristotle*, *Posterior analytics*, tr. McKirahan 2008, 67).

26 With a slight deviation from Philoponus by one transposition and the addition of an article.

textual difficulty, however instead of discussing it as did Philoponus, he just posits that the term 'them' is to be understood as 'the respective underlyings', yet with this he extends his gloss in a manner particular to him. For, while Philoponus recommends using the expression 'certain things' in place of 'them', Magentinus is more precise in stating that what is meant in each case is 'the respective underlyings'. His subsequent paraphrasis of the second meaning of 'in itself' may have been influenced by the concluding part of Philoponus' commentary. With good reason, he introduces the term for (logical) predicates (τὰ κατηγορούμενα), instead of Philoponus' accidental attributes (τὰ συμβεβηκότα), even if his juxtaposition of two participles is a bit clumsy.[27] The example using the term nose and the attribute snub-nosedness is clearly explained in what seem to be partially his own words. The next example of the straight line has been abridged by omitting Philoponus' second example and the indication of further existing definitions. While Magentinus limits himself to the first of these in his commentary, the scribe, who might be Magentinus himself or a scholar of his circle, later supplements the second in the margin. When explaining περιφερές (circular), Magentinus uses an explanation (not found in Philoponus on this passage) that is less accurate, as it would also cover any non-circular line that returns to its starting point.[28] However, recognising the shortcomings of this explanation, the scribe tries to restrict it to the case in point by adding that it is in reference to the circle. In his later addition of Philoponus' passage on a section of the circle and the differences between 'bent' and 'curved', the scribe once more deviates from the earlier comment by restructuring and shortening it as well as by adding to it. He even refers back to Aristotle himself in his addition, claiming that the explanation matches the Aristotelean wording. Succinctly: in quoting Philoponus and excerpting from his commentary while adding his own variations, he invokes Aristotle as his authority.

Magentinus uses a similar process in other parts of his commentaries. To create an annotated Aristotelean study manuscript perfectly adapted to his own

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27 I.e. he writes τῶν συμβεβηκότων τῶν ἐνυπαρχόντων τισὶν ὑποκειμένοις (instead of Philoponus' τῶν κατὰ συμβεβηκὸς ἔν τισιν ὑπαρχόντων, Ioannis Philoponi *in Aristotelis Analytica Posteriora*, ed. Wallies 1909, 61, ll. 22–23).

28 Philoponus' commentary has this description of the circle in a later passage entirely unrelated to this context (Ioannis Philoponi *in Aristotelis Analytica Posteriora*, ed. Wallies 1909, 395): ὡς γὰρ ὁ κύκλος ἀφ᾽ οὗ σημείου ἄρχεται, εἰς τὸ αὐτὸ καταλήγει [...] The somewhat daring particple construction of Magentinus' (περιφέρεια γάρ ἐστι πάθος γραμμῆς, ἀφ᾽ οὗ σημείου ἀρχομένης εἰς τὸ αὐτὸ πάλιν καταληγούσης) is probably based on a formula such as the one we find here in Philoponus, and should be taken as a mere transposition of the statement into a genitive expression with omission of the necessary adaptation.

scholarly aims, he builds on the commentators from Late Antiquity and follows the structure of their works, however he mostly does not reproduce their explanations literally, rather using techniques of excerpting, compiling, adding, shortening and replacing to result in new and autonomous exegetic corpora. We would not do justice to his extensive transformative accomplishment that is evident in the end result, the comprehensive *Organon* manuscript Vat. gr. 244 with its intricate interdependencies of core text and para-content, if we were to apply modern criteria of plagiarism. It would be more useful and appropriate to further examine Magentinus' techniques of transforming and reworking in terms of the scholarly manuscript work of his time. While this brief inquiry could only make use of a sample passage for its analysis, it would be worthwhile to study the extensive labour of Magentinus' that is evident in this manuscript at a larger scale and adduce further examples for its more precise reconstruction.

Acknowledgements

Abbreviations

CAG   Commentaria in Aristotelem Graeca.
CAGB   Commentaria in Aristotelem Graeca et Byzantina.

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Fig. 1: Paris, Bibliothèque nationale de France, Coislin 166, fol. 363ʳ; written by Malachias, second third of the 14th c. © Bibliothèque nationale de France.

Fig. 2: Paris, Bibliothèque nationale de France, Coislin 166, fol. 396ᵛ; written by Malachias, second third of the 14th c. © Bibliothèque nationale de France.
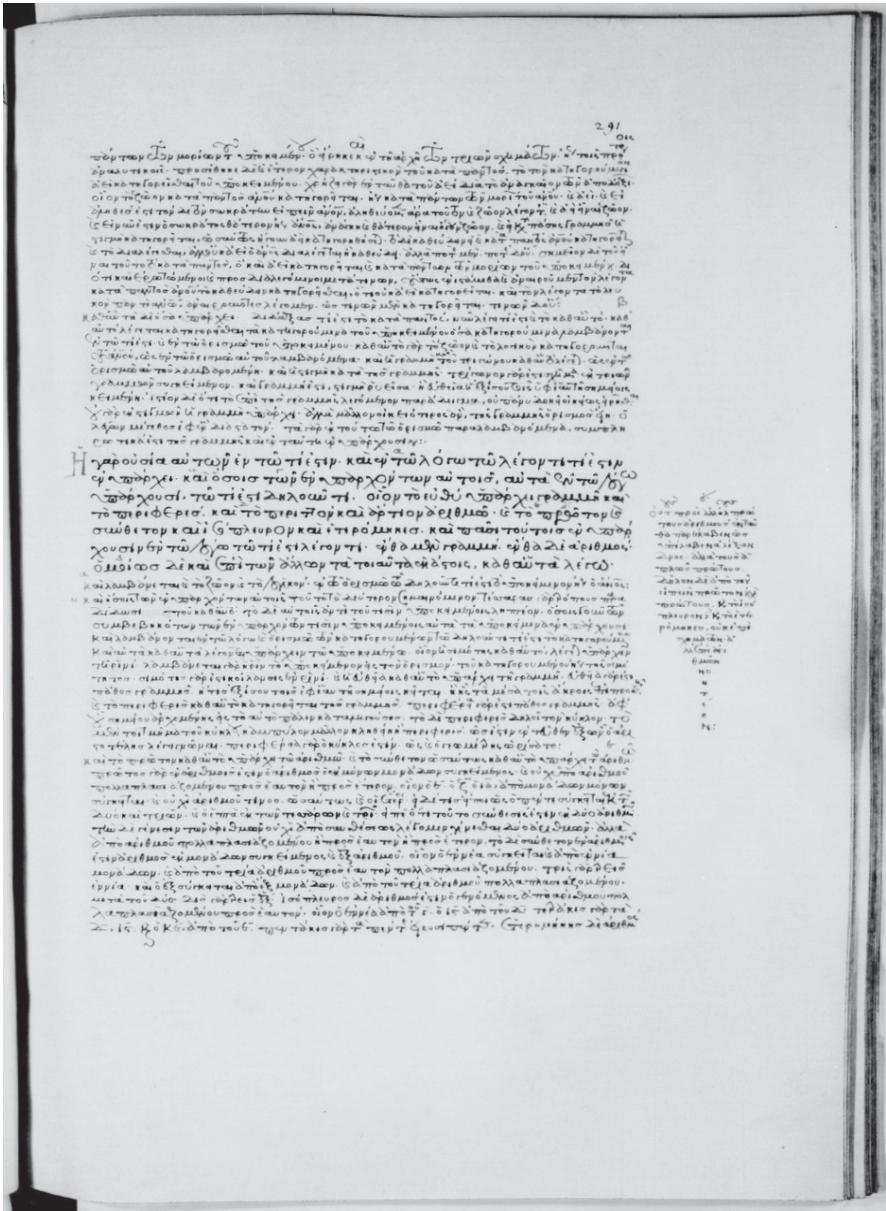
Fig. 3: Paris, Bibliothèque nationale de France, Coislin 157, fol. 291ʳ; written by Michael Klostomalles, first half of the 14th c. © Bibliothèque nationale de France.
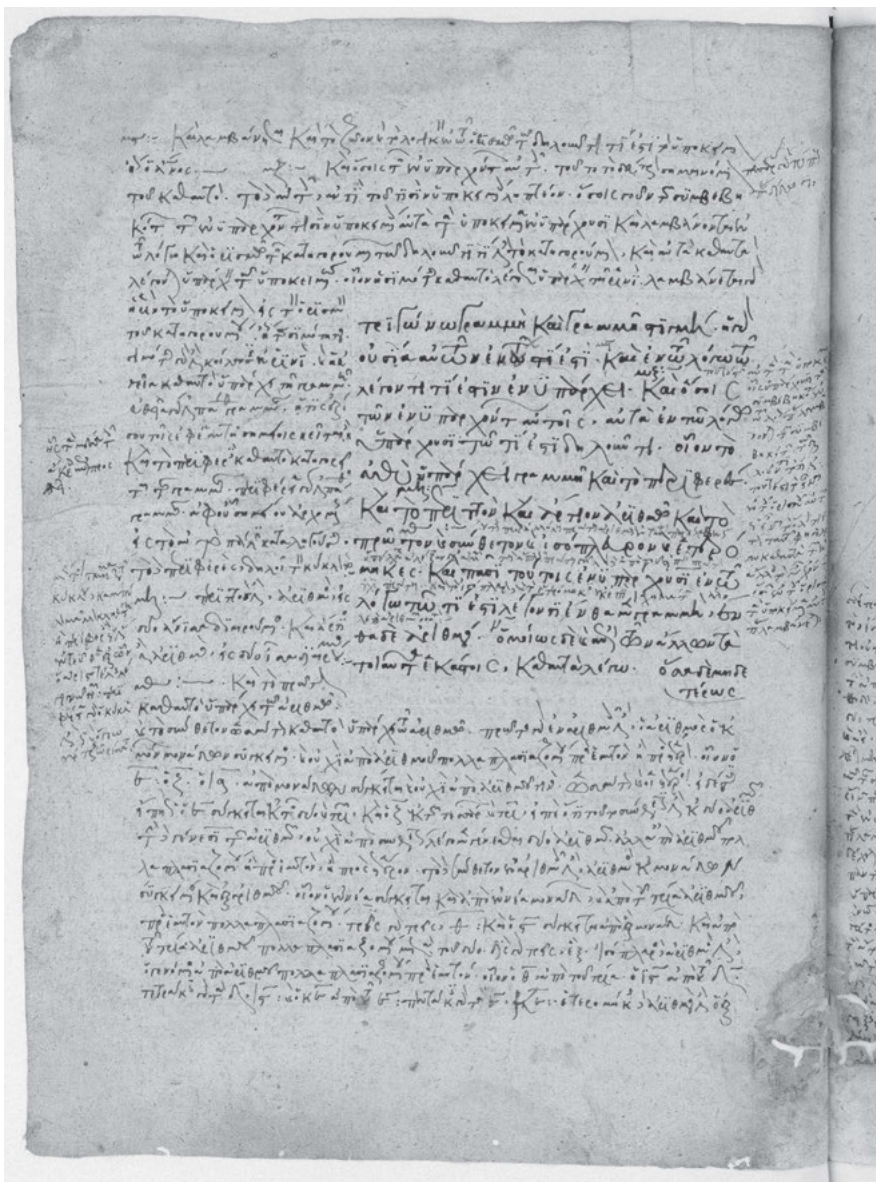
Fig. 4: Vatican, Biblioteca Apostolica Vaticana, gr. 244, fol. 311ᵛ; 12th c. © Biblioteca Apostolica Vaticana.

Heidi Buck-Albulet

From 'Task' to 'Title'? Japanese Linked Poetry and the *Fushimono*

Abstract: This paper examines how titles in *renga* ('linked verse') poetry, the so-called *fushimono*, interact with the texts they precede, or with parts of them, particularly the first verse or *hokku*. *Renga* is poetry jointly created by a group. Of the rules necessary for this, *fushimono* originally represented a significant part. While in the course of history the scope of the *fushimono* became more and more limited, it remained as an indispensable paratext. This paper also shows how historical changes to the *renga* rules and to the function of the *fushimono* were inextricably linked to the structure and layout of the manuscripts that emerged from the *renga* sessions. Finally, the paper will introduce the features of *fushimono* as a paratext in written artefacts, both in manuscripts and prints.

1 Introduction

In classical *renga* 連歌 poetry, there is a peculiar kind of paratext[1] that cannot easily be understood by its readers: *fushimono* 賦物 titles. Their peculiarity lies in the fact that they are also a type of directive. *Fushimono* tend to be overlooked, as research is usually more concerned with poetological and aesthetic issues of the genre, i.e. the text. However, *renga* also includes a performative aspect (the practice of composing) and a material aspect as well (the written artefacts that emerge from this practice), and once the focus is shifted there, *fushimono*, like other paratexts, can no longer be ignored.

The meaning of *fushimono* is only revealed to those who take the trouble to understand its history.[2] Starting off as a kind of directive, it became a mere convention in the fifteenth century and has remained so ever since. The following example from 2018 indicates how this latter form works:[3]

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1 A broader term called 'paracontent' has been developed at CSMC, which includes non-verbal elements. See Ciotti et al. 2018. Since I am mainly concerned with text elements in this paper, I will continue to use the term 'paratext'.

2 On the history of *fushimono* in Western languages, see Keene 1977; Horton 1993; Naumann 1967 among others.

3 The first sheet recto and verso of the respective manuscript are depicted in Fig. 2.

賦御何連歌
三十年を鼓に舞ふや露の庭　　　　　　裕雄

Fusu on nani renga　　　　(*Renga* related to 'honourable')[4]
Misotose o　　　　Thirty years
tsuzumi ni mau ya　　　　dancing to the drum
tsuyu no niwa　　　　in the garden of dew　　　　Hiroo

A peculiar kind of game is at work here: in the example above, the title could be read in such a way that it requires the *hokku* 発句 ('first verse') to include a word that can be combined with *on* 御, meaning 'honourable' (the solution in this case is *niwa* 庭, yielding *on niwa*, or 'honourable garden'). The task (i.e. to find a corresponding part) is indicated by the character *fu* 賦. However, as we shall see, the *hokku* was actually written before the title, so the task works the other way round: *on* was chosen because of the word *niwa* in the *hokku*.

A second example, dated to 1688 (see Fig. 1), shows that the principle was the same in pre-modern *renga*:

賦何人連歌
かへるさの山づとにせむ木葉かな　　　　　　信貞

Fusu nani hito renga　　　　(*Renga* related to [the word] 'person')[5]
Kaerusa no　　　　At the time of returning
yamazuto ni semu　　　　the trees' autumn leaves
ko no ha kana　　　　as a souvenir from the mountains　　　　Nobusada

The *hokku* contains the word *yama*. When *nani* ('what') is replaced by *yama* in this *renga*'s *fushimono* title, the result is the compound *yamabito* (lit. 'mountain man', i.e. 'mountain dweller').

Fushimono titles figure prominently in *renga* manuscripts as they are written in a bigger font size on the right-hand side of the text on the first sheet recto. Titles of this kind emerged in pre-modern Japan in the course of the formation of the genre itself and are still employed in contemporary poetic practice.

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4 The *renga* was composed in Gujō Hachiman (Gifu Prefecture). The author of the *hokku* is Tsurusaki Hiroo 鶴崎裕雄, who also acted as the *renga* master (*sōshō* 宗匠). The above translation of the title (lit. 'distribute "honourable" something *renga*') was inspired by the way Earl Miner (1979) translated *renga* titles.

5 Yamaguchi Prefectural Library (no. 1085). A transcription of it can be found in Ozaki 2005, 81–83.
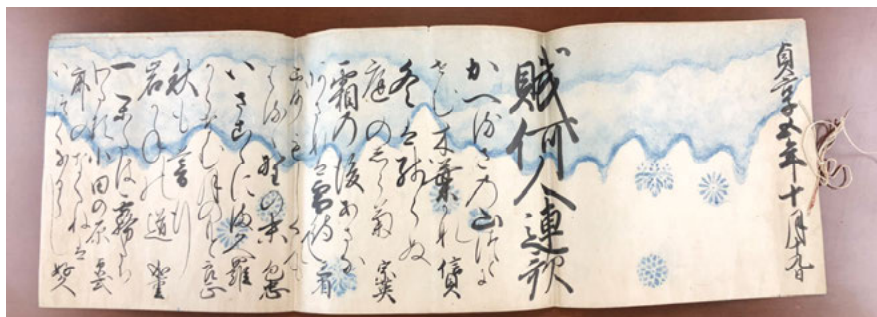
Fig. 1: *Renga kaishi* originally owned by the Abe family in Yamaguchi (*Abe ke renga kaishi* 安倍家連歌懐紙) and dated to 1688. Now in the possession of Yamaguchi Prefectural Archives (Yamaguchi ken Monjokan 山口県文書館). The name of the document is *Fusu nani hito renga kaishi* 賦何人連歌懐紙 ('Distribute something with person *renga*' *kaishi*). Courtesy of the Yamaguchi Prefectural Archives. Photo: H. Buck-Albulet, 2018.

After a brief introduction to the genre of *renga*, I aim to show where the roots of *fushimono* lie, how its function changed over time and how it 'works' in written artefacts. Tracing the development of *fushimono* titles also sheds light on the development of *renga* itself.

2 What is *renga*?

Renga 連歌 ('linked verse') is Japanese poetry jointly composed by a group of authors. The group is guided by a master (*sōshō* 宗匠), an official record of the poem is made by a scribe (*shuhitsu* 執筆), and the participants (*renjū* 連衆) add verses to the poem either one after the other or competitively. In pre-modern *renga*, the scribe was the only one to take any notes. The manuscripts that emerged from the gatherings are called *renga kaishi* 連歌懐紙 (literally, '*renga* chest paper').[6]

A more recent form of classical *renga* is still being practised in contemporary Japan,[7] but *kaishi* and a brush are not usually used any more to record verses during a *renga* session; a newly invented form sheet developed by Mitsuta

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6 'Chest' refers to the chest part of the author's clothing where such papers may have been kept.

7 Classical *renga* had nearly died out at by the beginning of the twentieth century, but it was revived again in the 1980s. See Buck-Albulet 2020 for details.

Kazunobu 光田和伸 is used by all the participants instead (including the *sōshō* and scribe) and the brush has been replaced by a pencil and biro. On formal occasions, however, especially in religious votive *renga*,[8] a calligrapher may be commissioned with producing a clean copy of the poem on *kaishi* in the traditional format and layout.

Preliminary forms of *renga* already existed in the Heian period (794–1185). In the course of its long history, the genre has naturally gone through various changes and it has also developed many variants. The length of the poems can vary from thirty-six or forty-four verses to a hundred, a thousand or even ten thousand, but a hundred verses – or *hyakuin* 百韻 (literally, 'a hundred rhymes')[9] – became the pre-modern standard and forty-four verses, or *yoyoshi* 世吉, the modern norm.[10] One important feature of the genre – since the late fourteenth century, at least – is that a host of poetic rules apply that define which semantic category or motif can be used in which part of the poem. Moreover, in the course of time, the process of composing verses in a group became highly ritualised and was consequently codified in rulebooks; the scribe in particular had to follow detailed instructions (*shuhitsu sahō* 執筆作法) on how to handle the paper, brush and inkstone, for instance, and on the way he had to write *fushimono* titles.[11] The vast majority of these procedural rules have now been abandoned in contemporary *renga*. What has remained, though, is the practice of allocating the traditional roles of the master, scribe and other members of the group.

The parameters of the genre that have remained constant are particularly noteworthy: apart from the metre, the internal structure of a *renga* text and its representation in *kaishi* have also remained stable after reaching a certain point in the development of *renga* (see below), even since the invention of new media in the twentieth century. The structure of *renga* developed in close connection with the layout of the traditional *kaishi* and now consists of eight verses on the first sheet recto and last sheet verso and fourteen on all the other pages. This

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8 In votive *renga*, sessions are conducted to honour a deity. The composing session is followed by a dedication ceremony at which the *renga* poem is recited to the deities and a calligraphic copy of the text is presented to the respective shrine or temple.

9 The term *hyakuin* indicates the influence of Chinese poetry as Chinese verses had rhymes.

10 During my research trip in 2018, I also witnessed the practice of composing twelve and twenty-two verses.

11 Regarding the procedure (*shidai* 次第) of writing *fushimono* titles, see Carter 1987, 12; Horton 1993, 449; Hiroki (ed.) 2010, 18 and Iwashita 2010.

allows for fixed caesuras in the manuscript such as the end of a page, which adds to the text's organisation.[12]

3 The formal development of *renga*

Two 'starting points' are essential for the development of *renga*: Chinese linked verse (*lianju* 聯句, Jap. *rengu*)[13] and Japanese *waka* 和歌 poetry.

In China, forms of linked poetry were practised from the Six Dynasties (222–589) to the Tang period (617–907) in particular. They also became known in Japan, and Japanese poets began to practise *lianju* themselves as early as the Heian period. We can already find the Chinese term *fu* 賦 in *lianju*, employed in a way that contributed significantly to how the term *fushimono* was later used in *renga*. Only a few of all the meanings the Chinese term and its character can represent will be mentioned here. First of all, it is the name of a genre of Chinese 'prose-poems' and it is a form of literary expression at the same time.[14] *Fu* 賦 may also be translated as 'to compose a poem'.[15] As for Chinese linked poetry, David Pollack's mention of a *fu* technique is noteworthy; he describes this as a '"spectacular agglomeration" of things in neat categories'.[16] As will be elaborated shortly, Japanese linked poetry is also about arranging things in categories, although it is precisely the 'agglomeration' that should be avoided.[17]

In Chinese linked poetry, there was a practice to allot rhymes to the poets and distribute them within a poem. Topics came to be allotted as well, and this

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12 See Buck-Albulet 2020 for details.

13 Besides discussing *lianju* 聯句, Pollack (1976, 19) also mentions a shorter Chinese form of linked poetry called *lianju* 連句. In Japan, there were also mixed forms with alternating Chinese and Japanese verses (*wakan rengu* 和漢聯句). Incidentally, *rengu* should not be confused with *renku* 連句, the term for *haikai no renga* (a variant of *renga* that developed from the sixteenth century onwards). See Ogata 2008, 992.

14 One of the 'six styles' of classical Chinese poetry mentioned in the 'Great Preface' *Da xu* 大序 of the *Shijing* 詩経 (*Book of Odes*). On the Chinese *fu* see Ho 1986, among others. *Fu* is also mentioned in the Chinese preface (*manajo* 真名序) of the *Kokin wakashū* 古今和歌集 (*Collection from Ancient and Modern Times*, 905) and is rendered as *kazoe uta* 数え歌 in the Japanese preface (*kanajo* 仮名序) and subsequently as one of the six *waka* styles as well. SNKBT 5, 7–8 and 339. *Kazoe uta* is translated as 'description' by Rodd and Henkenius 1996, 38.

15 Tanaka 1969, 431. The sinologist Okamura Shigeru says its basic meaning is 'to spread' (see *Nihon hyakka daijiten*, lemma *fu*, Japan Knowledge).

16 Pollack 1976, viii.

17 Pollack 1976, viii.

was indicated in the titles, such as *fu te* x (賦得 x, 'writing a poem on the subject of x') or *fu* x *te* y (賦 x 得 y, 'writing a poem on the general subject of x, I got the sub-topic y'),[18] patterns that were adopted in Japanese anthologies of Chinese poetry.[19] In this case, *fu* either means 'to compose' or 'to allot a topic for a poem'.[20]

One fundamental difference between Chinese and Japanese linked poetry is that the latter does not make any use of rhyme words (Jap. *inji* 韻字, Chin. *yunzi*) as a structural category. There is much to suggest that *fushimono* or 'the distribution of names for things' came to be introduced instead. Medieval Japanese poets were well aware of these Chinese roots. Some Japanese poetic treatises compared Japanese *fushimono* to the 'distribution of topics' (Jap. *dai* 題, Chin. *ti*) in Chinese poetry, while others compared it to rhyme (Jap. *in* 韻, Chin. *yun*) in Chinese *lianju*.[21]

However, since *renga* developed in a different way than Chinese linked verse, the origin of the *fushimono* cannot be explained solely by the model of the *lianju*. Rather, the poetic rhetoric of the *waka* needs to be taken into account as well.

Waka, or 'Japanese song' consists of thirty-one syllables or 'morae' arranged in five units (or *ku*) of 5-7-5-7-7 morae. The first 5-7-5 form the upper part, the 'long verse' (*chōku* 長句), while the 7-7 form the 'short verse' (*tanku* 短句). *Renga* may also have found a model in the fact that *waka* were sometimes combined to form longer chains of verses, the standard length of which became a hundred poems (*hyakushu uta* 百首歌).[22] A specific method of poetry composition from which *renga* could draw was 'topic poetry', the composing of verses according to previously set topics, which was practiced in China as well as in Japan. Finally, *waka* opened up the possibility of splitting a poem into two separate halves if a semantic and grammatical caesura is made after the 'long verse'. A very simplified overview of the formal development of *renga* consists of five steps:

1   When some of the *waka* split up into two parts, the earliest form of 'linked verse', the short renga' or *tanrenga* 短連歌 (or as it was called by that time, the *ikku renga* 一句連歌) emerged in the eleventh and twelfth century. It

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18 Pollack 1976, 37–38.

19 Tanaka 1969, 431–433.

20 Pollack 1976, 47.

21 Tanaka 1960, 31; Tanaka 1969, 433; Ichiji 1967, 24; Naumann 1967, 33–36.

22 A poem by Sone no Yoshitada 曽禰好忠 dated to 960 is regarded as the earliest example.

consisted of a 'long verse' and a 'short verse', with two people composing each part.

2 By repeating this pattern, the length of the *renga* gradually expanded to form longer 'chains' of verses (*kusari renga* 鎖連歌). This probably took place around the Insei period (1086–1221).

3 Towards the end of the Insei period, longer chains of verses formed 'long *renga*' (*chō renga* 長連歌) with a fixed number of verses (*teisū renga* 定数連歌).

4 A hundred verses (*hyakuin*) eventually became the most representative form (in the latter half of the Kamakura period, 1185–1333). A *hyakuin* was first mentioned in 1200.[23]

5 The standardising of the length was accompanied by the emergence of poetic rules and an internal text structure ('parts of speech', so to speak), which was also reflected in the layout of the written artefacts, as will be explained below.

Early *renga*, while adopting its metre from *waka* poetry, was practised as a kind of counterpart to it, especially to the 'elegant' (*ga* 雅) and aristocratic nature of court poetry: it was conducted as a verse-capping game, requiring skills from its participants such as the ability to make puns and play with words.

There are at least two parameters that are essential for every game. First of all, as Johan Huizinga noted, 'all play has its rules',[24] and second, it is necessary for every play or game to maintain the initial suspense among the participants. Moreover, as *renga* is a game that results in a text being produced, this notion relates not only to the performative level, but to the text level as well (we might speak of 'text coherence') and even to the material level of the written artefact.

The fact that *renga* started as a competitive game was decisive for the success of the genre, and the early *fushimono* was absolutely necessary at this formative stage because it provided a challenge whose fulfilment could be judged.[25]

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23 It is mentioned in the *Meigetsuki* 明月記 ('Record of the Clear Moon'), a diary kept by Fujiwara Teika 藤原定家 (1162–1241). However, the distribution of verses in the *kaishi* was not formalised at that point, see Hiroki 2015, 96.

24 Huizinga 1998, 11.

25 Ishida 1959, 30–38.

4 Renga and the *fushimono*

The short *renga* (*tanrenga* 短連歌) can be seen as an initial stage of the genre.[26] It had a dialogic structure and depended on successfully creating a link between two parts, A and B. The point of contact consisted of two associated objects or concepts, often linked by way of a pun.[27] This is the technique of *mono no na* 物の名 ('names of things') adopted from *waka* poetry. The *tanrenga* can be described as a short dialogue with only two contributions that are mutually related to each other and it demands *esprit* and quick-wittedness from the poets. As Hiroki Kazuhito has put it, it is basically a riddle-answer pattern.[28] However, as soon as a third link is added, this changes the structure of the poem fundamentally.[29] This is where *fushimono* literally came into play because other means to maintain suspense or text coherence became necessary.[30]

Fushimono may be described as 'tasks to be fulfilled' or 'thematic directives'.[31] These have changed fundamentally in the course of time, and in two ways: on one hand, in terms of how they worked as a structural principle, i.e. whether they affected the entire text/performance or only part of it, and on the other, in terms of the types of directives used.

4.1 Types of *fushimono*

Whilst different types of *fushimono* have been used at the same time for decades and even centuries, a certain historical development can still be seen. The first type of *fushimono* is *mono no na* ('names of things'). With this directive, the *renga* went back to a principle that was already at work in *waka* poetry and in short *renga* as the 'hidden topic' (*kakushidai* 隠題) aka *mono no na*, a form of the

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26 Tanaka Yutaka (1960, 2) argued that the *tanrenga* is not just a preliminary form of *renga*, but a genre all of its own – a work that is self-contained.
27 Keene 1977, 248; Okuda 2017, 22.
28 Hiroki 2015, 30. Regarding the affinity between a riddle, *renga* and *fushimono*, see Schneider 1974 and 1989.
29 The performance changes, too, as there might be a third person, and a new place for the composing process may come into play. See Kishida 2015, 2–20.
30 The puns in short *renga* poems have been described by Okuda as an 'original form' of *fushimono* ('*fushimono no gensho keitai*' 賦物の原初形態), see Okuda 2017, 22; Carter 1987, 12.
31 Konishi 1991, 275.

aforementioned topic poetry. The task here is to 'hide' topics in semantically unrelated homonyms[32] or to allude to them in the verses.

Topics of this type could be place names from the classical novel *Genji monogatari* 源氏物語 ('The Tale of Genji'), names of plants and animals or the names of poets of famous poetry collections, for example. Many of them were contrastive pairs; one had to refer to black and white alternately in *Fusu kuro shiro* 賦黒白, for example (the term itself means 'distribute black and white').[33]

The acrostic type of *fushimono* was another early form. Linked poetry composed this way was called *kanmuriji renga* 冠字連歌 or 'crown- [or cap-] character *renga*'. Each verse had to begin with a certain character. As the writing alignment in a *renga* manuscript is always vertical, the first syllables or characters would be on the top, or 'crown' (or cap).

Two special forms of the acrostic type may be mentioned: first, the *iroha renga* (an 'alphabet *renga*', so to speak, which flourished around the twelfth and thirteenth century[34]), the verses of which began with the characters of the old 'alphabet'-like *iroha* poem. The task or *fushimono* in this case would be *Fu(su)*[35] *iroha* 賦伊呂波, or 'Distribute *i-ro-ha* characters'. A hundred-verse *renga* following this principle would be a *Fu iroha hyakuin*. The *Myōgō renga* 名号連歌 was a second 'crown-character *renga*', the verses of which started with the syllables of the invocation *Namu Amida Butsu* 南無阿弥陀仏 ('I take refuge in Amida Buddha'). It is interesting to note that 'crown-character *renga*' poems are related to the development of 'fixed-number *renga*' poems mentioned above. In manuscripts, the 'crown-characters' are often indicated by paratexts.[36]

The third type is what could be called 'the *nani* 何 ('what') type of *fushimono*'. The *nani* type can also be divided into two sub-types: a 'simple' (*tanshiki* 単式) and a 'double' or 'combined' (*fukushiki* 複式) *fushimono*. Analysing data from Fujiwara Teika's diary *Meigetsuki*,[37] Ishida sets the watershed that separates the '*nani*' type from the earlier forms around the Jōkyū 承久 era (1219–1222). After

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32 The technique is employed, for instance, in Book 10 of the *Kokin wakashū*. The bird's name *hototogisu* ('lesser cuckoo'), for instance, appears in the words <u>hodo</u> ほど ('about') and <u>toki suginure ya</u> 時すぎぬれや ('is it because the time has passed?'). SNKBT 5, 140, Tanaka 1969, 435–436.

33 Ishida 1959, 27; Okuda 1979, 33, n. 2.

34 Hiroki (ed.) 2010, 48.

35 The character 賦 may be read as *fu* or *fusu* (verbalised).

36 A beautiful example of a *kaishi* recording a 'crown-character *renga*' dating to 1548 is depicted in Tenri Daigaku fuzoku Tenri Daigaku toshokan (ed.) 2020, 83–102.

37 Entries on *fushimono* cover the years from 1200 to 1235. See Ishida 1959, 27–28 and n. 23 above.

this date, all the entries relate to the *nani* type. One of the reasons for moving to this rule might have been that the task is easier to achieve and gives one more artistic freedom, so the poetic results lead to greater thematic variety.[38] As an example of a 'simple' one, if the *fushimono* is *nani yama* 何山, or 'what [kind of] mountain' (or 'something with "mountain"'), then the task in the *renga* is to use binary words, the second part of which is 'mountain'. If the *fushimono* is *yama nani* 山何, then 'mountain' is the first part of the compound and the second part has to be inserted. The first case is called *uwabushi* 上賦 ('the *fushi* above'), while the second case is called *shitabushi* 下賦 ('the *fushi* below').

The second sub-type is a combination of two simple *nani* compounds, like *nani hito kawa nani* 何人河何 ('what-person-river-what') demanding from the poet that all long verses should have a compound term with *hito* (person) as its second part and all the short verses should have a compound term with *kawa* (river) as its first part. One might expect the 'simple' form to precede the double one, but in fact the opposite was true: the double form was the one that came first, while the 'simple' one only started to flourish in the second half of the thirteenth century. As it turns out, the *nani*-type *fushimono* mentioned in *Meigetsuki* are all of the 'double' type.

The simple *fushimono* has been in use ever since then. Its emergence and persistence should be seen in connection with another historical development: while the double *fushimono* with its alternating distribution was more an expression of *renga* as a game and was probably also inspired by Chinese models, the simple *fushimono* went hand in hand with increasing abstraction and, in parallel, the shift of weight in *renga* from 'game' to 'art', a process that included the development of poetic theory, the ritualisation of the performance, and acts of 'nobilitation' of the genre like its inclusion in poetry anthologies[39] and later the editions of anthologies solely devoted to *renga* (see below). *Renga* also became regarded as worthy of being conducted as a votive gift (*hōraku renga* 法楽連歌 or *hōnō renga* 奉納連歌) to the deities.[40] On a material level, it can be observed that some *renga* poems were written on lavishly decorated *kaishi* paper, which was precious, and that *kaishi* sheets were occasionally turned into scrolls, the book format with the highest prestige of all. Not only were the votive

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38 Ishida 1959, 29–30. As Ishida states, the sudden change to the *nani* type may also be related to a change in the practice and to the fact that this change occurred after ex-emperor Gotoba had been exiled to Oki island.

39 The *Shūi wakashū* 拾遺和歌集 (*Collection of Gleanings*, 1005) was the first anthology to include short *renga*.

40 See Buck-Albulet 2020.

poems dedicated to the deities through the acts of composing and reciting, but their material carriers (i.e. the manuscripts) were donated to the gods as well.

There is a fourth group of miscellaneous types of *fushimono* as well. I shall mention two of these here:

- *sanji chūryaku* 三字中略 ('take the middle character of three characters out'). This refers to a task that requires the poet to use a three-syllable (or *kana*-character) word that still makes sense when the middle syllable has been taken out.[41] For example, if you took out the middle character from *katsura* かつら (cassia tree), the result would be *kara* から ('China'). I call this the '*ryaku*' or 'shortening' principle.
- *niji hen'on* 二字反音 ('two characters, reverse sound'), on the other hand, requires words consisting of two *kana* characters that have another meaning if read backwards, such as *hana* はな ('flower') and *naha* (= *nawa*) なは ('rope').[42] I call this the 'reverse' principle. Both types are still in use today.[43]

Collections of *fushimono* began to be compiled in the Kamakura period (1185–1333),[44] which not only indicates the importance of the technique, but that a process of canonisation was also taking place. One of the medieval collections is still used by contemporary *sōshō*, as they choose the *fushimono* from it:[45] the *Fushimonohen* 賦物篇 (*A Compilation of Fushimono*) by Sanjōnishi Sanetaka 三条西実隆 (1455–1537) and revised and enlarged by Botanka Shōhaku 牡丹花肖柏 (1443–1527).

4.2 *Fushimono* as a structural principle

The development of the *fushimono*'s effect on a *renga* poem can be divided into four steps. First of all, in the Kamakura period (1185–1333), it was a principle that affected each link of the poem. In a second step, the scope of the rule was reduced, for example to the first eight verses (= the recto of the first sheet) or the first three. The third step was reducing the scope to just the *hokku*, and finally, the fourth step was the reversal of the principle: the *fushimono* was only provided

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41 Ogata 2008, 344; Hiroki (ed.) 2010, 122.

42 Hiroki (ed.) 2010, 228.

43 See Susa Jinja Renga no kai (ed.) 1997, 18 and 44, for example.

44 The oldest extant collection is the *Nosakabon Fushimono shū* 野坂本賦物集 (Fushimono Collection, manuscript owned by the Nosaka family, fourteenth century); see Ogata 2008, 660.

45 Yukuhashi-shi bunka isan kasseika jikkō iinkai (ed.), 2014, 21. A printed edition was published by Yamada Yoshio and Hoshika Sōichi in 1936, 11–20.

once the *hokku* had been composed, just like in a riddle where the answer is given first and the question leading to it then has to be found. In 1468, the practice of only picking the *fushimono* once the *hokku* was composed was criticised by the monk and eminent *renga* master Shinkei 心敬 (1406–1457).[46] From the viewpoint of the performance, the scope of the *fushimono* also developed from affecting all the participants, then just some of them and finally – at least in contemporary Japan – only the *sōshō* who creates the *fushimono* from the *hokku*. The fourth step may be related to the fact that the first verse was often created prior to the gathering, usually by the guest of honour.[47]

4.3 From *fushimono* to *shikimoku*

With the development towards the simple *fushimono* on the one hand and its 'degeneration' as a structural principle on the other – it was no longer something that determined every verse, and gradually became meaningless around the Nanboku era (1336–1392)[48] – other measures to maintain text coherence became necessary. These were the rules (*shikimoku* 式目) of restriction on seriation (*kukazu* 句数, limitation of the 'number of verses' in which 'thematic or lexical categories may appear in sequence'), rules on intermission (*sarikirai* 去嫌,[49] where similar themes had to be separated by a certain number of verses), and rules on occurrence (rules that 'limit the number of times certain words may appear in a full sequence of one-hundred verses').[50] In modern *renga*, for example, the subject of 'famous places' may be continued for two verses. Verses containing 'love' must be separated by five verses. Some of the restrictions also apply on the level of the manuscripts: *ori o kirau* 折を嫌ふ refers to expressions that should 'not be repeated on the [same] folded sheet', while *omote o kirau* 面を嫌ふ ('avoid the page') means a participant should not come up with the same category on the same page.[51] These rules, known as *shikimoku*, came to be recorded in rulebooks, the prototype of which became *Renga shinshiki* 連歌新式 (1372, *New Rules on Renga*, later called *Ōan shinshiki* 応安新式 *New Rules of the Ōan era*), which is still the reference work upon which contemporary practice is based. As Okuda has remarked, its compilation 'coincided almost exactly with

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46 Okuda 2017, 25. ZGR 17b, 1131.

47 Benl 1954, 438.

48 Okuda 2017, 22.

49 Okuda 1979, 38. The term in modern Japanese is *ku sari* 句去り ('set verses apart').

50 Carter 1983, 584. Hiroki (ed.) 2010, 120.

51 Mitsuta 1993, 148.

the period in which *fushimono* was on the decline'.[52] It is also worth noting that the development from *fushimono* to *shikimoku* rules paralleled the development of *renga* from a game to an acknowledged art. This is also indicated by the compilation of the earliest semi-official anthology, *Tsukuba shū* 菟玖波集 (*Tsukuba Anthology*, 1356), and the *Shinsen Tsukubashū* 新撰菟玖波集 (*Newly Selected Tsukuba Anthology*, 1495).

So what happened to the *fushimono* after the invention of *shikimoku* rules? So far, we have seen that it changed in a four-step development from being a structural principle affecting each verse of a *renga* poem to being something that not only related exclusively to the *hokku*, but that was created once the *hokku* had been announced and had thus undergone a *reversal* of its initial principle. The remarkable thing here is that it was not entirely abandoned, but changed its function from being a 'quiz question' to the answer. In other words, the place of the question or task moved from the 'title' to the first verse. Or rather, the question in the 'title' came to be created after the 'answer' was given in the *hokku*.

4.4 *Fushimono* as a title?

As mentioned above, *fushimono* appear as titles or 'headers' written in a bigger font size than the verses themselves in manuscripts and other written artefacts. According to the definition produced by the Centre for the Study of Manuscript Cultures in Hamburg, paratexts can have a structuring, commenting and/or regulating function.[53] Two of the most important functions that a header has are naming a text or manuscript and giving a short summary or keyword that adequately describes the essence of the main text that follows. (A *fushimono* can only have such a function if it relates to the entire poem.) However, a title or header (or rather, a sub-title) may also have a regulating function, as in a maths test: 'Multiply the following numbers: ...'. The main text in this case (the maths test) would be like a cloze exercise to be completed by the reader. 'Topic poetry' (Jap. *daiei* 題詠) as it was practised in China and Japan is a similar case: the titles had a regulatory function, at least in the performative process. In the early stage of *renga*, *fushimono* titles may have been where the directive that worked in the performance was recorded. *Fusu nani hito renga* would thus mean 'find

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52 Okuda 1979, 38.
53 <https://www.manuscript-cultures.uni-hamburg.de/Projekte_e.html> (accessed on 3 Oct. 2020); Ciotti and Hang 2016, XI.

words (or 'characters'; *ji* 字) that could replace *nani* to form a compound expression with *hito* ('person') as the second part and distribute them in every[54] verse'. This task was to be performed by the participants.

With the wording of the *fushimono* title being a result of what was written before in the *hokku*, its regulating function is somewhat defunct in the final stage of its development. To some degree, the riddle still works for the reader, but not for the poets. The *hokku* provides a task that is to be performed by the *sōshō* who creates the *fushimono* title. Apart from this, the function of *fushimono* titles in later *renga* poems tends to shift to naming or classifying the *renga*, thus a commenting function of the paratext. However, the naming function is also somewhat defunct as there is only a limited number of terms that may be used. In research and in catalogues of *renga* manuscripts, different devices like the initial words from a *hokku* and reference numbers may additionally be used to identify a specific *renga* manuscript.[55]

The purpose of *fushimono* as a *paratext* may thus be described as assigning a kind of 'genus' or classification to the poem. It has also been said that *fushimono* is a 'label' (*fuchō* 符帳) rather than a title.[56] Some outstanding poems have been given unique names like the *Minase sangin hyakuin* 水無瀬三吟百韻 (*Hyakuin by three poets at Minase*),[57] for example, which is a *Fusu nani hito renga*.

5 Written artefacts and the *fushimono*

5.1 *Renga kaishi*

In contemporary Japan, traditional *renga* manuscripts are usually only written on special occasions. But when they are written, they employ a layout that has largely remained the same for centuries:[58] four folded sheets (*ori* 折) around 36 × 52 cm in size when folded are necessary for a hundred verses and two

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54 Or the first eight verses or just the *hokku*, according to the era.

55 See Ozaki 2005, 81.

56 Tsurusaki 2010, 51. Hiroki states that a *fushimono* does not denote an individual work, see Hiroki 2017, 49.

57 See Yasuda (1956) for an English translation. A facsimile of a record of this *renga*, which is said to be in handwriting of the famous poet Sōchō 宗長 (1448–1532), has recently been published. See Tenri Daigaku fuzoku Tenri Daigaku toshokan (ed.) 2020, 41–59.

58 The handling of the layout in Fig. 2 is a little freer, but the basic scheme is still employed.

sheets are needed for forty-four verses (the standard in contemporary Japan).[59] Both distribute the verses on the sheets in such a way that there are eight of them on the recto side of the first sheet, eight on the verso of the last one and fourteen on all the other pages. The title – one of the introductory paratexts[60] – is placed to the right of the *hokku* and at the left margin of the blank space, which covers a little less than a third of the first sheet recto, and is written in a bigger font. In order to store them in boxes, many *kaishi* are folded twice to yield three parts (see Fig. 1), and the title is usually placed to the right or left of the fold or exactly where the fold is to be made.[61]

We do not know precisely when this layout emerged as no manuscripts have been found that date to the earliest stage of *renga*'s history. Ichiji reports the existence of *kaishi* from the early fourteenth century that already followed exactly this pattern.[62] Initially, however, alternative patterns existed as well. The *Meigetsuki* mentions five and even six folded sheets (*ori* 折 or *origami* 折紙), but we do not know if this refers to the record of a hundred verses.[63] There was also a pattern using three *ori* for a *hyakuin*, although such copies are very rare.[64] Among the *kaishi* consisting of four *origami* in the fourteenth century, there were a number that distributed the verses according to a different formula, such as ten for the first sheet recto and six for the last sheet verso, or a distribution of ten and fourteen for the first sheet, twelve and fourteen for the second and third sheet and fourteen and ten for the last sheet.[65] The pattern as we know it today seems to have spread more and more in the course of the fourteenth century or towards the end of it.

How does the development of these formats relate to that of the *fushimono*? The existence of different layout patterns may indicate that they correlated with

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59 The fold can be seen in Fig. 2. As this manuscript is not tied with thread, it was possible to unfold it for the photo.

60 *Hashizukuri* 端作 in the narrower sense is the date in the right-hand margin, following precedents of *waka kaishi*. Sometimes the *fushimono* title is included in the notion of *hashizukuri*. See Hiroki (ed.) 2010, 237.

61 According to Yamada 1980, 161, the *fushimono* title was to be placed to the right of the first vertical fold. I would like to thank Inoue Yukiko 井上由希子 for this information. A *kaishi* by Inoue which complies with Yamada's instructions for writing the *fushimono* is depicted in Buck-Albulet 2020, 17.

62 Ichiji 1967, 137.

63 Ichiji 1967, 20 and 140.

64 Ogata 2008, 983; Ichiji 1967, 139. The distribution of verses this case is ten for the first sheet recto and the last sheet verso and twenty for all the other pages.

65 Ichiji 1967, 139.

different poetic rules, each developed by the great poets of the time.[66] The earliest extant fragment of a *renga kaishi*, dating to 1241, already has the typical blank space on the first third of the page, like the first sheet recto of later *kaishi*. Moreover, it also has a title indicating that this is a *Fusu nani ya nani mizu renga* 賦何屋何水連歌 ('*Renga* related to house and water').[67] The title is followed by nine verses, each written in two vertical lines, as in practically all *renga kaishi*.[68] A remaining blank space on the left-hand side suggests that this page was initially meant to be filled with twelve or fourteen verses.[69] As the title shows, this *renga* fragment is part of a *fushimono renga*, i.e. the rule expressed in the title applies to the whole text, with *nani ya* and *nani mizu* applying alternately to the verses. As mentioned above, in the history of *fushimono* there was a development from the *mono no na* type to the 'double' *nani* type. It was not until the second half of the thirteenth century that the 'simple' *nani*-type *fushimono* occurred.[70] Initially, the simple *fushimono* was also maintained throughout the *renga*, as can be seen from extant *kaishi* from the fourteenth century, but since this is more difficult than with a 'complex *fushimono*', it became shortened to the first eight verses (i.e. the first sheet recto), the first three verses and finally just the *hokku*. In the preceding sections, we saw that *shikimoku* rules were on the rise just when the *fushimono* rules were being eroded, reduced to a mere fragment only visible in the title and, to the insider, in the *hokku*. This was also the time when poetic standards were set that applied to the layout of the *kaishi*, one of which has stood the test of time to this day. Finally, since we mentioned Chinese *lianju* above, the question that remains at the end of this chapter is whether or not the form of *renga kaishi* is actually based on Chinese models of manuscripts.[71] Future research on this point should address questions such as whether Chinese manuscripts of linked poetry are extant or at least whether Chinese manuscripts of linked poetry are mentioned in source literature. A

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66 Ichiji 1967, 137.

67 This manuscript is written on the verso of a manuscript from *Tōdaiji yōroku* 東大寺要録 (*Essential Records on Tōdaiji Temple*), which is stored in the Archive of Daigoji Temple; Okuda 2017, 54–55 (a photo of the manuscript can be found there). A reprint of the text is in Ichiji 1967, 136–137.

68 There are manuscripts with verses written in one line, but it seems this is mainly the case with clean copies.

69 Ichiji 1967, 140.

70 Ichiji 1967, 144.

71 Tanaka 1969, 434; Ramirez-Christiansen 2008, 14.

starting point may be Chinese linked poetry as practised in Japan:[72] Nose Asaji quotes several Japanese collections of Chinese poetry suggesting that *kaishi* were prepared for *rengu* sessions. These sources not only show that similar divisions of verses were used for the *rengu kaishi*, but the four-*origami* form is also mentioned in them.[73]

5.2 *Fushimono* in the age of print

In contemporary *renga*, every member of the circle takes notes using a printed Mitsuta sheet, as mentioned above. This way, everybody writes his or her own manuscript, a hybrid of print and handwriting. There are some variants of the form sheet in circulation, which vary in detail. There are even more paratexts in the pre-printed parts, which cannot be described in this paper. Many of them refer to parts of the poetic rules of the *renga* and thus serve as a guideline for poets. The pre-printed part of the *fushimono* usually contains the words *fusu … renga* 賦＿＿連歌 with a blank space in the middle to be filled in by the participant as soon as the *sōshō* announces his decision on that.

Thus, *fushimono* has survived to this day, albeit as a kind of relict, and can be found as titles in modern print editions of *renga* poetry as well. What do these tell us about the use of *fushimono* in contemporary Japan? To examine a modern sample, I analysed the *fushimono* in two printed editions of modern-day *renga*. They showed a surprising degree of variety. In the collection called *Heisei no renga* (*Renga of the Heisei era*),[74] which contains sixty-eight *renga*, thirty-three different *fushimono* were used, the most common ones (each mentioned four times) being *nani ta* 何田 ('something field'), *on nani* 御何 ('honourable something'), *kara nani* 唐何 ('China/Chinese something') and *hatsu nani* 初何 ('first something').

A collection of seventy *renga* composed at Kumata Shrine 杭全神社 in Osaka between 1987 and 1993 likewise has thirty-three different *fushimono*, the most common being *nani hito* 何人 ('something person', eight times), *nani ki* 何木 ('something tree', five times) and *nani ro* 何路 ('something path', six times). As there are forty-four different *fushimono* listed in the *Fushimonohen*, this means that most of them were used. Moreover, this result also suggests that

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72 When *lianju* or *rengu* 聯句 is mentioned in Japanese research literature, the authors often do not make it sufficiently clear whether they mean Chinese linked poetry or Japanese linked poetry composed in Chinese.

73 Nose 1950, 119–121.

74 Susa Jinja Renga no kai (ed.) 1997.

there is a striving for balance that goes beyond the individual *renga* sessions, extending to the series of sessions that led to the printed anthology.[75] Thus the *fushimono* is also a place of intertextual reference.

6 Conclusion

The early *fushimono* was a kind of rule that was initially inspired by techniques used in Chinese linked poetry. However, while *lianju* remained more of a game, 'the Japanese raised the concept of "playing" in poetry to the level of high art'.[76] Like the *shikimoku* employed later (and like rules in general), it was a device that limited players' options and thus made it possible to play the game in a group. It can be said that the early *fushimono* rules had stabilising and stimulating functions, just as the *shikimoku* rules did that were introduced later. They contributed to the coherence of the text and of the process of its creation, and thus to the internal cohesion of the group itself. Competition governed by common rules encouraged the linking process and contributed significantly to the development of long *renga* poetry.[77]

With the limitation of its scope to the *hokku* and then the reversal of the principle (i.e. the *fushimono* was decided on after the *hokku* had been composed), the *fushimono* became defunct as a task or 'thematic directive' and a structural principle and was replaced by other rules. At the same time, *renga* poetry underwent a process of aestheticisation and literarisation. A remnant of the riddle function can still be mentally reproduced when reading a *fushimono* title and looking for the 'solution part' (actually written before the title) in the *hokku*.

Thus, the *fushimono* title also takes on the function of a bearer of tradition, a *lieu de mémoire* that might call up memories of *renga*'s long history and of literary techniques used before in short *renga*, *waka* and even in Chinese poetry. Reminiscent of the heritage of Chinese culture is also the fact that the syntax of the *fushimono* title is basically a *kanbun* structure. Yamada Yoshio thus resolves the title 賦_何花_連歌 as *Nani hana o fusu(ru) renga* ('*Renga* that distributes "flower" to something').[78] As a paratext in manuscripts and prints alike, *fushimono* also makes a *renga* poem recognisable as a *renga* as opposed to similar

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75 Kumata Jinja (ed.) 1993, 155–159.

76 Pollack 1976, vii–viii.

77 Ogata 2008, 808.

78 Yamada 1980, 6.

genres like *haikai no renga* or *renku*. Because of its exposed position, a title is particularly suitable for such kinds of inter- and extra-textual references.

Apart from this visual feature, *fushimono* titles differ from what are usually considered to be functions of titles or headers, like naming the text or manuscript or referring to its content. Due to limited variety, the identifying function of *fushimono* titles is a weak one; like very common personal names, additional identifiers are needed in certain contexts. This paper has also shown that it is necessary to distinguish between the directive aspect of *fushimono* and its feature as a 'title', although both uses are inextricably linked. The development from 'task' to 'title' therefore means a shift in weighting between both aspects. In contemporary Japan, *fushimono* is still an indispensable part of *renga* poetry as a performative practice and a literary genre. While being a kind of title, *fushimono* has never entirely lost its nature as a task and a language riddle, just as *renga* has never ceased to be a game and yet serious poetry at the same time.

7 Epilogue

It was the last of fourteen circles composing *renga* linked poetry that I took part in during my six-week research trip in Japan in the hot summer of 2018. The group met up on 6 August at a mountain retreat next to Myōken Shrine 明建神社 in Gujō Hachiman, a beautiful place in Gifu prefecture in Central Japan. The aim of this gathering was to jointly compose a forty-four-verse linked poem[79] that was to be recited the next day before the deity of Myōken Shrine at the annual Shrine festival.

The first verse, or *hokku*, had been composed by Professor Tsurusaki himself, who acted as the *sōshō* at the day's *renga* session. It is the one quoted at the beginning: *Misotose o tsuzumi ni mau ya tsuyu no niwa* ('Thirty years/ dancing to the drum/ in the garden of dew').[80] The *hokku* alludes to the thirtieth performance of the *takigi nō*[81] *Kurusu sakura* くるす桜 ('Kurusu cherry blossom'), which was to take place the next day during the annual festival at Myōken Shrine.[82] Once the first half of the poem had been created, Professor Tsurusaki

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79 The whole poem can be found online at <http://www.kokindenju.com/column.html> (accessed on 16 July 2020).

80 The sound of the drum should be thought of as a kind of background music. My thanks to Yamamura Noriko 山村規子 for this information.

81 *Nō* theatre that is played outside in the evening by torchlight.

82 <http://kokindenjunosato.blogspot.com/2015/04/25.html> (accessed on 14 Nov. 2019).

announced the *fushimono*, i.e. the 'title' of the day's poem: *Fusu on nani renga* 賦御何連歌 ('Renga related to 'honourable').
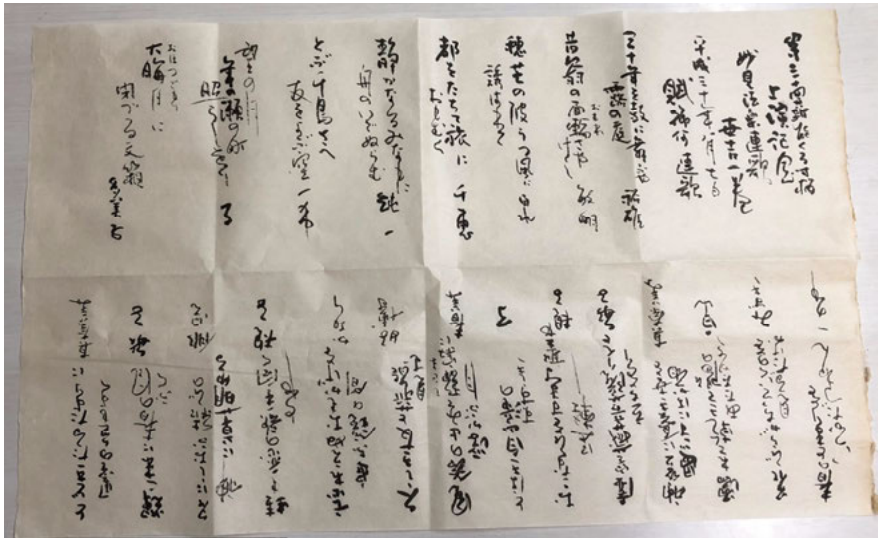
Fig. 2: Clean copy of the *renga* composed in Gujō Hachiman in August 2018 (first sheet recto and verso). The calligraphy is by Yamada Hakuyō 山田白陽. Courtesy of Kokin denju no sato fiirudo myūjiamu 古今伝授の里フィールドミュージアム (Kokin denju Village Field Museum). Photo: H. Buck-Albulet.

As mentioned previously, the *Fushimonohen* from the fifteenth century serves as a source of information regarding which words may be inserted for *nani*. However, when I consulted that work to find out which word in the *hokku* was meant to refer to *on*, it appeared that the only character that matched up with it was *toshi* 年 ('year'), thus yielding the compound *mitoshi* 御年 ('grain'). When we asked Professor Tsurusaki whether this was correct, he replied that he had another character in mind, viz. *niwa*. The solution was *on niwa* 御庭 ('honourable garden').[83] As *niwa* is not listed in the *Fushimonohen* as a possible match for *on*, this indicates that the *sōshō*'s authority enables some allows for a degree of artistic freedom, and the authority of the old rulebook (which I actually wanted to demonstrate with this example) is not considered absolute in contemporary *renga* circles.

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83 I would like to thank Tsurusaki Hiroo and Yamamura Noriko for their advice on this matter.

The solution *on niwa* is only virtually present in the *renga kaishi*. 'The word written into the verse with black ink and the *fushimono* together form the compound word'.[84] Moreover, there is no semantic relationship between the 'hidden' compound in the *hokku* and the content of the verse. In votive *renga*, however, it can be observed that the compound often reinforces the auspicious tone that the *hokku* sets, as this example shows.

On the evening of the day following the composing session, Professor Tsurusaki dedicated the *kaishi* to the deity of Myōken Shrine and solemnly recited the first eight verses of the *renga* in the light of burning torches. The *fushimono* in this oral presentation was a kind of 'acoustic title' marked by a short pause in speech before the first verse followed, and thus an indispensable part of the dedication ceremony. I left Japan two days later, deeply grateful for having been able to experience what it means to *live* the tradition of *renga*. My experiences there also made it clear to me that *fushimono* is part of this living tradition.

Acknowledgements

Abbreviations

SNKBT   Shin Nihon koten bungaku taikei
ZGR   Zoku gunsho ruijū

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84 Ichiji 1967, 141.

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Jost Gippert
Hidden Colophons

Abstract: On the basis of Georgian codices from the collection of the Iviron
Monastery on Mt Athos, the article examines a special purpose of using red ink
in medieval manuscripts, namely, to provide information concerning the manu-
script in question and the people involved in its production (scribes, authors,
translators, or commissioners) by scattering sequences of individual letters over
one or two pages. After discussing authentic accounts of the use of rubrics in
the Georgian manuscript production of the eleventh century, the shape and
scope of 'hidden colophons' is illustrated by reference to four codices of the
monastery (Ivir. georg. 4, 9, 16, and 61).

1 Introduction

When I first visited the University of Hamburg for a research stay concerning
manuscript studies in summer 2009,[1] one of my topics was the typology of the
use of red inks in manuscripts of the Christian East, and as a first result of my
stay, I was given the opportunity to publish a short paper on this in the Newslet-
ter *manuscript cultures* issued by the Research Group *Manuscript Cultures in
Asia and Africa* in 2010 (no. 3).[2] The materials I relied upon were mostly Geor-
gian manuscripts from the Caucasus and from St Catherine's Monastery on
Mt Sinai which I had been working on intensively in the years before. The main
functions I was able to work out then were decoration, demarcation, the high-
lighting of headings, titles, and initial letters (including those of proper names

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1 The host of the stay was the DFG-funded Research Group 963 *Manuscript Cultures in Asia and
Africa* (2008–2011), a forerunner of the Sonderforschungsbereich 950 *Manuscript Cultures in
Asia, Africa and Europe* (2011–2020) and the present Cluster of Excellence *Understanding Writ-
ten Artefacts* (2019–). The steady development of this research association, today hosted at the
dedicated *Centre for the Study of Manuscript Cultures*, is a success story that is unparalleled in
the history of the Humanities in Germany. – My thanks are due to Michael Friedrich who invit-
ed me to Hamburg and who has supported my work immensely over the years – the present
contribution is meant to be a humble antidoron to him.
2 Gippert 2010. The main points of the paper had been presented to the Research Group during
a workshop on July 23, 2009, under the title 'Textauszeichnungen in Handschriften' ('Text
markup in manuscripts').

in enumerations), referencing, esp. via numerical information (as in the case of the so-called 'Ammonian' section numbers in Gospel codices), and the marking of peculiar signs such as neumes in hymnographical manuscripts. Recently, during my work on a catalogue of the Georgian manuscripts of the Iviron Monastery on Mt Athos,[3] I have come across another function of red ink that seems to have remained unnoticed so far, namely, of constituting a peculiar type of 'hidden' colophons. In the following pages, I intend to provide a preliminary account of this phenomenon.

2 The Georgian manuscripts of the Iviron Monastery

With 95 numbered items (93 codices, one scroll and several minor fragments taken together as no. 95), the Iviron Monastery on Mt Athos hosts one of the largest collections of Georgian manuscripts outside of Georgia.[4] The reason is that the monastery was built up by two Georgian noblemen named John and Euthymius by the end of the tenth century and remained under the leadership of Georgians for several centuries, establishing itself as a true centre of Georgian eruditeness. Among the most remarkable items of its collection, we may count the famous 'Oshki Bible' (Ivir. georg. 1), which was written down in the eponymous monastery in East Anatolia[5] in 978 CE and contains on more than 950 folios, bound in two large volumes today, the oldest near to complete translation of the Old Testament into Georgian.[6] Another outstanding item of the

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3 The project of compiling a new catalogue of the Georgian manuscripts of the Iviron Monastery has been conducted by myself in cooperation with Bernard Outtier and Sergey Kim in the framework of a project on Georgian palimpsests kindly funded by the Volkswagen Foundation between 2009 and 2019. Further cooperation partners were the laboratory 'Orioni' at Ivane Javakhishvili State University, Tbilisi and several members of the Korneli Kekelidze National Centre of Manuscripts, Tbilisi. For former catalogues of the collection cf. Cagareli 1886, Blake 1932–1934, and Axoбаѯе et al. 1986.

4 Larger collections abroad are those of the Institute of Oriental Manuscripts of the Russian Academy of Sciences with *c.* 560 items, St Catherine's Monastery on Mt Sinai with *c.* 200 items (including the so-called 'New Finds' of 1975), and the Greek Patriarchate of Jerusalem with *c.* 150 items. The largest collection by far is hosted in the Korneli Kekelidze National Centre of Manuscripts, Tbilisi, with several thousands of Georgian manuscripts.

5 The remnants of the Oshki monastery are situated at 40°36'50.3"N and 41°32'32.9"E.

6 Leaving lacunae that are due to the loss of quires or folios aside, the only parts that are missing are the Psalter, the Chronicles, and the books of Maccabees.

collection is the so-called 'Athos *mravaltavi*' (Ivir. georg. 11), a homiliary as well from the end of the tenth century comprising more than 94 texts, mostly translations of Greek Church Fathers.[7] If we leave palimpsests aside,[8] the oldest codex of the collection is the so-called 'Opiza Gospels' of 913 (Ivir. georg. 83), a small codex written *in toto* in majuscules.[9] A second codex in majuscules is Ivir. georg. 9, again written in Oshki in 977 CE, which consists of homilies mostly by John Chrysostom and Ephrem the Syrian as well as a large collection of apophthegms including the *Pratum spirituale* by John Moschus (see 3.1 below).

2.1 Colophons in Iviron manuscripts

The Georgian manuscripts of the Iviron monastery are exceptionally rich in colophons. In many of them, scribes, authors, compilers, translators, binders, commissioners, donors, and other persons that were involved in the production of the codices have left their personal accounts, partly in unusual verbosity, and partly with the expressed wish that they should be included in later copies. This is especially true of the colophons by George the Athonite, the most productive and influential figure among the monks of the Iviron, who, in the eleventh century, produced a huge bulk of translations from Greek, among them homiletic, hagiographic, and hymnographic works, and who was also responsible for the last redaction of the Old Georgian New Testament, which was soon widely accepted as the 'Athonite vulgate'. The most verbose colophon of his is found in Ivir. georg. 45, which contains a complete *paraklētikē*, i.e., a collection of chants and canons in all eight modes.[10] In the codex, George's colophon comprises nearly seven folios (fols 2ᵛ–9ʳ), fully covered with 44 lines each in his tiny cursive hand, in which he provides a complete survey of the structure and contents of the *p̣araḳlit̠oni* (thus the Georgian term, from Greek παράκλητον) consisting

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7 The provenance of the codex is unknown but it is likely that it was produced in the monastery of SS Cosmas and Damian on Mt Olympus (present-day Uludağ) near Bursa in Bithynia, given that it was probably written by the same hand as Ivir. georg. 42; cf. the colophon on fol. 236ʳ of the latter codex which reads 'It was written on Mt Olympus, in the abode of SS Cosmas and Damian, during the patriarchate of Polyeuctus in Constantinople (and) the reign of Nikephoros (II Phokas)', thus yielding a date between 963 and 969 CE.
8 At least one palimpsest of the Iviron collection must be older as it contains an undertext in the so-called *khanmeti* variety of Old Georgian (*c.* fifth–seventh centuries).
9 Opiza was another monastery in East Anatolia (probably situated at 41°13'35.6"N and 42°02'13.5"E).
10 On the system of canons and modes (or tones), cf. Gippert 2014, 558–561.

of 155 items numbered alphanumerically in the margins. Remarkably enough, the first page, in which he outlines his survey, is written all in red ink; it reads:[11]

> In the name of the Father, the Son and the Holy Spirit! Translated was (this) *paraklēton*, completely and without gap, widely and richly, purely and beautifully, by my, wretched priestmonk George's, hand. And I would barely have been able to fulfil this eminent and unattainable task, but God, benevolent towards my kin through the prayer and virtue of all Georgians, opened my beast-like mouth and aroused my filthy tongue and my soul and mind, liable to all guilt, and granted me to accomplish this all-beautiful and great matter. And now you who will copy this holy and soul-enlightening book, firstly pray for us and do not think that I have seen but some little and neglectable trouble translating and transcribing it! The Lord knows, when I remember the beginning and the end of the endeavour, my bones start quivering and I wonder how I could venture and attempt it or how I completed it! However, for the powers of God nothing is impossible and, as the Master himself spoke truly, 'His power is made perfect in weakness'.[12] And as I could not assess whether I should venture to translate it completely somehow, I first translated the *prokeimenon stichera* in another book, and then, as by order of my spiritual fathers I undertook to translate it completely, the second book was written, (very) big, and inevitably it was written down in scattered pieces; therefore it was necessary to draw up an index (*zanduḳi*, from Gk. σάνδυξ 'red colour') for it so that somebody who would copy it might copy it in just the sequence as we have written it down, and that someone who wants to know its gist, (i.e.), what is written in this holy and all-pleasant book, might easily recognise its gist and the number of *stichera* and chants (contained in it). But now it is appropriate that, if someone copies it entirely, he first begins with the Greek-Georgian *stichera* for the Resurrection. Just as we have written them down in the *paraklēton*, (thus) you should copy them, and do not disturb even one of them, be they (hymns) for the Resurrection or the Archangels or the Baptist or the Theotokos or the Apostles or the Cross or the Saints, they all must be written down at their proper place, and this (is also true) for the proper place of the newly translated (hymns). And if someone should say that it seems appropriate to pronounce either this or that (hymn) or (even) both, it is in the power and the will of everyone, and both are very good and beautiful and both are from Greek and rarely from Georgian, and those that are Georgian and have been written down by us are very good and pleasant. And (lit. but) nobody must sneak in others more, (hymns) that we have not written down, and it will be hurtful for the book if someone said, this is really enough and excessive. And if he did, he who cares for more and corrupts the book will have to answer to God on Judgement Day."

After describing the structure of the *paraklētikē*, George adds a personal account in which he mentions the place where he created the work (in the Laura of

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11 This and all other colophons of the Georgian manuscripts of the Iviron Monastery will be found edited and translated into English in the catalogue (Gippert et al. forthcoming). For a colour image of the page (Ivir. georg. 45, fol. 2ᵛ) and a German translation of the first lines cf. Gippert 2018, 137–138 with Fig. 137.
12 Cf. II Cor. 12.9.

St Symeon the Wonderworker on the Admirable Mountain)[13] and the date of its accomplishment; interestingly enough, the exact year was left out intentionally, probably because George wrote the colophon down before accomplishing the remaining 304 folios of the codex. The text reads (fol. 8[v], with the address line in red ink again):

> Now, holy and godly fathers, I do know that the extent of this soul-enlightening book bears witness unspokenly to our toil and effort, and (that) truly a church that will adopt this holy book entirely will not find it lacking of chant and praise even if some feasts may be missing (in it), once it is used. And no one should surmise that he might find somewhere, either in Greek or in Georgian, a *paraklēton* equal to this. And this toil and effort we took upon ourselves so that in your holy prayers you may remember this soul of mine, liable to all guilt, and that of my teachers and parents and my brothers in spirit and flesh and of all my benefactors and supporters. – I could not sell my handiwork, there was no means, and I was reared by the support of God-loving men, and I had to buy the parchment (myself), too – may Christ pay the reward to their souls and give (something) from His generous treasures to their souls. I did neither pray nor strive, I was lazy myself and idle, but then there was much to be done, and only lately, I was ready to do something for God. Forgive me, you, too, and ask God to forgive me. And if something good is found in this work of mine, you should know that it was fulfilled by the grace of our holy father Euthymius; it was his grace that opened this animal-like mouth of ours, and it was he who after God and the holy Theotokos supported and helped me. And his holy soul knows that I served devotedly on his grave and in the monastery built by him on Mt Athos for many years. – This newly translated *paraklēton* was accomplished in translating and writing it down by the hand of mine, wretched George the priestmonk, on the Admirable Mountain in the Laura of our holy father Symeon the Wonderworker, in the chronicon [ ] (and) in the year after Creation six thousand five hundred sixty and [ ] – may God forgive me my sins and have mercy on my pitiful soul, amen!

The indication of a 'year after Creation six thousand five hundred sixty and [ ]' might mean any year between 6561 and 6579, given that in Georgian, the numbers between 70 and 79 are styled as 60 + 10, 19 etc. (cf. French *soixante-dix*, *soixante-dix-neuf*, etc.). The time reckoning system used here is that of the Greek *annus mundi*, with 6561–6579 corresponding to 1053–1071 CE.[14] Of these years, only the period between 1053 and 1065 CE can be meant here as 1065 CE was the year of George's death. The assumption that he wrote the colophon first, before the remainder of the codex, is corroborated by a short note that George added on top of the first page of the main text (fol. 9[r]) together with the rogation 'Lord

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13 Today Samandağ, lit. 'Symeon's Mountain', near Antioch (present-day Antakya) in Southern Turkey, 36°04'36.0"N and 36°02'32.3"E.

14 Cf. Gippert 2018, 138 with Fig. 138 for an image and a German translation of the passage in question.

Jesus Christ, our God, have mercy on us and direct the deeds of our hands to the laud and praise of Your most holy name, for You are blessed in eternity, amen!'; the note simply says, 'I began on February 10'. The day of the end of the work is not indicated anywhere in the manuscript.

2.2 Reasoning on the use of red ink

In his description of the *paraklētikē*, George not only provides details as to the contents and the ordering of the elements but also as to the use of red ink in copying them. The first paragraph of his treatise reads (fol. 3^{r–v}):

> At first now it is appropriate to write down the Greek (hymns) for the Resurrection and the perpetual (canon beginning with the 1st ode on) 'Lord, I cried' (Ex. 15.1) up to the (matins *sticheron* on) 'Praise the Lord' (Ps. 148.1), in the following way: First the (hymns) for Resurrection, and then, following those for Resurrection, those for Repentance, and (after) those for Repentance, those for the Cross, and (after) those for the Cross, those for the Apostles, and (after) those for the Apostles, those for the Saints, and (after) those for the Saints, those for the Hierarchs and Fathers and Female Martyrs, and then again those for the Soul, and (after) those for the Soul, those for the Theotokos, and in this way should be completed the (whole) mode, and all eight modes should be written down in this manner. – But as we were copying these perpetual (hymns) widely and richly (and) we could not find such a rich book in Greek in which all (hymns) would have been written altogether so that we could have copied them one by one, therefore we have written the remainder and even more at the end of the second book, and now, these are the main ones and the foundations, (those) which are written in the minor book. But if a hymn consisting of pairs (of chant and antiphon) is found in the big book, this must not be copied separately, but if it be a (hymn) for the Resurrection, it should follow those for the Resurrection, and if (it be one) for Repentance, (it should follow) those for Repentance, and (one) for the Cross (should follow) those for the Cross, and (one) for the Apostles (should follow) those for the Apostles, and (one) for the Saints (should follow) those for the Saints, and (one) for the Hierarchs and Fathers (should follow) those for the Saints (!), and (one) for the Soul (should follow) those for the Soul, and (one) for the Theotokos (should follow) those for the Theotokos. It is appropriate to write it down in this way (no matter) whether it may belong to the (canon of) odes or to the *prokeimena*, and likewise the eight modes (and) odes are to be written down in this manner and divided into pairs, and all headings are to be put in rubrics because those that are not (subsumed) under a *heirmos* are *idiomela*, and therefore it is appropriate to apply rubrics. Those again that are (subsumed) under a *heirmos* are likewise to be copied in pairs as usual. And when they are finished, (continue) as follows.

It is clear that here, rubrics are meant to mark headings, a function that has well been established in the typology outlined above. In another autograph of his, Ivir. georg. 65, George mentions a somewhat different function of red ink in one

of his colophons. The codex, which comprises a *menaion* for the months of January and February, is introduced by an index of the canons for the saints and feasts of January (fols. 1ʳ–2ʳ), to which George adds:

> There will also be (some) *stichera* of this month that we have left over; they were not written among these Greek *stichera* of ours. At the end I found (some) other Greek *stichera*, too, and I have written them down there. (You) now, good brother who will copy (this), check what day you will be copying and copy them together with the *stichera* of that day. And these *stichera* and the remaining (ones), look, are written in the middle of these quires, and the number of the day that they should be ascribed to is placed (lit. sits) in the margin, and the name of the saint (is) in rubrics. And <now> pray for us, (you) whoever come across this work of ours. I had great zeal but the mud of my affairs did not permit me to do it properly. And no one of you should Hellenise something and look for the mode of certain canons as if they were not in that mode in Greek – do not look for it, I have translated certain canons in the mode I liked, but if a word was appropriate and fitting, the words are the same as they were in Greek. Only a small amount of canons did not go well.

Here, it is the function of highlighting the names of saints that a given hymn is addressed to; another function that has widely been adapted in the production of Georgian *menaion* codices.

A third function of rubrics is insinuated by George in a minor note that was copied from his model to Ivir. georg. 56, a *menaion* of May and June that must have been written down after his death, given that it contains a memorial office for George himself (on May 13, together with that of Euthymius). The note appears in the outer margin of fol. 52ʳ, with the first half written in rubrics itself, and reads: 'In my canons, beloved one, do not look for initials; I am interested in words and not in red letters'. Here, George is obviously referring to the usual practice of marking the first letters of a hymn in red and, if present, of the *heirmos* that determines its melody; this is clearly visible in the page in question, which contains the beginning of the canon for Thalelaeus the Unmercenary of Anazarbus (May 20). It seems that the copyist added the markings in the normal way, thus 'reacting' to George's warning.

3 Hidden colophons

Marking individual letters that represent the initials of hymns and the like in red was common practice indeed, not only on Mt Athos, and the liturgical manuscripts abound in such rubrics. A very different use of red ink for individual letters is found in at least four other Georgian codices of the Iviron collection, namely, Ivir. georg. 4 (fol. 2ʳ⁻ᵛ), 9 (fols *8ᵛ–*9ʳ), 16 (fols 299ᵛ–300ʳ), and 61

(fol. 1^{r-v}). Here, a series of several letters scattered over the main text constitute, in their given order, a subtext in its own right, which may be styled a 'hidden colophon', given that it represents, just as usual colophons, a reference of the scribe to the codex he was writing and the persons involved in its production. To illustrate this, it may be convenient to investigate the four examples in more detail.

3.1 Ivir. georg. 9

Of the four codices, Ivir. georg. 9 is the oldest (of 977 CE) and peculiar in being written in *asomtavruli* majuscules throughout (see 2 above). According to its main colophon (fols 375^{r}–377^{v}), it was copied in Oshki under commission of John Tornikios, a prosperous Georgian general in the Byzantine army who later became a *synkellos* (assistant of the Patriach) in Constantinople and contributed a lot to the erection of the Iviron Monastery before his death in 985 CE, and his brother John Varazvače. The codex was obviously written by three different scribes, two of which left their names in usual colophons, namely, one Sṭepane and one Davit; the first one reads (fol. 374^{v}): 'Jesus, Son of God, have mercy on the soul(s) of John and (mine), Sṭepane, who wrote this book. If anything is missing, forgive me in name of God.' In contrast to this, Davit's role was obviously restricted to writing down the commissioners' colophon, as he states (fol. 377^{v}): 'This colophon was written by me, unworthy Davit, sister's son of the godly father Mikael Modreḳili. If I missed anything by negligence, please forgive me in the name of God and pray for me.'[15]

Different from Sṭepane and Davit, the third scribe, who must have been responsible for the first part of the codex,[16] provided his colophon not as an attachment to the main text but in form of individual letters scattered about the first two folios of the fourth quire of the codex (fols *8^{v} and *9^{r}, see Fig. 1),[17] within a *Sermo de ieiunio et purificatione animae et mali oblivione* attributed to John Chrysostom (CPG 5175.3). Taken together, they yield the sentence გიორგი

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15 Mikael Modreḳili was the most famous Georgian hymnographer of the tenth century; several hymns of his are included in George the Athonite's *paraklētikē* in Ivir. georg. 45.

16 The actual switch from the first to the second scribe is hard to determine, given that there is not much difference in the style of the majuscules throughout the codex. I presume fol. 244^{v} to be the first page written by Sṭepane.

17 The first two quires of the codex are lost so that it begins within the third quire. In its present state, quires IV–VII are bound upside down and in reverse order; fols *8^{v} and *9^{r} are therefore numbered 15^{r} and 14^{v}, respectively.

მწერალი ცოდვილი გვედია ლოცვასა ღმრთისათჳს, which may be rendered as 'Giorgi the sinful writer is entrusted to your prayer, for the sake of God'. The hidden colophon thus provides the name of a Giorgi for the first scribe; a fact that has escaped the notice of all former cataloguers.[18] In the case of the catalogue produced in Tbilisi in 1986, this may easily be explained by the fact that this catalogue was based not on inspection *in situ* but on microfilms in black-and-white which conceal the change of the ink colour.[19]

3.2 Ivir. georg. 4

Ivir. georg. 4 is the middle part of a trias of codices that contain the complete translation of John Chrysostom's Commentary of the Gospel of Matthew (90 chapters). Together with Ivir. georg. 13 (as the first part) and 10 (as the last part),[20] it was produced in 1008 in the 'abode of the Holy Theotokos', i.e. the Iviron Monastery, on Mt Athos by the three scribes Iovane Grʒelisʒe ('John son of Grʒeli'), Iovane Okroṗiri (lit. 'John Chrysostom'!) and Arseni Ninoċmideli (of Ninotsminda), as the scribes' colophons tell (Ivir. georg. 4, fol. 263ʳ; Ivir. georg. 10, fol. 337ᵛ; Ivir. georg. 13, fol. 259ʳ⁻ᵛ).[21] The author of the Georgian translation was Euthymius the Athonite who was directed by his father, John, as the commissioner, as the latter's lengthy colophon on fols 331ᵛ–337ᵛ of Ivir. georg. 10 tells us; Euthymius himself left his translator's colophon (written by the scribe, Iovane Grʒelisʒe) on fol. 331ʳ: 'Glory to you, Holy Trinity, one God and one essence, accomplisher of all good, who deemed me, the unworthy one, worthy

18 Cagareli 1886, 89–91, no. 69; Blake 1931–34, [1], 329–339; Axobaʒe et al. 1986, 34–49.

19 Axobaʒe et al. 1986, 44. The author of the description (N. Čxiḳvaʒe) rejects the former proposal by D. Bakraʒe (1889, 243) and T. Žordania (1892, 107) that there were two scribes, one Ioane and one Sṭepane, the latter styled a 'sacristan' (*deḳanozi*; the catalogue erroneously uses the plural as if both scribes had been sacristans) and insists upon Sṭepane being the sole scribe of the main text.

20 The present shelf numbering system was developed by R. P. Blake in the course of his cataloguing. It is based upon the mere size of the codices, without consideration of contents, internal relationships, and the like.

21 The dates given are consistent: Ivir. georg. 13, fol. 259ᵛ, names the 'year from Creation' (i.e., *annus mundi*) 6516, which yields 1007–1008, and the 6th indiction, which fits with the same date. In addition, it names the year 983 'from the Crucifixion', the Georgian 'year from Creation' 6612 (which equals the Greek 6516), and the 'chronicon 228 in the 13th cycle', which again yields 1008. Ivir. georg. 4, fol. 263ʳ, names only the 'chronicon 228'. In Ivir. georg. 10, fol. 337ᵛ, the colophon breaks off before the date due to the loss of the last folio. Cf. Gippert 2018, 145 as to the Georgian time reckoning system.

of accomplishing the translation of this holy Gospel book. — Holy Evangelists and St. John Chrysostom, intercede before God for my father John and have mercy on me, too, your slave Euthymius, unworthy and liable of numerous sins, amen!' On fol. 2ʳ⁻ᵛ of Ivir. georg. 4, the same scribe, Iovane Grӡelisӡe, concealed an invocation for Euthymius, arranged in a similar form as the hidden colophon of Ivir. georg. 9; it reads (Fig. 2): ღმერთო აკურ(თ)ხე ეფთჳმე ამენ – 'God, bless Euthymius, amen!'

3.3 Ivir. georg. 16

Ivir. georg. 16 contains another major work of John Chrysostom's, namely, his Commentary of the Gospel of John, as well translated by Euthymius the Athonite. The codex is without a dating; from the final colophon (fol. 389ᵛ), however, it is clear that it was copied by one Mikael from a model that was written in Jerusalem by a certain Esṭaṭi. In a set of short additions to the text, the scribe added invocations for Leonṭi, the archbishop of Ruisi, who is likely to have been the commissioner of the codex; e.g., on fol. 55ʳ, we read 'Lord Jesus Christ, have mercy on and exalt in both lives Leonṭi, archbishop of Ruisi, and forgive him all his guilts' (comparable additions on fols 84ʳ, 245ᵛ, 322ʳ, 330ʳ, 338ʳ, 352ᵛ, 368ᵛ, 386ʳ, all in red ink). In one case, on fols. 299ᵛ–300ʳ, a similar invocation is spread in individual red letters across the main text; it reads (Fig. 3): ქ(რისტ)ე აღიდე ლეონტი მროელ მთავარებისკოპოსი ა(მე)ნ – 'Christ, exalt Leonti, the archbishop of Ruisi, amen!' With the repeated mention of Leonṭi Mroveli, the compiler of the Georgian chronicle *Kartlis Cxovreba*, the codex can safely be dated to the second half of the eleventh century.

3.4 Ivir. georg. 61

The case of Ivir. georg. 61 is harder to assess. The codex, which on its 154 folios contains the larger part of a *menaion* for the month of August with additional *stichera*, has no normal colophon that would tell about its provenance, date, or scribe; from its content and its structure, it is probable, however, that it was produced as a copy of a (lost) autograph by George the Athonite in the eleventh–twelfth centuries. Unfortunately, it is highly lacunose: taking its quire numbering as the basis, a total of 37 quires must be missing at its beginning, which suggests that it once comprised not only the missing seven first days of August but rather one or two preceding months more. It is all the more welcome that despite of being heavily damaged and partly covered by a paste-on label to

protect its torn outer edge, just the first folio that has been preserved (fol. 1ʳ⁻ᵛ) provides some letters in red ink that may be taken to represent a hidden colophon. What can be made out today are, in the given order, the letters *c̣-m-d-ma* on the recto and *m-e-x-e-ǵ-a-v-sa-x-l-m-o-gam-sa-šen-s-a-u-ǵirs-a-mo-n-a-sa-a-s-c̣-i-n-a-š-e* (Fig. 4). Considering that the saint commemorated in the surrounding text is the apostle Matthias (in Georgian *maṭatia*), the successor of Judas Iscariot who was celebrated on Aug. 9, we may tentatively restitute this to read წმ<ი>დ<აო> მა<ტათია> მე<ო>ხ ეყავ სახ<ე>ლმო<დ>გამსა შენსა უღირსა მონასა <ამ>ას წინაშე <ღ(მერთის)ა>, which would mean something like 'St Matthias, intercede for your namesake, this unworthy monk, before God!' If this is correct, the colophon most likely yields us the name of the scribe who took the opportunity to mention himself in connection with his biblical namesake. It is important in this context that other codices containing the commemoration of the apostle on Aug. 9 (Jerusalem, Greek Patriarchate, georg. 107, fol. 231ʳ⁻ᵛ; Mt Sinai, St Catherine's Monastery, georg. 92, fol. 384ʳ⁻ᵛ, and georg. 56, fol. 83ʳ) do not contain the corresponding rubrication.

4 Conclusion

The four Georgian codices of the Iviron Monastery on Mt Athos reveal the practice to insert secondary information concerning the manuscript in question and the people involved in its production by applying red ink to a sequence of individual letters throughout one or two pages. The hidden 'colophons' thus produced may refer to the actual scribe (Ivir. georg. 9 and 61), the author or translator of the given text (Ivir. georg. 4) or the commissioner of the codex (Ivir. georg. 16). It would certainly be worthwhile investigating whether this practice extended beyond the Athos collection, beyond the time frame of the tenth–twelfth centuries, and beyond Georgian.

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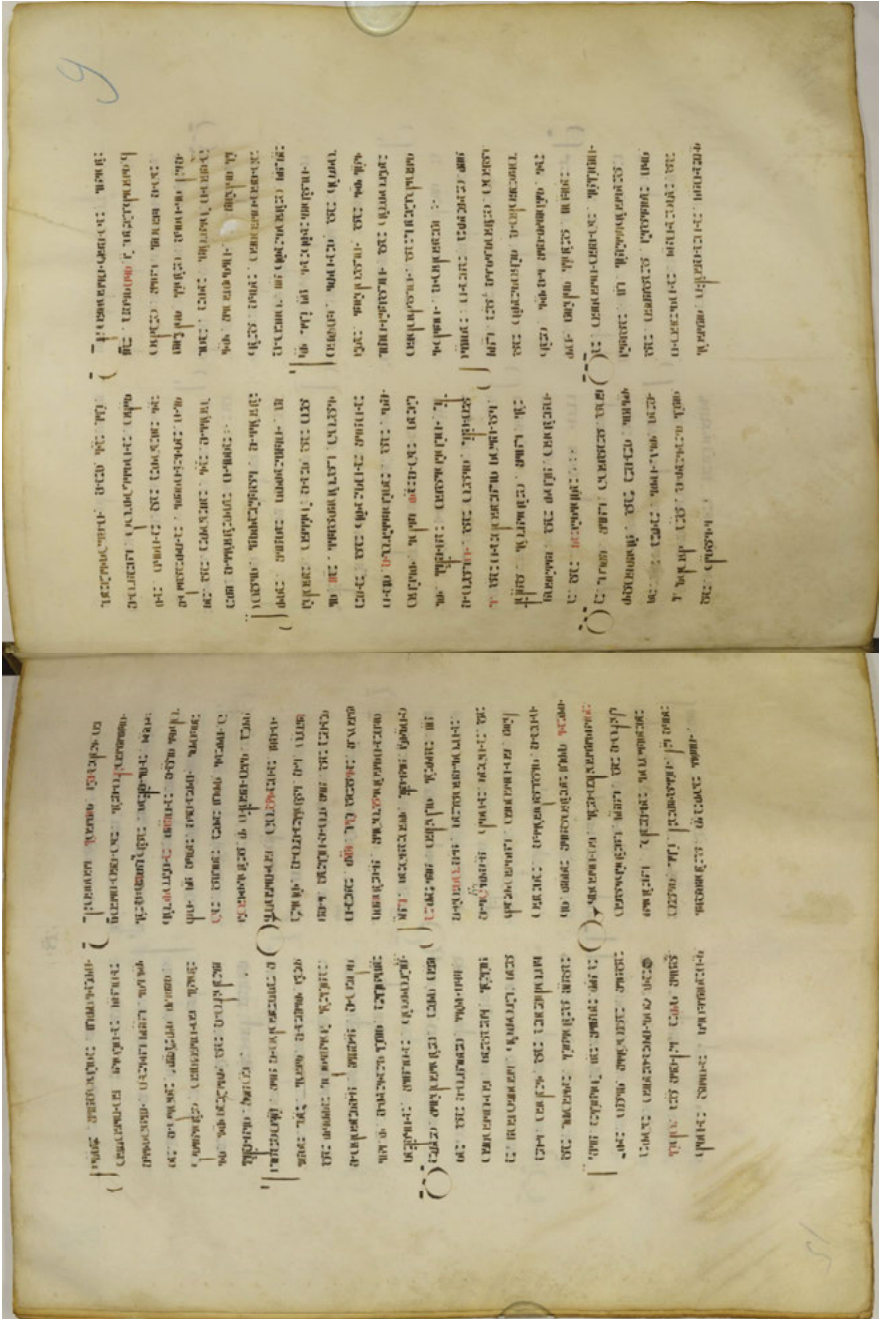
Fig. 1: Hidden colophon in Ivir. georg. 9, fols *8ᵛ–*9ʳ. © Iviron Monastery, Mount Athos.
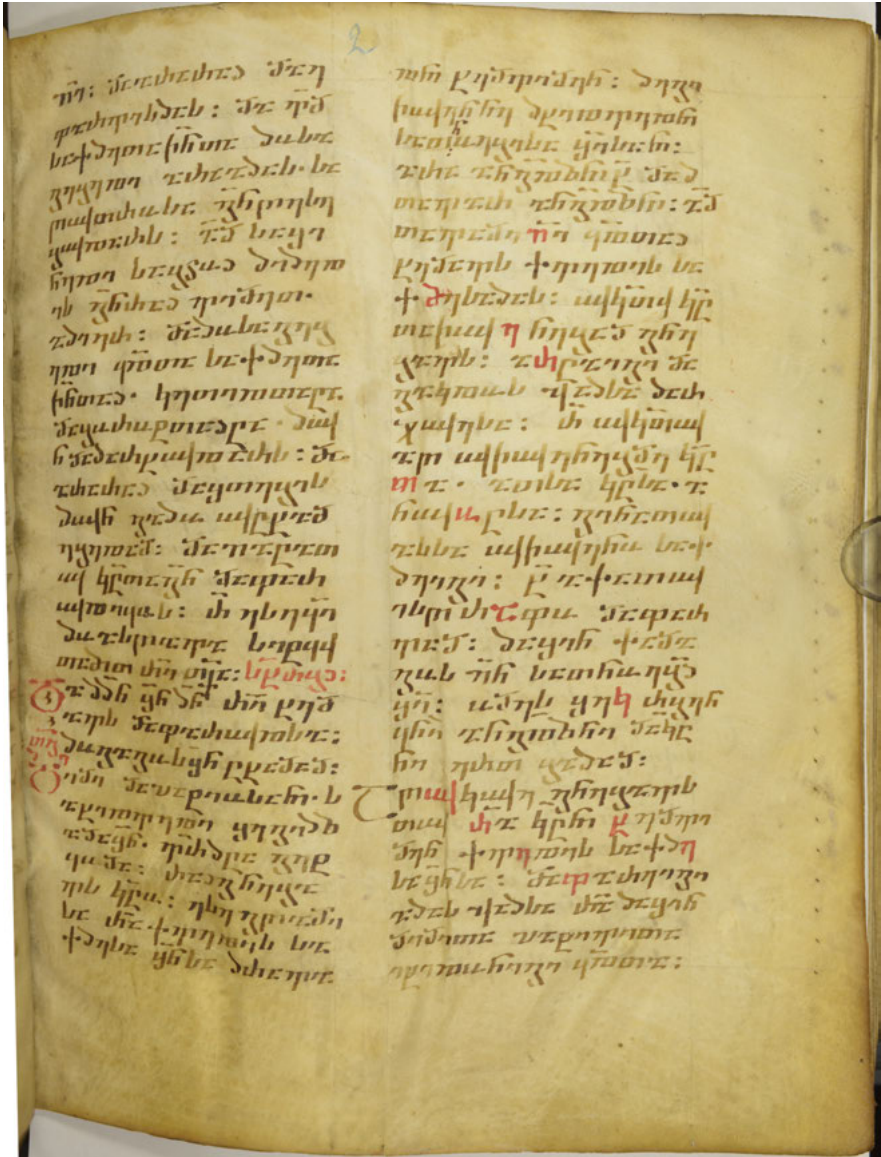
Fig. 2a: Hidden colophon in Ivir. georg. 4, fol. 2ʳ. © Iviron Monastery, Mount Athos.
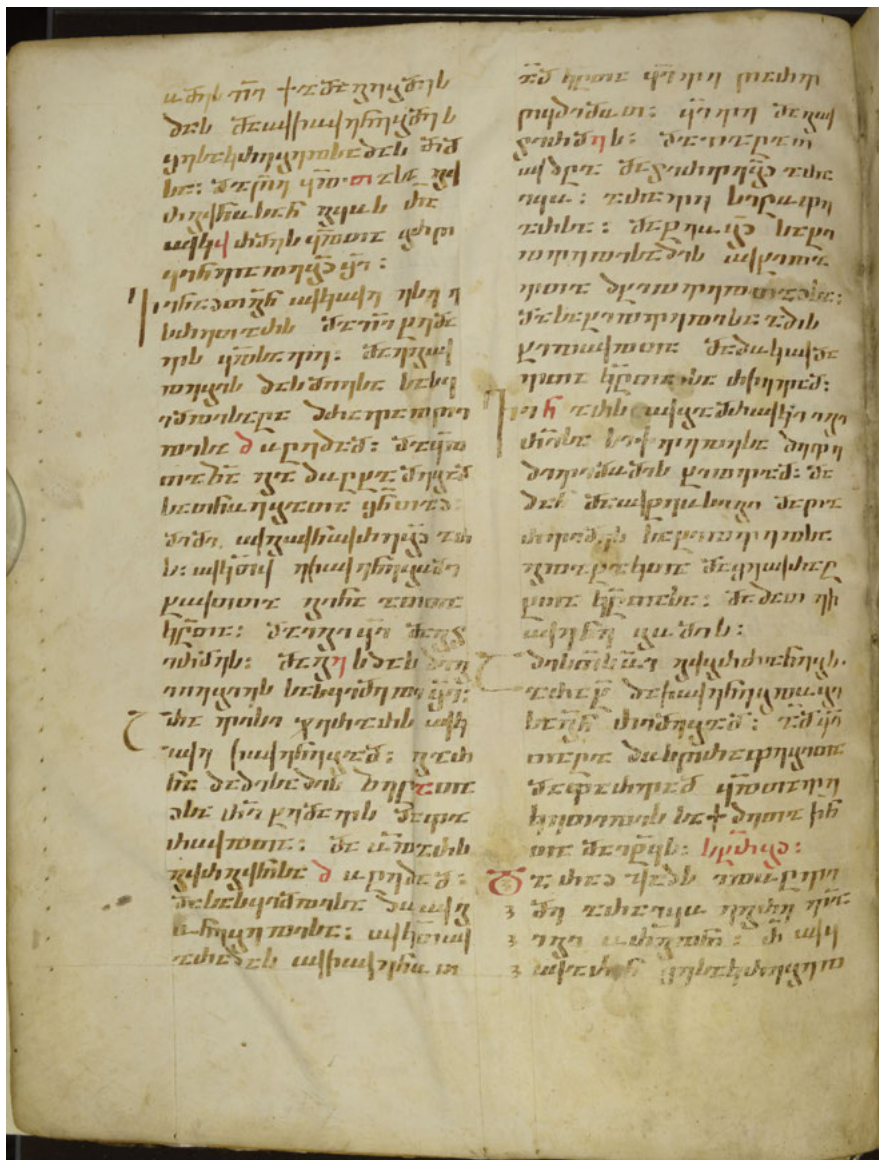
Fig. 2b: Hidden colophon in Ivir. georg. 4, fol. 2ᵛ. © Iviron Monastery, Mount Athos.
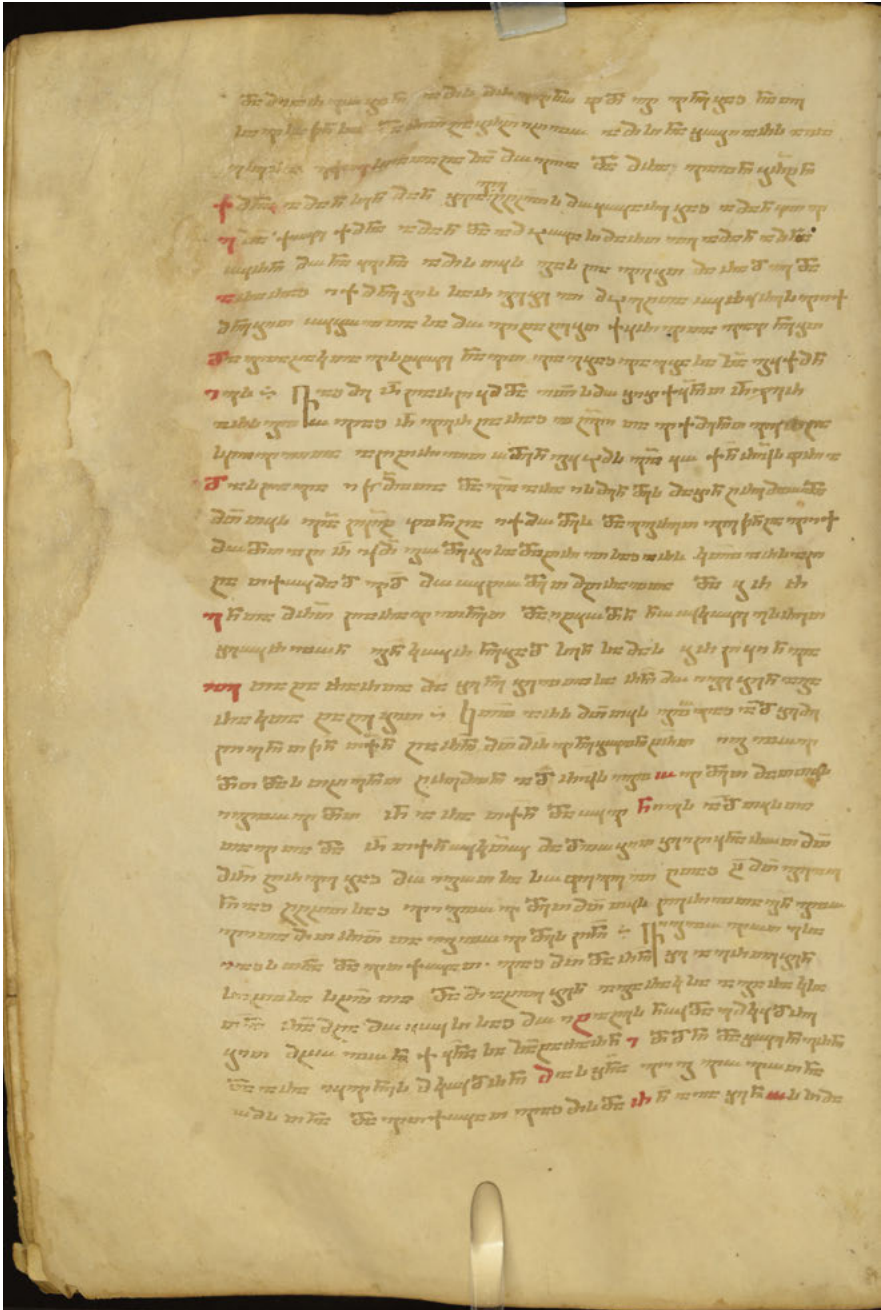
Fig. 3a: Hidden colophon in Ivir. georg. 16, fol. 299ᵛ. © Iviron Monastery, Mount Athos.
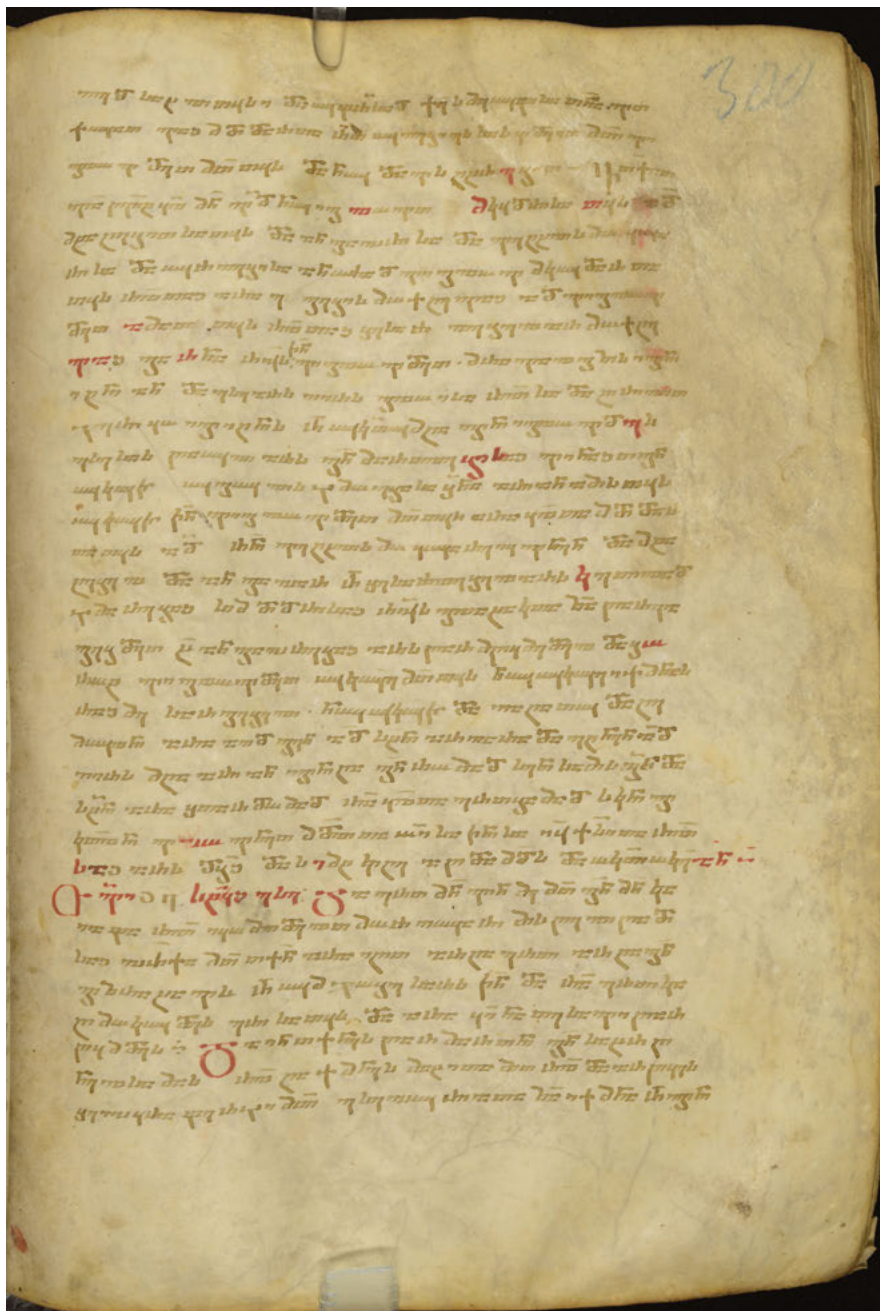
Fig. 3b: Hidden colophon in Ivir. georg. 16, fol. 300ʳ. © Iviron Monastery, Mount Athos.
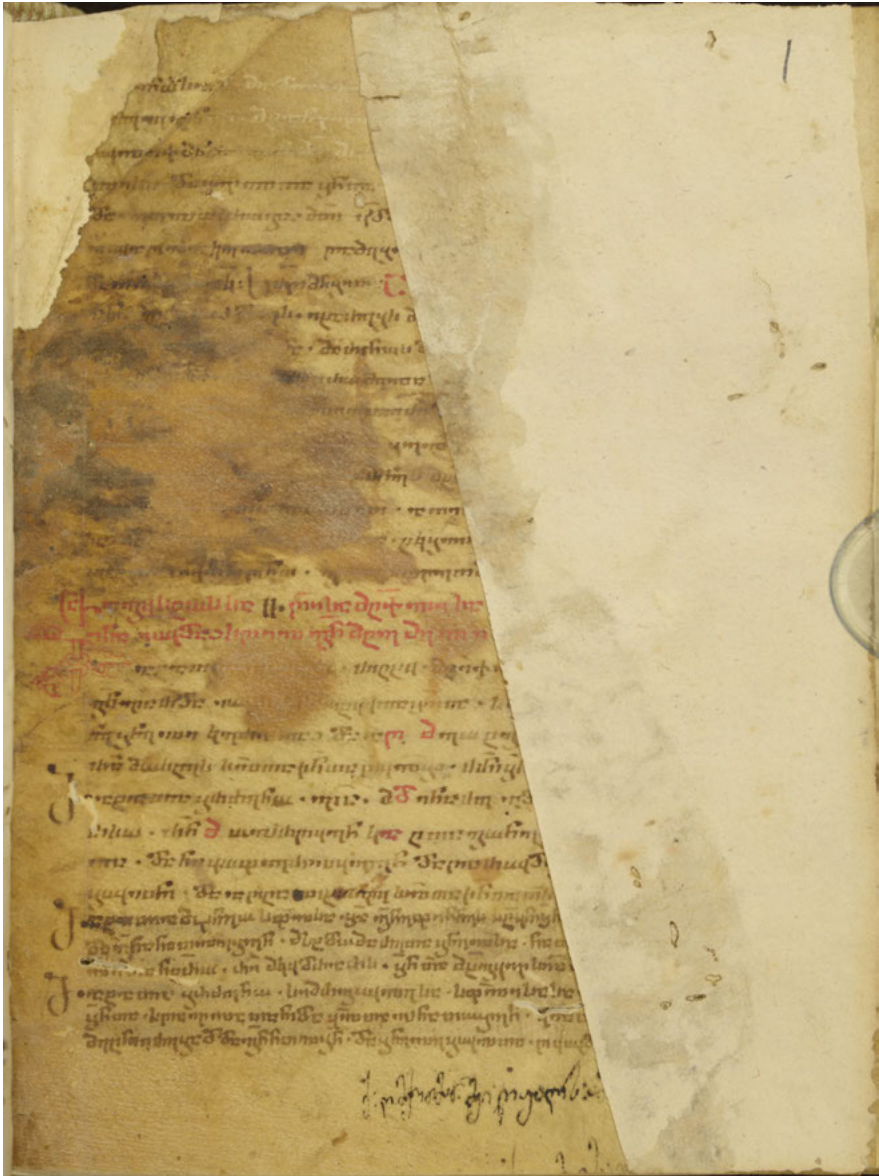
Fig. 4a: Hidden colophon in Ivir. georg. 61, fol. 1ʳ. © Iviron Monastery, Mount Athos.
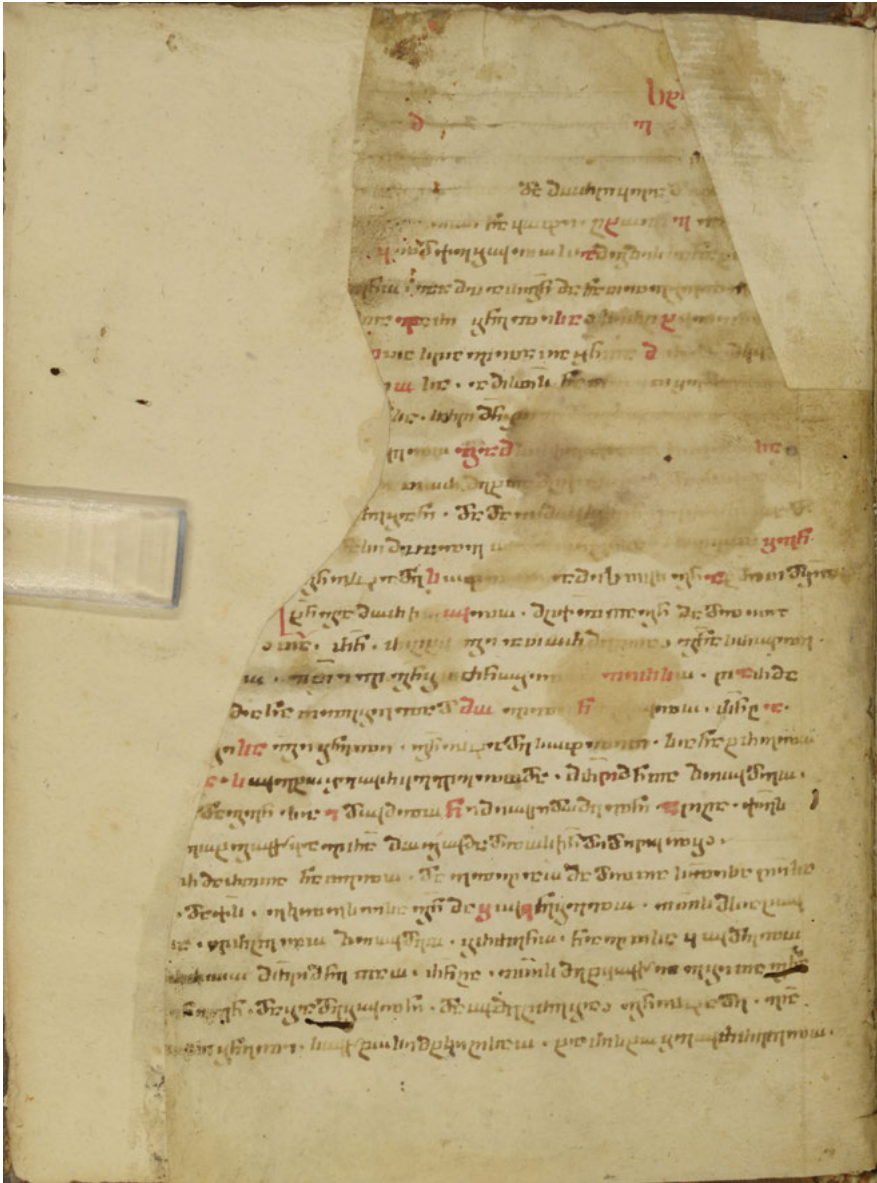
Fig. 4b: Hidden colophon in Ivir. georg. 61, fol. 1ᵛ. © Iviron Monastery, Mount Athos.

Volker Grabowsky

Sealed Manuscripts in Laos: New Findings from Luang Prabang

Abstract: This article discusses two palm-leaf manuscripts from the former Lao royal capital of Luang Prabang which contain royal decrees. Both manuscripts are dated from the mid-nineteenth century when the kingdom of Luang Prabang was still a tributary state of Siam. Attached to the manuscripts are well preserved royal seals authenticating and legitimising the royal decrees sent to provincial governors. The materiality and iconography of the seals as well as the contents of the decrees are analysed against the background of the use of seals in the manuscript culture of Laos and neighboring Tai speaking regions.

In early August 2013, a team of Lao researchers made an astonishing discovery in the *Sala Hong Tham* (lit., 'Hall for keeping Buddhist scriptures') of Vat Saen Sukharam, one of the most prominent monasteries in Luang Prabang, during an inventory of manuscripts. In the bottom drawer of one of the cabinets were found two palm-leaf manuscripts, each of which bearing royal seals made of stick-lac still firmly attached to the palm leaves. This type of sealed manuscript is very rare in the Thai and Lao world and has so far been little studied.[1] Thus, given its special historical value, it was decided to transfer these two sealed manuscripts to the collection of the monastery's museum, a building next to the abbot's abode.[2]

In this article I will give first a brief overview of the use of seals as symbols of authority in written documents from Laos and present-day Northern Thailand. Thereafter, I will discuss the two manuscripts, dated from the mid-nineteenth century, with regard to their materiality followed by an analysis of their contents in the context of other extant sources from the same period. Finally, an annotated English translation of the manuscripts will be provided.

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1 Sealed palm leaves were not unknown in Tamil manuscript culture as Eva Wilden shows in her analysis of the use of palm-leaf as writing support in Tamil literature in the first millennium. See Wilden 2012/2013, 71.

2 As for the manuscript collection of Vat Saen Sukharam, see Bounleuth 2015.

1 Seals as symbols of authority in ancient Laos and Northern Thailand

As the French historian and epigraphist Michel Lorrillard has shown, the use of seals as symbols of royal authority in Laos dates back to the fifteenth century when the kingdom of Lan Sang, founded in 1353, became a Chinese vassal state.[3] Since the founding in June 1404 of the Pacification Commission (*xuanwei si*) of Laowo, as the Chinese called the Lao kingdom of Lan Sang (lit., '[Country of] the Million Elephants'), tribute missions were regularly sent to the Imperial Court until the early seventeenth century.[4] Only the bearers of seals issued by the Ming Court were recognized as rightful rulers. The unauthorized use or destruction of such seals would result in severe punishment.[5] When issuing memorandums for the Imperial Court, the rulers of Lan Sang and other Tai vassal states would authenticate them with a Chinese seal.[6] Lorrillard provides a few examples of Chinese seals used by Lao rulers, including one of nine or ten characters engraved in a cartouche of a stone inscription dated 1577.[7] The use of Chinese seals by Lao kings appears until the early nineteenth century, but it still needs to be investigated how genuinely Lao inscribed seals – the earliest of which date from the seventeenth century – have evolved from the Chinese model.

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3 Lorrillard 2015, 8–10.

4 The *Ming Shilu* ('Veritable Records of the Ming Dynasty') has a total of 96 entries recording relations between Ming China and its Lao vassal state of Lao-wo. Most of the entries are from the fifteenth century with only seven from the sixteenth and four from the seventeenth century. See Wade 2005.

5 The *Ming Shilu* reports, for example, that '[i]n the year Chenghua 7, 5th month, on *bingshen* day (1471), the official seal of the Military-cum-Civilian Pacification Commission of Laos was burnt and destroyed by bandits (the Kaeo). Officials were sent to find out the truth [before] casting [another one] for them', quoted from Liew-Herres 2006, 18.

6 Though no original memorandum from Lan Sang or Lao-wo has been found so far, at least one manuscript copy of a memorandum from the Pacification Commission of Cheli – the Tai Lü polity of Sipsòng Panna in southern Yunnan – situated to the north of Lan Sang has been preserved in the archives of Toyo Bunko in Tokyo. It is a bilingual (Chinese-Tai) memorandum sent by the ruler of Cheli, Tao Sam Pò Lütai (r. 1457–1497) to the Ming Court. The Tai version of this document is written in the so-called tamarind pod script (*tua aksòn fak kham*) and bears the ruler's seal at the bottom. See Liew-Herres et al. 2012, 353–357.

7 This inscription has been found at Don Hon, a small island situated in the Mekong river 150 km downstream of Luang Prabang. Since 1915 this inscription has been preserved in a museum in Hanoi. See Lorrillard 2015, 13.

A seal is called *chum* (จุ้ม) in ancient Tai. The Shan rulers (or *cao fa*) used seals to issue official letters and often appointed their main wives to keep the seals and to stamp documents with these seals.[8] The owners or keepers of such seals were called *chao chum*, literally 'Lord of the Seal', and exercised considerable political influence. The Lan Na and Sipsòng Panna chronicles call inscribed seals *lai chum* (ลายจุ้ม), or refer to them when accompanied by an additional written paper document as *lai chum lai chia* (ลายจุ้มลายเจี๋ย).[9] This term appears in twenty-three inscriptions (dated between 1560 CE and 1638 CE) scattered over the Lao province of Vientiane and the Thai province of Nòng Khai.[10] The *lai chum lai chia* were kept in the *hò chia kham lüang* (หอเจี๋ยคำเหลือง) or '[Archives of the] Golden Pavilion' at the Tai ruler's palace.[11]

In the following several examples of inscribed artefacts bearing seals are given. Iconographic features of these seals are discussed to put the two sealed palm-leaf manuscripts into wider perspective. A royal seal that was once attached to a silver plate inscription has been preserved in Northern Thailand (see Fig. 1). The seal, issued by Queen Wisutthithewi,[12] has a lotus design on the front and the queen's official name, Somdet Chao Ratchawisut (สมเด็จเจ้าราชวิสุทธิ์), on the back. The seal was made of dark brown stick-lac, 5 cm in diameter. The silver plate resembling the shape of a palm leaf is now broken into two pieces. It is inscribed on both sides in Thai Nithet script and Tai Yuan (Lan Na Thai) language. The inscription, dated 1567 CE, contains a royal decree exempting the inhabitants of a cluster of five villages in a district south of Chiang Mai from corvée labour in recognition of their taking care for a temple-monastery (*wat*) under royal patronage.[13]

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8 Somphong (2001, 240) reports that in the Shan state of Hsenwi the governors of subordinate *müang* had to pay obeisance to the *nang chum* when sending tribute to the court of the *chao fa*.

9 Liew-Herres and Grabowsky 2008, 41; Liew-Herres et al. 2012, 43.

10 Lorrillard 2015, 20, n. 29.

11 See the mention of this expression in the Chiang Mai Chronicle (Wyatt and Aroonrut 1995, 200).

12 Queen Wisutthithewi (also spelled Wisutthathewi) ruled the kingdom of Lan Na from 1564 until 1578. She was the last ruler of the Mangrai dynasty before the country was placed under Burmese suzerainty. See Sarassawadee 2005, 116.

13 Sarassawadee 2005, 118; see also the German translation of the inscription in Grabowsky 2004, 448.

Fig. 1: Royal seal of Queen Wisutthithewi of Chiang Mai, dated 1567 CE. Courtesy of Dr. Apiradee Techasiriwan, Archive of Lan Na Inscriptions, Social Research Institute, Chiang Mai University.

Three royal seals from the Tai Khün principality of Chiang Tung in eastern Burma, an area which belonged to the kingdom of Lan Na until the mid-sixteenth century, have recently been published. All three seals are made of dark brown stick-lac but are no longer attached to their original object, which might have been a plate made of silver or another type of metal or a palm leaf. The two seals, each measuring 6–7 cm in diameter have the exalted Khmer-Pali title of the Chiang Tung ruler – *Somdet Kemādhipatirājā* (สมเด็จเขมาธิปติราชา) – inscribed in Tamarind Pod (*Fak Kham*) script on the back. Both seals bear the images of two peacocks facing each other. As the peacock became a state symbol emblazoning the ruler's seal only after the Burmese conquest (1558),[14] the seals probably date from the second half of the fifteenth or first half of the sixteenth century. The third seal, measuring 4 cm in diameter, bears on the front side of the image a war elephant adorned with a *howdah* on its back, while the reverse side has been inscribed with the words *Phraya Khaek Müang Khemmarat* (พระยาแขกเมืองเขมรัฐ), the title of the liaison officer, a high-ranking minister in charge of foreign affairs.[15]

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14 Originally the special animal of Chiang Tung was the lion while the neighbouring polity of Moeng Laem chose a golden swan. See Lamun 2007, 36.

15 The three seals are reproduced in black and white images and documented in detail in Panpen Kruathai and Silao Ketphrom 2013, 289–309.

Fig. 2: Royal seal from Chiang Tung, Burma, *c.* sixteenth century, front and back sides (Panpen and Silao 2013, 289).

An elephant also features as the iconic symbol on the front sides of two seals, each of which are attached to mid-nineteenth-century royal edicts written in Lao Buhan (Old Lao) script on palm-leaf.[16] The back sides of the seals have texts inscribed in Lao Buhan script as well. The inscription of the first seal reads *Braḥ Rāja-ājñā* (พระราชอาชญา), meaning 'Royal decree'.[17] The second seal bears the inscription *Phaya Luang Chum Phu Nòi Soek Khua* (พญาหลวงจุ้มพูน้อยเสิกขวา), 'The great seal-carrying official of the Phu Nòi, right-side combat'. This title most probably signifies a high-ranking Lao military officer in charge of dealing with the Phu Nòi, a Tibeto-Burman minority living in the remote province of Phong Saly near the Lao-China border. French social anthropologist Vanina Bouté discovered these two sealed manuscripts, along with several others, all made of dark brown stick-lac, during her field research on the ethnogenesis and integration of this group, which has adopted various features of neighbouring Tai societies, including Buddhism (see Bouté 2018).

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16 Of the manuscripts to which the seals were originally attached only fragments are left which do not contain any dates. However, there are fragments from other manuscripts kept by her owner in the same small box which have dated from the year CS 1206 (1845/46 CE). I am grateful to Vanina Bouté for sharing with me the information contained in these fragments.

17 *Braḥ* (Lao: *Pha*) is an honorific prefix, *rāja* (Lao: *lasa*) means 'king', and *ājñā* (Lao: *atnya*; Pali: *āñā*) means 'command, order, or authority'.

Fig. 3: Seal attached to a palm-leaf, from a Phu Nòi (Phunoy) village in Phong Saly province, Laos; courtesy of Dr. Vanina Bouté from the Centre Asie du Sud-Est (CNRS-EHESS).

2 The sealed manuscripts from Vat Saen Sukharam

Let us now return to the two sealed manuscript discovered at Vat Saen Sukharam. The manuscript EAP691_VSS_1_0797 comprises only one single folio written in Lao Buhan script on both sides (recto: 4 lines, verso: 3 lines). The leaf is 57.4 cm long and 5.2 cm wide. Attached to the left-hand margin of the recto side is a seal stating: *Pha Akkha Mahesiya* (ພະອຄຸຄະມະເຫສິຍາ, literally, 'Her Majesty the Principal Queen'). The round-shaped seal has a diameter of 5.5 cm and the seal wax spills out to the verso side of the leaf. Furthermore, on the right-hand margin of the recto side is a small piece of white paper (measuring 3 × 4.4 cm) on which the following text is written with blue ink in modern Lao script: '1976 (pink ink), [the manuscript is dated] CS 1226, BE 2407, 1864 CE (112 years ago)' (1976 ເມື່ອ ຈ.ສ. 1226 ພ.ສ. 2407 ຄ.ສ. 1864 [ໄດ້ 112 ປີ]). This means that the manuscript which contains the text of a royal decree was issued by the Queen of Luang Prabang in 1864 and rediscovered in 1976, probably by Pha Khamchan Virachitto (1920–2007), the then abbot of Vat Saen Sukharam. The palm-leaf folio has ten holes of different sizes which slightly affect the legibility of a few passages.

The palm-leaf manuscript EAP691_VSS_1_0798 comprises five folios written in Lao Buhan script on both sides (6 lines for each side), except for the last folio where only the recto side is written on (5 lines) and the verso side is left blank. The five leaves are of the same size and measure 56.8 cm in length and 5.3 cm in width. Attached to the left-hand margin of the recto side of the first palm-leaf folio is the front side of a seal stating: *Braḥ Rāja-ājñā* (พระราชอาชญา), meaning 'royal decree' or 'royal order'. The octagonal seal measures 5.8 cm in diameter and encompasses all five folios. The reverse of the seal attached to the verso side of the fifth and last folio does not bear any symbol. On the right-hand margin of the recto side is a small white piece of paper (measuring 3.8 × 4.3 cm) on which the following text is written in blue ink: '1976 (pink ink), [the manuscript is dated] CS 1219, BE 2400, 1857 CE (119 years ago)' (1976 ເມື່ອ จ.ส. 1219 พ.ส. 2400 ถ.ส. 1857 [ໄດ້ 119 ปี]). This means that the manuscript which contains the text of a royal decree was issued in 1857 by the King of Luang Prabang (i.e. Chantharat, r. 1852–1871) and, like the first manuscript, was rediscovered in 1976, probably by Pha Khamchan Virachitto himself. The fourth palm-leaf folio has one 1.5 cm long crack/hole which runs over the fourth line but only slightly affects the legibility of some words. Though both manuscripts are written in the secular old Lao script, the final consonants of a number of words are borrowed from the subscript variants of the corresponding Dhamma (religious) script characters. The two seals do not only differ with regard to their shapes, circle (Queen) versus octagon (King), but also with reference to their colours. Though both seals are made of dark brown stick-lac, only the front side of the King's seal is gilded, emphasizing his highest authority as 'Lord of the Land' (*chao phaendin*) and 'Lord of the Great Life' (*chao maha sivit*).

3 Contents of the royal decrees

The Queen's decree is rather short. It stipulates the issuing of letters to a number of officials admonishing them to act according to the royal orders. Most of these officials hold the high rank of *Saen* (literally, 'one hundred-thousand'), while others are of slightly lower ranks, such as *Thao* or *Phia*. Their responsibilities are unspecified with the exception of Thao Khamphan who is identified as *lam* (ล่าม), a term which in modern Thai and Lao refers to a translator or interpreter, but in the traditional Tai polities signified the liaison officer in charge of taking care of visitors having an audience with the king.

The King's decree begins with his long, exalted title as Lord of the Kingdom of the Million Elephants and the White Parasol, which runs over more than one

line. The first part of the decree, running over the first two palm-leaf folios, deals with a legal conflict between a high-ranking official, Saen Phòng Si Mün, and many of the commoners (*bao phai*) who had originally been under his supervision. The commoners, liable to corvée labour, accused their patron (*mun nai*) of bad treatment, such as arbitrary punishment and unlawful seizure of property. Dating back to the reign of the previous king, Sukkhasoem (r. 1839–1850), the dispute was solved in 1857 by the incumbent ruler, King Chantharat (r. 1851/1852–1871) who decided to allow the four household clusters comprising 90 households (*lang hüan*) each to opt for alternative patrons. At the end, 78 households decided to stay with their old patron while the remaining 282 households opted for other patrons that they trusted more. Given the scarcity of manpower in pre-colonial Laos and most other parts of Southeast Asia, mistreatment of the common people by the aristocratic class had its limits. In general, commoners had considerable leverage for negotiation when being confronted with excessive demands from their patron; the choosing of new patrons as expounded in this royal decree from Luang Prabang also appears in nineteenth-century Siam whose ruler was the overlord of the King of Luang Prabang.[18]

The second part of manuscript EAP691_VSS_1_0798 continues to discuss the mutual dependence and respect for aristocratic officials (*thao khun*) and commoners (*bao phai*) and the need to treat the latter decently. This request is most strikingly expressed in the following appeal to the country's ruling class:

ถ้าและผู้ใดยังมานะกระด้างข้างแขง อยู่โดยเอาราชการสมค่าให้ด่า สมพอตีให้ตี สมพอผูกให้ผูกมาใส่ ราชการ ค้นมาเถิงหน้า เวียก แล้วให้แก่ใส่ราชการ อย่าเอาเบี้ยอย่าเอาเงิน อย่ารักเงินแสนไถ่ ให้รักไพ่ แสนเมือง หล้มให้พ้อมกันพาย หงายให้พ้อมกันขี่ <u>ให้เก็บผักใส่ซ้า เก็บข้าใส่เมือง</u> เมืองสันใด- จักเป็นราชการ สลองพระเด็จพระคุณคำหนุนพระราชสมภารเราพระองค์

If someone is still disobedient and stubborn when performing public work, then reprimand him when he deserves to be reprimanded, beat him when he deserves to be beaten, and tie him when he deserves to be tied [and] lead him to do his work for the crown. When he has been tied you must untie him after having reached the workplace so that he can do his work. Do not take his money. Instead of loving enthusiastically the people's money (*ngoen thai*), you shall love enthusiastically the people (*phrai müang*) [themselves]. If you have capsized you should be ready to row, if you are lying on your back you should be

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18 In fact, the kingdom of Luang Prabang comprising roughly the northern third of present-day Laos, was a vassal state of Siam since 1779. Whereas the Lao kingdoms of Vientiane and Champasak in the centre and the south of Laos lost their status as a tributary state, Luang Prabang retained its status until 1893 when the French seized control over all Siamese territories on the left bank of the Mekong River.

ready to ride (meaning: you have to stick together in good and bad times.) <u>Gather vegetables and put them into the baskets, gather subjects and put them into the *müang.*</u> As for any public work that will support the glory of His Majesty the King […] (fol. 3ᵛ, ll. 5–6)

The underlined phrase (in Thai/Lao: *Kep phak sai sa kep kha sai müang*) is widely regarded as a Northern Thai saying that characterizes the forced resettlement of war captives from regions in the present-day Shan State and Sipsòng Panna to present-day Northern Thailand during the late eighteenth and nineteenth centuries.[19] The saying was popularized by the late Kraisri Nimmanheminda who rendered it into English as 'Put vegetables into baskets, put people into towns'.[20] Turton suggests that the most literal translation is 'Gather vegetables (and/to) put [them] into basket(s), gather *kha*[21] (and/to) put [them] into the *müang*' (see Turton 2000, 16).

As Kraisri did not provide any written evidence for the saying, suspicions arose that the saying might even have been composed by Kraisri himself. However, the sealed manuscript EAP691_VSS_1_0798 found at Vat Saen Sukharam clearly confirms the authenticity of the saying which is also documented in another Lao royal decree from the same period. That decree is written on a white cotton cloth measuring 96 cm in width and 163 cm in length.[22] It is an official letter sent from the ruler of Luang Prabang (เจ้านครหลวงพระบาง), a vassal of the Siamese King, to Phrachaiyawongsa, the *uparat* or deputy governor of Müang Lan Mat, dated 'seventh month of the *ka pao* year [Cula]sakkarat 1215'

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19 See Grabowsky 1999 and 2004.

20 Kraisri 1965. See also Grabowsky 2001.

21 *Kha* (ข้า) is a generic term used by the lowland Lao to designate the autochthonous, predominantly Mon-Khmer speaking tribes of the highlands. Today they make up almost one-fourth of the population in Lao PDR. In pre-colonial times the *kha* probably constituted a majority of the population, notably in the Luang Prabang region (note that the first Lao census under Sam Saen Thai in the early fifteenth century counted 400,000 Kha but only 300,000 Tai-Lao!). Many *kha* moved to the lowlands, where they increased the agricultural workforce of the Lao rulers and – over several generations – eventually became 'Lao'.

22 This textile manuscript has been kept in the Thai National Library, along with several dozen other manuscripts from Hua Phan province in northeastern Laos called *bai chum* (sealed letters), which are published in two volumes. The first volume compiles those 21 *bai chum* written on textiles (Phimphan 2001), while the second volume publishes another 47 *bai chum* written on thin mulberry paper (*kradat phlao*) or industrial 'Western' paper (*kradat farang*), along with an analysis of the whole collection of 68 manuscripts (Phimphan 2013). The *bai chum* manuscript on textile is published as document no. 9 in volume 1 (Phimphan 2000, 121–124).

(June/July 1853).[23] The *bai chum* textile manuscript written in black ink runs over 47 lines and is authorized by a large red stamped royal seal with a flower pattern measuring 23.2 cm in width and 22.5 cm in length.
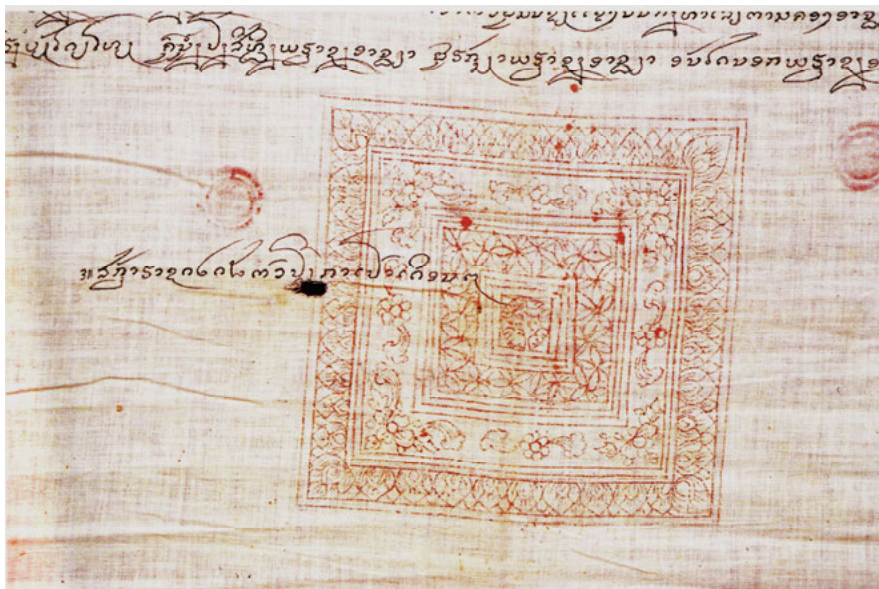
Fig. 4: Royal seal of the ruler of Luang Prabang, dated 1853, in Bai Chum document No. 9 (Phimphan 2000, 17).

The decree deals with several aspects of local administration in Müang Lan Mat, a dependent *müang* of Luang Prabang situated in present-day Hua Phan province close to the Lao-Vietnamese border. One main aspect of this document concerns the control of manpower. The Lao king admonishes the local administration not to exploit the population by raising excessive taxes. On the contrary, the work force is required to be treated decently. Moreover, the local authorities are given advice to encourage people who had fled to outlying regions to return to areas under government control. In this very context the saying *khep phak sai sa kep kha sai müang* appears as part of a long phrase which is

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23 ใบจุ้มเจ้านครหลวงพระบาง พระราชทานพระไชยวงษาอุปราชเมืองลานมาศ แต่เมื่อศักราช ๑๒๐๕ ตัว, in Phimphan 2000, 117–124.

almost identical with the one quoted above from the palm-leaf manuscript EAP691_VSS_1_0798 that was produced only four years later. It says:

ถ้าแลผู้ใดยังมานะสะหาวขัดแข็งกระด้างกระเดื่องอยู่บ่โคด   เอาใจใส่ราชการเราพระรองค์ดังนั้น
สมพอด่าให้   ด่าสมพอตีให้ตีสมพอผูกให้ผูกมาใส่ราชการ   ถ้าแลผูกมาถึงหน้าเวียกแล้วให้แก้
ปล่อยใส่เวียกใส่การ อย่าเอาเบี้ยอย่าเอาเงิน อย่ารักเงินแสนไทยให้รักไพร่แสนเมือง หล่มให้พร้อมกัน
พายหงายให้พร้อมกัน ขวี่ ให้พร้อมกันเก็บผักใส่ซ้าเก็บข้าใส่เมือง เยื่องฉันใดจักเป็นบ้านเป็นเมือง
เป็นรีตเป็นคลอง เป็นราชการ ค้ำหนุนพระราชสมภารพระองค์เรา

> If anyone resists the corvée, then reprimand him, when he deserves to be reprimanded, beat him when he deserves to be beaten, and tie him when he deserves to be tied [and] lead him to do his work for the crown. When he has been tied you must untie him after having reached the workplace so that he can do his work. Do not take his money. Instead of loving enthusiastically the people's money (*ngoen thai*), you shall love enthusiastically the people (*phrai müang*) [themselves]. You have to stick together in bad times, you have to stick together in good times. <u>Gather vegetables [and put them] into baskets and gather people [and put them] into the *müang*.</u> Thereby the *ban-müang* (country, political domain) and the *hit-khòng* (written: *rit-khlòng*: customary laws, administrative rules) will be built up. This is an activity for the crown (*ratchakan*) supporting His Majesty the King always more extensively.[24]

Is it possible that the quotation was a kind of standard phrase used whenever admonishing provincial governors to treat the King's subjects with benevolence so that 'the Teachings of the Buddha will prosper ever more in the future, and the people of the country will live in peace and happiness'?[25]

4 Conclusion

The role and function of seals in Lao and Thai manuscript cultures is still under-researched. While there are quite a number of extant paper manuscripts and manuscripts written on textiles which bear seals as symbols of royal or state authority, sealed palm-leaf manuscripts containing royal orders or decrees are quite rare. The two well-preserved sealed manuscripts recently discovered in the monastery of Vat Saen Sukharam in the old royal capital Luang Prabang in northern Laos bear royal decrees dealing with administrative issues in the provinces (mostly related to the outer province of Hua Phan near the border to

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24 Lines 35–37 of the manuscript, see Phimphan 2000, 123. The translations offered above is slightly improved from the one provided in Grabowsky 2001, 69.
25 Line 38 of *bai chum* no. 9. See Phimphan 2000, p. 119 and 124.

Vietnam), in particular with the organization and treatment of manpower. Though only a few other sealed palm-leaf manuscripts of that kind have survived so far, it seems that they were part of a more widespread cultural practice. This article includes two of these unique manuscripts, translated for the first time into English, in the hope of encouraging further in-depth investigation (see the Appendix below).

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Appendix

Translation of manuscript EAP691_VSS_1_0797

Fig. 5: Manuscript EAP691_VSS_1_0797, recto side.

Recto side:

/1/ In Cunlasakkalat [CS] 1226, on the fifth day [of the week], on the twelfth day of the waning moon of the eleventh lunar month, in *a kap chai* year,[26] Her Majesty the Queen issued the decree that the royal page (*mahat lek*) Sathu Komsi Phaisai to the right-hand side, the royal pages to the left-hand side, including /2/ Phu Nyai Si Sonsai, the official sitting on the feet of the throne, Phu Nyai Kosa Hatsakot, and Thao Khamphan, [the official] in charge of the royal treasury, issue letters for the Phu Nòi Nguang Kang, commoners of both sides, namely Saen Phòng Luang Sulinyawongsa one letter, Saen Phuak one letter, /3/ Saen Sutthamma one letter, Saen Khattiya one letter, Saen Siwongsa one letter, Saen Phòng Si Ban one letter, Phia Su one letter. Of these seven officials (*chu*), Thao Khamphan is the liaison officer (*lam*).[27] If the decree of Her Majesty the Queen requests someone to go, he has to act according to the orders of his own *lam* /4/ in every respect. Do not disobey, do not persuade other people to work for you. This is unfair and will be punished. Saen Phòng Luang Mai, Thao Chanthani, Saen Luang Kuan, Saen Wong, and Saen Si – these five officials (*chu*) are [under one] liaison officer. If the decree of Her Majesty the Queen ... [End of page]

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26 1226 Karttika 27 = Friday, 25 November 1864.
27 Though *lam* is used in modern Thai and Lao for 'translator', its primary meaning 'to tie (with a rope)' is still known in modern Thai but is the general meaning in Tai Lü and some other Tai dialects. According to the late Cia Yaencòng, the institution of *pò lam* or *nai lam* was originally created to exercise tighter political control over the ethnically and culturally heterogeneous highlands of Tai polities in southwestern Yunnan but later expanded to the Tai lowlands. See Liew-Herres et al. 2012, 23–24.

Verso side:

|1/ requires someone to go, he has to follow suit in every aspect. Do not disobey, do not persuade other people to work for you. This is unfair and will be punished. According to this stipulation, Saen Phòng Luang Sulinyawongsa, Saen Phuak, Saen Sutthamma, Saen Khatthiya, Saen Siwongsa, /2/ [Saen] Phòng Si Ban, and Phia Su paid an audience to Her Majesty the Queen according to the customs. [...] If the liaison officer (*lam*) places any gifts /3/beneath [the throne], let anyone of his own servants (*luk lam*) receive them. Do not rely on other officials, this is unfair. The decree goes so far. Anyone [who disobeys] will be punished.

Translation of manuscript EAP691_VSS_1_0798

Fig. 6: Manuscript EAP691_VSS_1_0798, fol. 1ʳ.

Folio 1, recto side:

/1/ The royal power of His Majesty, Lord of the Kingdom of the Million Elephants and the White Parasol (*phrachao lan sang hom khao*), Parama Seṭṭha Khattiya Suriya Phra Rāja Vaṃsā Pha Mahā Jeyya Cakravarti Bhūminnarindipatti Paramanāṭṭha Paramapabitra Phra Mahā Dhammamikarājādhirāja Chao /2/ Pha Nakhòn Müang Luang Phabang Rājadhānī has accomplished a sealed royal decree as this.[28] This royal decree directed at Hua Saen Phòng Luang Suriyawongsa Uttamathani Sitthi Saiyamungkhun, Saen Phuak Chanthawongsa, Saen /3/ Sutthammarasa Bun Hüang, Saen Siwongsa, Saen Luang Chum, Saen Kham Mungkhun, Thao Phu Luang, Saen Sitthi, Saen Khattiya stipulating that Saen Phuam and Thao Khun Sam Si Fa, who come down to rely on Khun Kwan, the *nai lam*, for paying obeisance to His Majesty the King, /4/ Lord of the Great Life

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28 Pronounced in Lao: Somdet Pha Pen Chao Lan Sang Hom Khao Bòromma Settha Khattiya Suriya Pha Rasawongsa Pha Maha Sainya Chakkraphatti Phumintha Narinthathipatti Bòrommanattha Bòrommabòphittha Pha Maha Thammikarasathirasa Chao /2/ Pha Nakhòn Müang Luang Phabang Rasathani Si Ongkha.

who has already passed away.[29] Saen Phòng Si Mün has been oppressing and mistreating all of the citizens, as I have learned. Therefore, I order the chief minister (*akkha maha senathibòdi*) to appoint an appropriate official (*thao khun*) to take /5/ Saen Phòng Si Mün to be interrogated and to explain himself. Then Saen Phòng Si Mün put himself under the shelter of Khun Kwan, his *nai lam*, who paid obeisance to His Majesty saying: '[There are] Fa Khao Saen Phòng Kao, Fa Khao Saen Phuak, Fa Khao Saen Nam Pak Theng, and Fa Khao /6/ Thao Nòt who are all under my supervision. [...] Your Majesty has been informed about this. I ask you to have mercy with Saen Phòng Si Mün and thus consider that the chief minister (*akkha maha senathibòdi*) ... [End of page]

Folio 1, verso side:

/1/ may take Saen Phuak and all three or four *fa khao* officials inside the royal court (*hò sanam*) to force them to lead a life as commoners (*bao phai*) of Saen Phòng Si Mün'. Then Saen Phuak and the three or four *fa khao* officials informed /2/ the chief minister that since Chao Maha Siwit Luang Fak Nai (i.e., His Majesty the King) had been pleased to give the order to appoint Saen Phòng Si Mün to [the rank of] *phòng*, he forced all of us to pay a fine and took gold and silver from us. We all could no longer endure this. /3/ We all thus jointly approached Khun Kwan, their *nai lam*, and made a complaint to inform His Majesty the King about our sufferings. The King was kind enough to instruct his chief minister (*akkha maha senathibòdi*) to let all of us as his subjects, as well as Saen Phòng Si Mün, to enter for an investigation and interrogation. /4/ Our allegations were heard. Saen Phòng Si Mün argued that he did not suppress us, thus it would be unfair to punish him because Chao Hak Na had issued a letter and we had acted accordingly. Thereafter, the chief minister presented /5/ the allegations made by both sides to His Majesty the King who made the judgment that the chief minister should take the money from Saen Phòng Si Mün and hand it over to His Majesty the King. /6/ The King felt mercy for both of us and for Saen Phòng Si Mün, with both sides, and he issued two letters of appointment [stipulating] that we all would no longer be dependent on [Saen Phòng Si Mün].

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29 This might refer to King Sukhasoem (r. 1838–1850).

Folio 2, recto side:

/1/ Saen Phuak and Thao Khun Sam Si Fa Khao enjoyed happiness until the *huang khai* year.[30] His Majesty the King had already passed away, and we all were suppressed again. Thereafter, in the *tao chai* year[31] the investigation had not yet been cleared up. Saen Phuak and Thao Khun Thang Sam Si Fa Khao had not yet been ready to join /2/ Saen Phòng Si Mün. Later, they were confined until the *hap mao* year.[32] I, the King,[33] having a lot of mercy for Saen Phòng Si Mün, decided to order the chief minister (*akkha maha senathibòdi*) to take Saen Phuak and Thao Khun /3/ Nai Sam Si Fa Khao into prison and punish them so that they could see the essence of their wrongdoing. We do not know whether or not they realized their deeds. Thereafter, they filed a petition to His Majesty the King asking for /4/ the chief minister to put us all, as commoners (*bao phai*), under the supervision of Saen Phòng Si Mün. We all, though respecting the royal power to the utmost, claimed that Saen Phòng Si Mün used to molest and suppress us all. /5/ We all put ourselves under the protection of His Majesty the King. We begged not to be placed under the supervision of Saen Phòng Si Mün as *mun nai* (chief). /6/ We all asked for the royal support and protection of His Majesty the King in the future. Once there were 90 households of ours under Saen Phòng Kao, 90 households of ours under Saen Phuak, 90 households of ours under Saen Nam Pak Theng, … [End of page]

Folio 2, verso side:

/1/ and 90 households of ours under Thao Nòt. Of the 90 households of ours under Saen Phòng Kao, six households consented to be under Saen Phòng Si Mün and 84 households opted to stay with us, with Saen Siwisai as their lord. /2/ Of the 90 households of ours under Saen Phuak, 15 households consented to being under Saen Phòng Si Mün [whereas] 75 households opted for staying with us under Saen Phuak as their chief. Of the 90 households of ours under Saen Nam Pak Theng, /3/ 31 households sought refuge under the protection of Saen Phòng Si Mün, [while] 59 households opted for staying with us under Saen Wang as their chief. Of the 90 households of ours under Thao Nòt, 26 house-

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30 This was the year CS 1213 or 1851/52 CE.
31 This was the year CS 1214 or 1852/53 CE.
32 This was the year CS 1217 or 1855/56 CE.
33 This was King Chantharat (r. 1852–1871).

holds sought refuge under the protection of Saen Phòng Si Mün /4/, while the remaining 64 households, including the 4 *fa khao*, opted to stay with us under the protection of Saen Bangkhom. Thus, a total of 78 households opted to stay under Saen Phòng Si Mün while the remaining 282 households, including the 4 *fa khao*, stayed with us. /5/ In the twelfth lunar month of each year[34] we all asked to receive the assignment to keep the grass for the King's sturdy elephants exclusively, as has been the case in the past. Khun Kwan, [our] *nai lam*, led us /6/ to have an audience with the King; this has to be done every year without exception. As for the [other] 78 households who are under the command of Saen Phòng Si Mün, they ought to perform works for his Majesty the King according to his pleasure.

Folio 3, recto side:

/1/ I, the King, have issued the order that the chief minister (*akkha maha senathibòdi*) had placed them under the command of Saen Phòng Si Mün as his commoners (*bao phai*) but they did not consent. They thus made a complaint /2/ to me in this way. I realized that their complaint was honest and justified. Therefore, I ordered the chief minister (*akkha maha senathibòdi*) to appoint Saen Phuak to the position of Saen Phòng Luang Suriyawongsa Uttamathani, /3/ to appoint Saen Siwisai to the position of Saen Phuak Chanthawongsa, to appoint Saen Bangkhom to the position of Saen Sutthamma Rasa Bun Hüang, to appoint Saen Wang to the position of Saen Siwongsa, to appoint Saen Chum to the position of Saen Luang Chum, to appoint /4/ Saen Kham Hong to the position of Saen Kham Mungkhun, to appoint Khun Chan to the position of Thao Phu Luang, to appoint Sip Wiak[35] to the position of Saen Sitthi, and to appoint Khanan Khattiya to the position of Saen Khattiya. They shall be ready to safeguard, look after and take care of the people of our country. /5/ Do not let them move elsewhere to the South or to the North. Even if they have been frightened and were afraid, so that they might flee to all directions to place themselves under the protection of [the ruler] of any other places, large or small, /6/ ditches and channels, mountain ridges, and dense forests wherever [people have taken shelter], Saen Phòng Luang Suriyawongsa shall appoint officials (*thao khun*) to persuade [the refugees] to return to their country to become ... [End of page]

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34 November–December, depending on the moon phase.
35 Probably an official in charge of supervising the work (*wiak*) of a group of ten (*sip*) commoners.

Folio 3, verso side:

/1/ a human resource as before. At the end of a year taxes in cash and kind have to be paid as well as precious objects such as bracelets. [Cutting] the grass [for feeding the King's] elephants is a long-established activity. /2/ Saen Phòng Luang Suriyawongsa and all the officials (*thao khun*) have to collect all of this. Khun Kwan, the *nai lam*, leads [them] to have an audience with the King every year as usual. Do not abandon this. /3/ Saen Phòng Luang Suriyawongsa and all the officials (*thao khun*) shall join hands to protect the country's territory, both on land and water. These are the caves, the cliffs and rocks, the rubber trees, the bamboo canes, heartwood trees, the teeth and horns of wild animals, ivory, various kinds of deer, the forests and the highlands. /4/ The fruit of all kinds of trees, on land and water, everything which belongs to the King has to be reported and presented to the King by Saen Phòng Luang Suriyawongsa according to the customs without interruption. /5/ Any litigation has to be examined and decided by Saen Phòng Luang Suriyawongsa and all officials (*thao khun*). If the amount in dispute is over 200 [units] and a decision cannot be agreed upon, they have to come down and let /6/ the chief of the *tasaeng* consider the case. If the amount in dispute is over 400 [units] and a decision cannot be agreed upon, they have to come down and let the chief minister (*akkha maha senabòdi*) consider the case according to the laws of the country. With regard to the laws and customs, ... [End of page]

Folio 4, recto side:

/1/ if Saen Luang Suriyawongsa has a matter, I, the King, have the mercy to let him act according to that matter, without any exception. If the laws and customs do not have [any stipulation], do not add anything, this is not permitted. As for the construction [carried out] by Saen Luang Suriyawongsa, /2/ which means the construction of houses and the making of dry and wet rice fields, he has to inform all the commoners (*bao phai*) to carry out these construction works according to the rules and traditions of the country. If they do not keep pace with these works, do not mistreat them. Do not fine and punish them. Do not exploit them. This is not permitted. /3/ As for royal works, whether they occur during daytime or nighttime, all officials (*thao khun*) have to think about such works together with Saen Phòng Luang Suriyawongsa. They need to listen to Saen Phòng Suriyawongsa's arguments. Nobody has to object. /4/ The commoners (*bao phai*) shall listen to the arguments put forward by the officials

(*thao khun*) in a similar way according to the respective positions held by commoners and officials. If someone is still disobedient and stubborn /5/ when performing public work, then reprimand him when he deserves to be reprimanded, beat him when he deserves to be beaten, and tie him when he deserves to be tied [and] lead him to do his work for the crown. When he has been tied you must untie him after having reached the workplace so that he can do his work. Do not take his money.[36] Instead of loving enthusiastically the people's money (*ngoen thai*), you shall love enthusiastically the people (*phrai müang*) [themselves].[37] /6/ If you have capsized you should be ready to row, if you are lying on your back you should be ready to ride. Gather vegetables and put them into the baskets, gather people and put them into the country (*müang*). As for any public work that will support the glory of His Majesty the King, ... [End of page]

Folio 4, verso side:

/1/ [...] please jointly consider it and make the works lawful, do not deviate. Everyone, be it the craftsmen, the servants, the wanderers, the servants of the officials, the merchants, have to pay a fine and be punished by paying a fine in kind if they do any harmful acts. /2/ If they molest [someone] they will be arrested and flogged. You need to investigate and interrogate. If a stipulation is not recorded in the law you need to tell of this and jointly stop it. Do not be indifferent or ignore this. /3/ You must absolutely not support [such attitude]. If they still suppress and molest [people] you have to be ready to tie them around

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36 The phrase *ya ao bia ya ao ngoen* could be understood as a request not to accept bribes from people who would like to be exempted from corvée labor.

37 The phrase *ya rak ngoen saen thai hai rak phrai saen müang* is a rather complex parallel structure composed of a combination of several parallel pairs: *saen* + *rak* (to love exceedingly); *phrai* + *thai* (commoners, population at large). As an excellent analysis of the frequent use of parallelisms in traditional Lao literature, see Koret 1995. Ignoring the parallelism of the sentence discussed above, several alternative translations might be theoretically possible. *Saen*, literally 'hundred thousand' can also denote a high rank in government service. However, the rank of *saen thai* is unknown both in Lan Na and Lan Sang. Another alternative focuses on the suggestion that the word *thai*, written ไท in the original form and interpreted by Phimphan (2000, 123) as ไท, should be read, adding the tone marker *mai ek* which is often missing in old manuscripts. Then *thai* would mean 'cloth' or 'fiber bag', and the whole phrase could be rendered as follows: 'Instead of loving the money [filled in] numerous bags, love the people (*phrai*, commoners) of numerous *müang*'. This translation, however, has to be regarded as rather unlikely.

their arms and bring them to the chief of the district (*tasaeng*) who shall hand them over to the royal court where they will be punished. /4/ If there is a section recorded in the law clearly, it must be acted according to the royal power, even if /5/ all kinds of people have the desire to be subjects of His Majesty the King and place themselves under his protection. Thus, we need to be ready to persuade them with good intentions. Another clause (of the law) says that if enemies, evil persons and thieves /6/ sneak into the territory (of our country) to commit harmful acts against its people all day and night, Saen Phòng Luang Suriyawongsa must mobilize the officials and commoners to fight against them until achieving victory.

Folio 5, recto side:

/1/ If someone is still rebellious and recalcitrant, he has to be punished in accordance with martial law. According to all agreements of the royal officials, the officials in charge of the elephant unit and the cavalry, /2/ volunteers, craftsmen, servants, wanderers, the servants of noblemen, merchants moving back and forth, everyone is forbidden to molest and suppress people, squeeze money, /3/ garments, cows, buffaloes, pigs, dogs, ducks, chicken, granaries, fields, but also not let their wives and daughters argue that they are [only] commoners cutting the grass for feeding the royal elephants. The royal decree stipulates just this. /4/ Whoever disobeys will be severely punished. Everyone has to follow the royal decree and refrain from doing anything beyond this royal decree. [This decree was written] on the auspicious year [cs] 1219, a *moeng sai* year, /5/ on the twelfth waxing day of the ninth lunar month, the first day of the week,[38] at the time of the morning drum, at the auspicious moment of 20.

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38 1219 Sravana 12 = Sunday, 2 August 1857.

Eva Wilden

Naming the Author: The Taṇṭi Motif in the Margins of the Tamil Poetic Tradition

Abstract: One of the most important early treatises on the figures of speech in Sanskrit, the *Kāvyādarśa* ('Mirror of Poetry', eighth century CE), was adapted into Tamil for the first time in about the eleventh century CE as part of a bigger treatise, and then again a century later as *Taṇṭiyalaṅkāram* ('Ornaments of Taṇṭi'). The author of the *Kāvyādarśa*, Daṇḍin, became 'Taṇṭi' in Tamil and remained a sort of tag for the tradition concerned with the figures of speech in poetry; in fact he left his trace as an author's name as late as the sixteenth century in the preface to *Māṟaṉalaṅkāram* ('Ornaments of Māṟaṉ'), in the form of a dialectal variation, Teṇṭi. The preface to the *Taṇṭiyalaṅkāram* that informs us about 'Taṇṭi' does not have a broad basis of sources; it is apparently transmitted only in a limited number of the manuscripts that contain the frequently copied and important text *Taṇṭiyalaṅkāram*. Consequently the preface has found entry only into few of the editions. Recently a new manuscript has come to light (MSSML 631) which gives additional information which might have been deliberately suppressed in the print tradition. The parentage and education of 'Taṇṭi' in the paratexts of this Tamil sub-school of poetics thus may teach us a lesson not only about the fluidity of transmission but also about the arbitrary choices of editors and their possible political agendas.

1 Introduction

1.1 The preface as a paratext in the process of transmission

Information about authors is notoriously rare in the whole of Tamil literature. Literary history in the Western sense started only during the colonial period in the nineteenth century when a new genre was created, or rather imported, namely, a narrative interspersed with verse quotations that gives (traditional) chronological accounts of the lives and works of poets and scholars. The most well known of these works is Casie Chitty's *Tamil Plutarch. A Summary Account of the Lives of the Poets and Poetesses of Southern India and Ceylon*, first published in 1859.

For the earlier period, the sources are references and quotations in the commentary literature and occasional inscriptions,[1] but first of all the mostly anonymous verses that are transmitted in the wake of the written transmission. Those verses may be part of textual colophons, even rarer than scribal ones, which are preserved for about only 10 per cent of the surviving manuscripts. They may be satellite stanzas added at the beginning of a bundle on an unnumbered folio. They may have become an integral part of the textual tradition, in which case they may be found at the beginning of the first numbered folio as a 'protection' (*kāppu*) or a 'preface' (*pāyiram*). The important thing to note, however, is that as soon as printing comes into play they are invariably relocated to the beginning of the book, either as a part of the editor's preface (quoting or only summarising the information contained in the verse) or as a 'laudatory preface' (*ciṟappuppāyiram*). A detailed discussion of the subgenres involved may be found elsewhere;[2] it suffices here to say that it appears impossible to reconcile the theoretical discussion about prefatory material with either manuscript usage (which in our case, however, may mirror only the late premodern usage of, say, the seventeenth to the nineteenth centuries) or with print usage (which unsurprisingly simplifies and standardises complex and fluid states of transmission).

The aim of the present article is to explore, on the one hand, the degree to which such anonymous stanzas dealing with authorship have become part of literary subgenres, or in other words, the degree to which they are conventionalised and follow a model once they are established in a certain tradition. On the other hand, the article focuses on the way that tradition can be manipulated and information changed or even suppressed, and what the possible reasons for doing so might be.

1.2 Tamil schools of poetics and the 'ornaments' of Taṇṭi

When trying to understand how tradition functions in terms of affiliation and community, the best example is the numerous schools that developed in the most fruitful theoretical domain of the Tamil people, namely, grammar in the wider sense, which includes not only phonetics, morphology, and syntax, but also poetics, metrics, and rhetoric – in other words, most of the language-related disciplines that were needed for training future generations of poets and the connoisseurs to appreciate their skills.

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1 Collected in Govindasamy 1977.

2 Wilden 2017, 170–174.

There are two obvious ways of describing and analysing school formation. One is the traditional Indian way of tracing a lineage beginning with a treatise and continued by a succession of commentaries. The other is to examine the development of curricula, a line of investigation recently pursued by Giovanni Ciotti.[3] To reconcile these two approaches is not easy, as, put in a nutshell, we would expect the followers of a school in the sense of the former model to read the texts belonging to their own tradition, instead of mixing the works of multiple schools as is done in many of the manuscripts representing a curriculum. A possible answer may have to take into consideration two aspects, both equally important. One is the fact that not all the grammatical schools include texts for all the necessary sub-domains of grammar enumerated above, so that for a complete education students had to resort to material outside their immediate tradition. The other aspect is the temporal restriction of our extant sources, which allows access only to witnesses from the late Premodern Period, when most of the schools had ceased to be alive and active, which might have made it easier for scholars to choose freely from what had been inherited.

Table 1: Tamil schools of grammar.

century CE	comprehensive	phonetics+ morphology/syntax	figures of speech
1st –10th	*Tolkāppiyam*		
11th	Iḷampūraṇar		[*Vīracōḻiyam*]
12th	Pērāciriyar		*Taṇṭiyalaṅkāram*
13th	Cēṉāvaraiyar	*Naṉṉūl* Maiyilaiṉātar	
14th	Nacciṉārkkiṉiyar		
15th	Teyvaccilaiyār Kallāṭaṉār		
16th			*Māṟaṉalaṅkāram*
17th		Āntipulavar Caṅkaranamaccivāyar	
18th		Civañanamuṉivar	
19th		Irāmāṉucakkavirāyar Kūḻaṅkaitampirāṉ	

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3 Ciotti 2021.

Table 1 shows examples of what such schools could look like, giving the names of treatises in italics followed in the same column by the names of their commentators. Even when a school became inactive in so far as it did not bring forth new commentators, the transmission and, presumably, the teaching continued, as is proved by the simple fact that today there are still numerous (in the cases taken up below very numerous) manuscript copies available.

The *Tolkāppiyam* (i.e. a treatise composed by somebody from the family of that name) is the oldest surviving comprehensive grammar, an enormous treatise in three books that was compiled and rearranged probably throughout the first millennium and then followed by a commentarial tradition of six commentators (not all of them on the complete work) from the eleventh to the fifteenth century. This work became the role model for all that followed, as will be shown in the next section with respect to its preface, even though as a description of language the *Tolkāppiyam* was superseded by the second school, the *Naṉṉūl* ('Good Treatise'), composed in the early thirteenth century, with a commentary tradition extending right into the nineteenth century. This, however, was not a comprehensive text, which means that for teaching purposes it had to team up with other branch schools. One such partial school was that of Taṇṭi, which is the focus of this discussion, and its tradition is also noticeable for organising its credentials in a slightly different manner.

The treatment of the figures of speech or 'ornaments' (*alaṅkāra* in Skt., *aṇi* in Tamil) might have entered the Tamil tradition as a treatise in its own right, but if so, that treatise has been lost.[4] The first extant and quite terse Tamil version goes back to a Sanskrit source, the *Kāvyādarśa*, composed by Daṇḍin in about the eighth century.[5] It is found in the eleventh-century *Vīracōḻiyam* (named for its patron from the Cōḻa royal dynasty), a considerably less successful attempt at rewriting Tamil grammar by using Sanskrit technical terminology throughout. The section on ornaments appears as its fifth part. This arrangement may be the most obvious reason why school formation in this case did not work by means of a line of commentaries. About a century later, a fresh adaptation is found; one hesitates to call it a translation simply because it is describing the ornaments used in Tamil poetry, which could not have been achieved by a mere one-to-one re-rendering in the target language. This fresh adaptation is

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4 For an attempt at tracing the pre-Daṇḍin history of the 'ornaments' in Tamil, see Chevillard 2019, as yet unpublished but available online at <https://halshs.archives-ouvertes.fr/halshs-02179709> (accessed on 10 May 2021).

5 On the importance of Daṇḍin's work (particularly the Sanskrit and Tamil versions) for Indian poetics as a whole, see Monius 2000.

called the *Taṇṭiyalaṅkāram*, no doubt after the author of the Sanskrit original, Daṇḍin, as mentioned above. The name remained so powerful that the Tamil author-translator himself was called by the name of that Sanskrit scholar – in Tamil, Taṇṭi – a fact that may be explained as conferring a badge of honour on the Tamil scholar: he is as eminent as his Sanskrit counterpart.[6] To cut a long story short that has not yet been explored in the detailed manner it deserves, in the Tamil treatment of *alaṅkāras* or *aṇis*, the sense of tradition is bound up with this name of the founding figure, Taṇṭi. It is still found in the later treatises on the topic such as the sixteenth-century *Māṟaṉalaṅkāram*. Before going into crucial references to this Taṇṭi in the Tamil tradition, especially the preface to the *Taṇṭiyalaṅkāram*, it is necessary to look into the model preface provided by the *Tolkāppiyam*.

2 The matrix of a preface in the oldest grammatical treatise

Larger than life looms in the background of the Tamil grammatical tradition the figure of Tolkāppiyaṉ, the author of the earliest extant treatise, the *Tolkāppiyam*, just as is the case with Pāṇini in the Sanskrit tradition. Tolkāppiyaṉ was, according to grammatical lore, one of the twelve disciples of the Tamil ur-grammarian Akkatiyaṉ, member of the first literary academy whose work has been lost in the course of time.[7] At first glance it is surprising that nothing of this relationship has found entry into the famous preface of the *Tolkāppiyam*, perhaps the oldest of its kind and an integral part of the textual transmission (included by the commentaries), printed today as a laudatory preface (*ciṟappup-pāyiram*), and in the manuscripts also simply called a preface (*pāyiram*). The explanation is delivered by one of the commentators, Nacciṉārkkiṉiyar, in his own preface to the commentary on the first part of the *Tolkāppiyam*, which deals with phonetics: there was a quarrel between master and student, and Akattiyaṉ unjustly cast off his first disciple, with the consequence that his own

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6 For another example of this kind, consider the early poet names in classical literature where the poet is henceforth called after a powerful image created by him, such as Cempulappeyaṉīrār for the author of *Kuṟuntokai* 40, that is, 'He who [sang about] red earth and pouring rain'.

7 A brief but succinct history of the legends surrounding this founding figure is given in Chevillard 2009.

work was lost and his student's treatise became the 'primary', i.e. the foundational treatise (*mutal-nūl*) of the tradition.

The preface, quoted and translated below in Table 2, with fourteen lines of verse of medium length, tells us everything that tradition expects its adherents to know about the great scholar:

Table 2: The preface of the *Tolkāppiyam*

vaṭa vēṅkaṭam teṉ kumari āy iṭai, tamiḻ kūṟu nal ulakattu	range	From the Northern Vēṅkaṭa hills to Southern Kumari, in the good world where Tamil is spoken,
vaḻakkum ceyyuḷum āy iru mutaliṉ eḻuttum collum poruḷum nāṭi	content	examining letters, words, and meanings, beginning with the two [types of] worldly and poetic [speech],
cem tamiḻ iyaṟkai civaṇiya nilattoṭu muntu-nūl kaṇṭu muṟaippaṭa eṇṇi pulam tokuttōṉē pōkk' aṟu paṉuval nilantaru tiruviṉ pāṇṭiyaṉ avaiyattu	credentials	seeing, with the field that is intimately related to refined Tamil, the previous treatise, thinking it through, he compiled the work, a faultless discourse in the assembly of Nilantaru Tiruviṉ Pāṇṭiyaṉ,
aṟaṅ karai nāviṉ nāṉ maṟai muṟṟiya ataṅkōṭṭācāṟk' aril tapa terintu	corrector	scrutinised, for errors to come to an end, by Ataṅkōṭṭācāṉ, who was accomplished in four Vedas, [his] tongue a bank of virtue,
mayaṅkā marapiṉ eḻuttu muṟai kāṭṭi malku nīr varaippiṉ aintiram niṟainta	tradition	showing a method [for writing] letters in an unambiguous manner, replete [with the knowledge of] *Aintiram*, bordered by the abundant water,
tolkāppiyaṉ eṉa taṉ peyar tōṟṟi pal pukaḻ niṟutta paṭimaiyōṉē.	author	manifesting his name as Tolkāppiyaṉ, he who is the model that is established in great fame.

This preface famously starts with the region in which the language that the grammar deals with is spoken, namely, Tirupati in the North (now in Andhra) and Cape Comorin in the South. The preface then gives us the content of the work, that is, three chapters on phonetics, morphology or syntax, and poetics that describe both worldly and poetic language. Next the preface moves on to the credentials of the work, that is, the court of the king in which it was presented and approved. It identifies the corrector and the tradition from which the book comes, here naming the Northern school of Aindra, not its own legendary

predecessor, the work of Akkatiyaṉ. And finally the preface adduces the name of the author, Tolkāppiyaṉ. One might also have expected the name of his father and his birthplace, but they are not mentioned here. The end brings a single line of praise for the scholar, not much according to the standard followed by many later verses of this type. Almost all the elements that make up this preface will be found again in a slightly different arrangement in the verse that plays the corresponding role in the Taṇṭi tradition.

3 Taṇṭi as an author in the printed versions

The first mention of Taṇṭi in the Tamil tradition is found in the aforementioned first adaptation, the *Vīracōḻiyam*. In this case the reference does not come as a paratext but is integrated into the first aphorism of the section on ornaments which, following the general pattern of rhetoric employed in this book, address-es a girl as the putative listener of the teaching:

> உரையுட லாக வுயிர்பொரு ளாக வுரைத்தவண்ண
> நிரைரநிற மாநடை யேசெல வாநின்ற செய்யுட்களாந்
> தரைமலி மானிடர் தம்மலங் காரங்க டண்டிசொன்ன
> கரைமலி நூலின் படியே வுரைப்பன் கனங்குழையே!

> *urai ~uṭal āka ~uyir poruḷ āka ~uraitta vaṇṇam*
> *nirai niṟam ā naṭaiyē celav' ā niṉṟa ceyyuṭkaḷ ām*
> *tarai mali māṉiṭar tam +alaṅkāraṅkaḷ taṇṭi coṉṉa*
> *karai mali nūliṉ paṭiyē ~uraippaṉ kaṉam-kuḻaiyē!*[8]

> I shall expound, oh lady with heavy earrings,
> in the very manner of the treatise that spreads to the [other] shore [of knowledge],
> which Daṇḍin uttered on the ornaments of human beings, abundant on earth,
> that are poems in which words stand as [their] body, meaning as [their] soul,
> the series of alliterative patterns as [their] complexion, style/[rhythmic] motion as [their] walk.

Befittingly, the section on figures of speech, or ornaments, starts with a convo-luted image that depicts a text which is beautified by such figures of speech, as a human body is decorated with ornaments. Apart from the content of the section which introduces, with heavily Sanskritised terminology, something that of course already existed in Tamil poetry (as in any other), it is this refer-ence to the Sanskrit source which allows us to make the direct connection with

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8 *Vīracōḻiyam* 143.

the *Kāvyādarśa* and its author. Here the Tamil *taṇṭi* definitely has to be understood as a direct reference to Daṇḍin. The topic of translation from Sanskrit into Tamil is not yet introduced here, and the text itself rather bears testimony to an effort at understanding a concept.[9]

For the next version in line, the *Taṇṭiyalaṅkāram*, things are in the process of being normalised and a verse preface has been produced; only here that preface does not seem to have taken a very firm hold in the textual tradition and its transmission. Speaking of the printed text, none of the early editions, as far as I could get hold of them (see bibliography), contains this preface at all. The first version I could trace is found in the edition of Cuntaramūrtti (my book of 2016 presumably being a reprint of the 1967 edition), and he quotes the verse in his introduction instead of putting it as a preface to the text itself. In the popular edition by Tamiḻaṇṇal of 2004, the preface is printed, as would be expected, as the 'laudatory preface' (*ciṟappupāyiram*). Such a state of affairs may well be regarded as suspicious, and a look into the manuscript transmission seems to offer some explanation: of the five manuscripts currently at my disposal, only one contains the preface (on which more below). The two print versions available at any rate agree with each other on the wording:

Table 3: The '*ciṟappuppāyiram*' of the *Taṇṭiyalaṅkāram*

vaṭa ticai iruntu teṉ malaikk' ēki mati tavaḻ kuṭumip potiya māl varai irum tavaṉ taṉ-pāl arum tamiḻ uṇarnta paṉṉiru pulavariṉ muṉṉavaṉ pakarnta tolkāppiyam neṟi palkāppiyattum	lineage and tradition	After – from the *Palkāppiyam* on the path of the *Tolkāppiyam* that was composed by the first of twelve scholars, who had understood difficult Tamil from the great ascetic on the vast Poti mountain of him in whose top the moon crawls after going from the northern direction to the southern mountain –
aṇi peṟum ilakkaṇam aritiṉiṉ terintu	content	he had understood with difficulty the grammar that pertains to *ornaments*
vaṭa nūl vaḻi muṟai marapiṉiṉ vaḻāat'	Sanskrit heritage	without swerving from the custom, sequence, [and] way of the northern treatises, without transgressing the twice two boundaries,

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9 On the development of the trope of a Sanskrit origin for Tamil texts, see Wilden 2021b.

Table 3 (continued).

īr-iraṇṭ' ellaiyiṉ ikavā mummaip pārata ilakkaṇam paṇpuṟat taḻīt	credentials	in a metrically suitable way he assigned difficult meaning
tiruntiya maṇi muṭic cempiyaṉ avaiyatt'		in the assembly of Cempiyaṉ, with a jewel crown, that was perfect
arum poruḷ yāppiṉ amaiv' uṟa vakuttaṉaṉ		in encompassing excellently Indian grammar threefold,
nāṭaka maṉṟattu nāṭakam naviṟṟum vaṭa nūl uṇarnta tamil nūl pulavaṉ		a scholar of the Tamil treatises who had understood the northern treatises, having also proclaimed a drama in the drama hall
pū viri taṇ poḻil kāviri nāṭṭu	place	in the land of the Kāviri with flower-spread cool groves,
vamp' aviḻ teriyal ampikāpati mēvarum tavattiṉ il payanta	father	brought forth by the house of penance that is befitting for Ampikāpati with a wreath on which new [flowers] open,
tā arum cīrttit taṇṭi eṉpavaṉē.	author	– the one who is called Taṇṭi, of a fame difficult to generate.

A comparison with the *Tolkāppiyam* preface quoted in the last section should make the dependency obvious as far as the informative elements are concerned, with the addition that here we also get the birthplace and the father's name.[10] But there is subtle play on some of the details. The reference to the Northern and Southern boundaries of the area where Tamil is spoken is cleverly employed to evoke another strand of grammatical folklore, namely, the ur-grammarian Akattiyaṉ (who was summoned by Lord Śiva to Mount Kailash in the North and then sent to the South to sit on Mount Potiyil in order to make a counterweight to Śiva's assembly of sages in the North so that the earth would not tilt). The version of the tradition according to which the *Akattiyam* (the lost work of Akattiyaṉ) is followed by the *Tolkāppiyam*, which in turn is followed by the *Palkkāppiyam*, can be traced back to another commentator on the *Tolkāppiyam*, namely, Pērāciriyar. In other words, the anonymous author of the

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10 I will not go into the details, used in arguments about the date of the *Taṇṭiyalaṅkāram*, of the popular stories connected with the name of Taṇṭi's father, Ampikāpati, putative son of the poet Kampaṉ, illicit lover of the Cōḻa king's daughter, and put to death by that king. The stories are told in the *Ampikāpatikōvai* (for a summary, see *Apitāṉa Cintāmaṇi* 2001, 74.1+2). At any rate, the connection between the two names, Taṇṭi and Ampikāpati, seems to go back to our preface.

current preface gives his Taṇṭi the *crème de la crème* of the tradition as antecedents. This is duly followed by an allusion to the Sanskrit heritage (here called 'the northern treatise'). The credentials in the form of a royal assembly where the work was presented are ascribed to the Cōḻa, not the Pāṇṭiya dynasty. There follows a sentence about Taṇṭi's education both in Tamil and in Sanskrit, making Sanskrit his secondary field of expertise; the sentence is underlined because we will find a different version of it in the next section. Sadly, the allusion to Taṇṭi's familiarity with drama is not backed up by anything we know; no dramatic text in his name appears to have survived.

The verse, although clever and charming, is in itself unremarkable; dozens of this type have been transmitted. Noteworthy is the previously mentioned fact that no trace is left of what may have been the proper name of the man called 'Taṇṭi'.

In order to show how tradition moves on, based on the same pattern but modifying and extending for the purpose of accommodating new trends in theory and poetic practice, a brief glimpse into the preface of the next treatise that still bears the name of *alaṅkāram*, the *Māṟaṉalaṅkāram,* shall conclude this section. This text goes back to the sixteenth century and is Vaiṣṇava in leaning, as can already be gleaned from its title, which evokes one of the names of the poet saint Caṭakōpaṉ. This is a considerably bigger book, including, among other things, a bulky first chapter on the theory of prefaces, so far mostly neglected by modern scholarship, apart from the 2005 edition by Ti.Vē. Kōpālaiyar, which contains not only the old commentary but also the explanatory notes of the great scholar.

This preface is much longer, beginning with the iconic reference to the area between Tirupati and Cape Comorin, mentioning the assembly of the learned and ending with the name of the author, Perumāḷ Kavirāyaṉ, but in the current context lines 11–16 suffice:

முதுமொழித் தெண்டி முதனூ லணியோடும்
புதுமொழிப் புலவர் புணர்த்திய வணியையுந்
தனுதுநுண் ணுணர்வா ரருபல வணியையு
மனுறத் தொகுத்தும் வகுத்தும் விரித்தும்
பொதுவியல் பொருள்சொ லணிநெஞ்ச வியலெனச்
சதுர்பெற விரண்டிந் தழீஇய சார்பெனலாய்க்

mutumoḻit teṇṭi mutaṉūl aṇiyōṭum
putu moḻip pulavar puṇarttiya aṇiyaiyum
taṉātu nuṇ uṇarvāl taru pala aṇiyaiyum
maṉāt' uṟat tokuttum vakuttum virittum
potuviyal poruḷ col aṇi eccaviyal eṉac
catur peṟa iraṇṭ' iṭam taḻīiya cārp' eṉal āyk

> Bringing together, dividing and expanding,
> so as to be taken in by the mind,
> with the poetic figures (*aṇi*) from the primary
> treatise of Teṇṭi with ancient wisdom,
> the poetic figures (*aṇi*) brought together
> by scholars in new words
> and the many poetic figures (*aṇi*) given
> by his own subtle perception
> as a tertiary treatise (*cārpu*) that encompasses
> two sections while obtaining four [chapters in one of them],
> namely, *Potuviyal*, *Poruḷ*-, *Col*-, *Aṇi*- [and] *Eccaviyal*

These lines describe both the content and the tradition in which the new treatise stands, and with respect to both there are a couple of new elements. First, the words 'bringing together, dividing and expanding, so as to be taken in by the mind' refer to the fact the work has gained considerably in size, and the reason given here is didactic: for the sake of easier understanding, the author has changed the arrangement and extended the presentation. The content is described not only by chapter titles (last two lines), but also by the antecedents that have provided the material presented here. The poetic figures or ornaments taken up are said to have three sources, alluding to the common concept of primary, secondary, and tertiary treatises, where the primary treatise founds a tradition – the role played for the whole of grammar by the *Tolkāppiyam* – the secondary treatise follows in its wake and expands but does not deviate from the master, and finally the tertiary treatise goes into even more detail.

The role of the primary treatise is attributed here to the work of Teṇṭi (dialectal variant of Taṇṭi), while the further figures collected by later scholars implicitly have to be counted as the secondary treatise(s), because the tertiary treatise is adduced to the current author, Perumāḷ Kavirāyaṉ, who contributes his own figures to the collection. There are two possible interpretations for this series. The name Teṇṭi may refer to the original Sanskrit Daṇḍin, in which case a slight would have been committed here against the Tamil author known as Taṇṭi, because he would not have been mentioned by name and not have received the proper recognition. Or the primary treatise referred to here is the Tamil *Taṇṭiyalaṅkāram*, and the subsequent scholars would be those who developed new poetry in the period between the twelfth and the sixteenth century, the time when the *Māṟaṉalaṅkāram* was conceived. In the latter case, the Sanskrit heritage would have been disavowed, something perfectly conceivable in the course of a long tradition, but less likely perhaps given the continued Sanskrit element in the very title. The most economic interpretation may be that by the sixteenth century the figure of Teṇṭi/Taṇṭi has become fully legendary and

the distinction between the author of the *Kāvyādarśa* and the *Taṇṭiyalaṅkāram* is no longer made.

4 The new evidence from MSSML 631

As stated above, the manuscript transmission of the preface is narrow, as far as can be determined today. The *Taṇṭiyalaṅkāram* was a very popular text, and dozens of additional manuscripts no doubt are out there.[11] Of the five manuscripts currently at my disposal, what is possibly the oldest one, from Tiruvāvaṭutuṟai (TAM 330), is in such a bad condition that it is not even possible to ascertain whether the verse is there. The two manuscripts that went to Paris (INDIEN 205 and 206, one dependent on the other) clearly belong to a strand which does not transmit the preface. One beautifully conserved manuscript from Ceṉṉai (UVSL 181) comes with several pages of as-yet-unexplored satellite material, but the preface is not found.[12] The one witness available is a remarkable MTM of grammatical treatises found in the Sarasvati Mahāl library in Tañcāvūr (MSSML 631).[13] The *Taṇṭiyalaṅkāram* begins on image 491 (identified by a marginal title) with the text of the preface, concluded by the words: *pāyiram muṟṟum*, 'here ends the preface'. The first twelve lines are reasonably identical, but the printed line 13 differs significantly and is preceded as well as followed by one so far unknown line, and then the verse ends with the familiar last four lines containing the birthplace, the father's name, and the name of the author.

Fig. 1: *Taṇṭiyalaṅkāram* in MSSML 631; © Mahārājā Serfoji Sarasvati Mahāl Library, Tañcāvūr.

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11 An impressive list of extant manuscripts is found in the as-yet-unpublished critical edition of M. Karunanidhi 2007, the author's dissertation. He includes the preface but cites it in the known print version, although he lists MSSML 631 among his witnesses.

12 For a first exploration of the devotional satellite material found in the grammatical tradition, see D'Avella 2020.

13 This manuscript, clearly an important witness for a local school of grammar, contains unusual material for more than one text; for its version of another treatise on poetics, the *Iṟāiyaṉār Akapporuḷ*, see Wilden 2021a. Since the folios are in disorder and the foliation disrupted, currently the best way of identifying a leaf is by referring to the image number.

Fig. 2: The lines of the preface that deviate from the print versions.

கான் முறை வணங்கு நான் மறைக் குறிசிலத் [|] தமி நூலுணர்ந்த வட நூற்
புல[வன் |] ‡தவித் தடப் புலமை கவுசிகப் பெயரோன் [|]
பூ விரி தண் பொழிற் காவிரி நுட்டு [|] வம்பவிழ் தெரியல் அம்புகாபதி
மே வருந் தவத்தினிற் பயந்த [|] தாவருஞ் சீர்த்தித் தண்
டி யென்பவனே – பாயிரமுற்றும் –

kāṉ muṟai vaṇaṅku nāṉ maṟaik kuricilat [|] tami nūluṇarnta vaṭa nūṟ
pula[vaṉ |] ‡tavit taṭap pulamai kavucikap peyarōṉ [|]
pū viri taṇ poḻiṟ kāviri ṉāṭṭu [|] vampaviḻ teriyal ampukāpati
mē varun tavattiṉiṟ payanta [|] tāvaruñ cīrttit taṇ
ṭi yeṉpavaṉē – pāyiramuṟṟum –

It is very worthwhile to take a closer look at the new lines 11′, 12 and 12′:

கான் முறை வணங்கு நால் மறைக் குறிசிலத்
தமி[ழ்] நூல் உணர்ந்த வட நூல் புல[வன்]
‡தவித் தடப் புலமை கவுசிகப் பெயரோன்

kāṉ muṟai vaṇaṅku nāl maṟaik kuricilat
tami[l] nūl uṇarnta vaṭa nūl pula[vaṉ]
‡tavit taṭap pulamai kavucikap peyarōṉ

one Kaucika by name, of vast erudition,
a scholar of the northern treatises who has understood the Tamil treatises,
master in the four Vedas, who bows at the correct times.

To recall, this text block corresponds to the simple line 12 of the printed version:

வட நூல் உணர்ந்த தமிழ் நூல் புலவன்

vaṭa nūl uṇarnta tamiḻ nūl pulavaṉ

a scholar of the Tamil treatises who had understood the northern treatises

What has changed and what has been added? The first additional line depicts Taṇṭi as a master in the Vedas, unlikely for anybody who is not a brahmin. Secondly, the modified line 12 makes him a Sanskrit scholar who has also mastered Tamil, and not vice versa, as in the printed line. The second additional line gives him another name besides Taṇṭi (following in the very last line), namely Kavucikam, which can reasonably be explained as the Sanskrit gotra name Kaucika; in other words, Taṇṭi is here positively identified as a brahmin. In the early print era as well as throughout the twentieth century, this provides another powerful reason either for not printing or for altering the transmitted preface, namely, nascent Tamil nationalism and its hatred of Sanskrit and brahmins.

5 Conclusions

To sum up the situation:
– The old editions do not contain the verse at all.
– More recent editions quote the verse either in their introduction or as a 'laudatory preface' (ciṟappuppāyiram).
– The manuscript transmission was fluid, and some manuscripts did not give a preface at all.
– MSSML 631 has a significantly different version called a 'preface' (pāyiram).

This leaves us with basically two options of interpretation. Either the manuscripts that have a preface vary according to context and region and possibly mirror differences of opinion in the local schools. In order to support such an interpretation it would be helpful to locate manuscripts that actually correspond to the print reading. Or, and this option cannot be ruled out until further manuscript evidence has been brought to light, the change and deletion in the recent editions have to be explained as an act of political correctness: Taṇṭi should not be considered either a Sanskrit scholar or a brahmin.

Of course there is one general feature of palm-leaf transmission that one should always keep at the back of one's mind, namely, that it is difficult to add material: the dense layout mostly rules out the options of marginal or interlinear annotation. This means that if somebody wants to tamper with tradition (or even simply add a new gloss or a new piece of information) his basic means of doing so will be to make a fresh copy (needed anyway because of the limited lifespan of manuscripts in the South-Indian climate) and to integrate (or delete) according to his lights and prerogatives, with the consequence that the process in the copy will be virtually undetectable, unless philological and historical

analysis can bring forward arguments that make such interference likely, or other palm-leaf witnesses can be found that read differently. In that respect, palm-leaf copying in South India resembles print transmission: it has the power to create a *fait accompli* which can be reversed only with a lot of digging and luck.

Acknowledgements

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Dmitry Bondarev

A Typology of West African Ajami Manuscripts: Languages, Layout and Research Perspectives

Abstract: In the process of creating their manuscripts, the scribes in West Africa had two linguistic sets – Arabic and non-Arabic (Ajami) – and they had to visually express these repertoires following the logic of interplay between these different sets. The suggested classification of Ajami manuscripts tries to follow this logic. Besides establishing formal types, the classification provides a glimpse into specific cultural domains that generated different types of manuscripts and suggests research perspectives and methods of study relevant to each type.

It was October 2011, I was in Mao, Chad, working on a Kanembu dialect spoken there and looking for commentaries on religious Arabic texts written in Old Kanembu. I was asking around about the existence of such manuscripts, giving a description of what they usually look like: A Qur'an text written in large script, with Kanembu written between the lines of Qur'anic text. One evening, I was talking to my host's guest who mentioned a chest of manuscripts inherited from his late father. To my question about written Kanembu in his collection, he said, 'You mean Ajami? Yes, I think there is some'. Two weeks later the owner was pulling out dusty chunks of paper from a wooden chest. 'This must be what you are looking for', he said. I took a thin manuscript and it was indeed an Ajami text – a poem written in Arabic script in a variant of Kanembu I had never come across. This manuscript has proved to be important evidence of cross-register hybridisation of written language,[1] but it was not the type I was looking for at that time. This counter-expectation triggered many years of musings on the diversity of Ajami manuscripts and their typology, finally leading to the typology of Ajami manuscripts presented in the following.[2]

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1 Bondarev and Dobronravin 2019.

2 The typology in this paper owes much to collective discussions within the Ajami Lab at CSMC and in many ways was inspired by Michael Friedrich's attention to the multiple interfaces between text and material object and his kin interest in the study of West African Islamic manuscripts.

1 The term Ajami

African languages written between the lines and in the margins of the Islamic manuscripts of West Africa often have a descriptive metalinguistic marker, asserting the presence of an Ajami segment. This marker is typically a graphic variation of the word *ʿajamī* or *ʿajam*, an Arabic term for 'non-Arab' or 'non-Arabic'. Another way of the metalinguistic labelling of the Ajami glosses found in the manuscripts is the Arabic phrase *fī kalāminā* 'in our language' (في كلامنا) and its variations. If *fī kalāminā* is not the most frequent device to signal the presence of a local language (it is mainly reported in the manuscripts of the Senegambia and Mali regions),[3] the *ʿajamī*/*ʿajam* label is found in almost all written traditions of West Africa based on Arabic script. Recent cataloguing and digitisation projects in Mali and Senegal show that this label occurs with annotations in Soninke, Mandinka, Songhay, Tamasheq, Bamana, and other languages of the region.

This practice seems to have a long history. The earliest Soninke glosses marked with the word *ʿajamī* are found in manuscripts of the Senegambia written from around the early nineteenth century. In Hausa Ajami writing, various stylised forms of *ʿajam(ī)* were frequently used[4] and are datable to the first half of the nineteenth century[5]. Moving further east, manuscripts with Old Kanembu glosses are generally believed to lack the *ʿajamī* label. However, there is at least one occurrence of such a label in the Borno Qu'ran, dated 1080 AH / 1669 CE. This single occurrence of *ʿajamī* makes it the oldest known case of labelling non-Arabic writing in West Africa. The term *ʿajamī* in this manuscript was most certainly written before 1669 since we know that the Old Kanembu glosses were added to the main Qur'an text first, while the voluminous Arabic commentary of al-Qurṭubī, which wraps around the main text, was done afterwards, in 1669.[6]

Given that the scribes of West Africa have always been conscientious about pointing to a specific non-Arabic linguistic layer in their writings, it is probably no surprise that different uses of Ajami were shaped in different ways. In the process of creating their manuscripts, the scribes had two linguistic sets – Arabic and non-Arabic – and they had to visually express these repertoires following the logic of interplay between these different sets. The suggested classification

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3 For the use of *ʿajamī* and *fī kalāminā* in Soninke and other Mande manuscripts see Ogorodnikova 2017, 122–125.

4 Dobronravin 2013, 91.

5 Bondarev 2019a.

6 See Bondarev 2017, 119–122 and Bondarev 2019a.

of Ajami manuscripts tries to follow this logic. Beside establishing formal types, classification provides a glimpse into specific cultural domains that generated different types of manuscripts and suggests research perspectives relevant to such domains.

2 Typology of Ajami manuscripts

The typology is organised according to the relationship between (a) Ajami, (b) Arabic and (c) layout and is made up of 5 distinct types: 1. Ajami primary manuscripts; 2. Intralinear Ajami (Ajami phrases following Arabic phrases on the same line); 3. Interlinear Ajami (Ajami written between the lines); 4. Occasional Ajami in densely written Arabic texts; and 5. Ajami in healing and esoteric manuscripts.

Each of these types exhibits individual historical dynamics in terms of change and function that call for different methods of study.

2.1 Ajami Type 1: Ajami primary manuscripts

Ajami primary manuscripts are the best studied and until 2010s were the only focus of Ajami research. Single Ajami texts can roughly be subdivided into three subtypes: poetry, history and correspondence.

2.1.1 Sub-type 1a: Poetry

Type 1a is made up of poetic texts. They become more prominent and widespread towards the middle of the twentieth century when manuscripts were increasingly disseminated in facsimile form. Due to its prominence in a more recent history of Islam in West Africa (i.e. during the last 200 years), poetry in Ajami is much better studied than the other two subtypes of single Ajami manuscripts.[7]

These are poems composed by famous Islamic scholars, such as ‘Abd Allāh b. Fodiye (1764/5–1829), Nana Asmā'u (1793/4–1864) (both writing in Fulfulde

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7 See for example Brigaglia 2013/2014 on the spread of literacy and Hausa verse in Nigeria stimulated by Sufi revival, or Hassane 2009 on religious poetry in Songay-Zarma in Niger, Salvaing and Hunwick 2003 on Fulfulde in Guinea and Ngom 2016 on Wolof in Senegal.

and Hausa), Muhammadu Samba Mombeya (1755–1852) (Fulfulde), Man Shinkafa (1800–1894) (Nupe) or by 'learned' griots, such as *farba* of Futa Jalon or Baa Hamma (or Maabal) of Bandiagara (late nineteenth century) and copied from autographs or written down from oral tradition.[8]

Spanning various genres – didactic and praise verse, elegies and eulogies – these poems often serve pedagogical ends to transmit basic elements of Islamic knowledge. They are typically written in a distinct linguistic register and thus are of special interest for research into register variation. Specialized poetic registers often disappear. For example, Roger Blench observes that Ajami poems in Nupe is a 'highly specialized sub-genre and has almost disappeared today, along with the use of Ajami script among the Nupe'.[9] A good example of how a specialized register may survive in manuscripts but escape the attention of scholars is the Nupe poem *Miya* 'I begin' on Muslim conduct and customs composed by Abdullahi b. Ibrahim Man Shinkafa (1800–1894).

> *Miya mire jin yebo nya tsu na jin yi na*
> *Soko wacin a zankpe ya zana kpau ye na*
> *Jama jati kaye tsu na yi kagboci na*
> *Alhamdu yebo rejin o ya tsoici yi na jii na*
> *Assalatu yeshi be yii yagi Amina nau mana*

> I begin with gratitude to the Lord, our Creator;
> Allah is Exalted and Mighty for one that reflects
> (He) causes laughter and cry, an attribute of The Powerful Lord
> Thanks be to the Lord who created us...[10]

Two manuscript copies of the poem shown in Fig. 1 are very similar in text and orthography (although very different in layout).[11]

Banfield and Macintyre (1915) who published the beginning of the manuscripts (Fig. 1a), transcribed the text correcting archaic and register-specific features. Thus, the aspect marker *re* in *mire* (underlined) was changed to a modern Nupe aspect marker *e* which resulted in change of meaning. This is shown below:

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8 See a.o.: Hiskett 1975, Boyd and Mack 1997 and Dobronravin 2004 on Hausa, Muhammadu 1963, Sow 1971, Haafkens 1985, Salvaing and Hunwick 2003 and Seydou 2008 on Fulfulde, Ndagi 2011 on Nupe.

9 Blench 2010, 6.

10 Ndagi 2011, 28.

11 I am grateful to Nikolay Dobronravin who was the first to have identified Nupe as the language in MS Or.954 and who pointed to the change of aspect markers in Banfield and Macintyre 1915.

Numbers and abbreviations in examples below: 1 = MS Banfield and Macintyre 1915; 2 = Cambridge, University Library, MS Or. 954; 3 = Banfield and Macintyre's transcription; 1s/p, 3s/p = first/third singular/plural; IMPF = imperfective; REL = relativizer.

1. *miyā mi-rē̲ yabū yāθū nā jā θijīnā*
2. *miya mi-rē̲ (ye?) yabū yāθū nā jā θijinā*
1s.begin 1s-<u>IMPF</u> love to lord REL do.3p and.3s.do.1p.REL
'I begin, with gratitude to (lit.: I loving) the Lord who made them and us.'

3. *miya mi e̲-be yebo ya'tsu na jin a ci ajin yi na*
1s.begin 1s <u>IMPF</u>-add love to.lord REL do 3p and 3s.do 1p REL
'I have begun, I am adding thanks to the King who made them and us.'

2.1.2 Sub-type 1b: Historical texts

Type 1b is represented by various historical texts. They range from narratives about the history of towns and polities to simple lists of rulers or scholarly lineages.[12] Unlike religious poetry, historical manuscripts are not numerous. They usually represent discontinued practice of recording collective memories which may nevertheless continue in the oral tradition. Occasional copies of such manuscripts made in the twentieth century do exist but the rationale for creating them is not always clear.

These manuscripts are good sources for proper names: places, peoples, ethnic groups, learned lineages, etc. Special attention should be paid to different spelling subsystems. Some formulaic expressions or frequent grammatical items may be written in a more unified way than proper names. For example, in Borno *gargams* (genealogical lists), the word *<kargō>* 'he lived' is written identically across all gargams. This verb form occurs at the end of each description of a ruler and therefore is one of the most frequent items in the genealogical lists. However, the place name Gazargamu – the most famous city in the Borno history – is written differently in four gargams: MS H/279: *<gasarkmu>*, MS H/280: *<gazarkmu>*, MS H/281: *<gazarkumu>*, and MS H/282: *<qasargmu>*[13]. This difference in spelling consistency may betray the coexistence of two distinct phenomena in such historical narratives. One is a fixed frame controlled by formulaic expressions and the other is fluid content selected on circumstantial demand.

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12 Schaffer 1975, Giesing and Vydrin 2007, Wilks 2011, Bondarev 2014.
13 Bondarev 2014.

2.1.3 Sub-type 1c: Correspondence in Ajami

This subtype is poorly studied despite frequent allusions to Ajami being used in personal letters.[14] In some areas of sub-Saharan Africa, writing personal letters in Ajami was a common practice.[15] In other areas, correspondence in Ajami was rather an exception from a more common practice of writing letters in Arabic.[16] One such exceptional case are letters in Hausa written in the early twentieth century in Bauchi (Northeast Nigeria). The letters were issued by the British colonial office, namely by Oliver Howard, the Resident of Bauchi (i.e. Head of colonial office) and were addressed to the emir of Gombe. The emirs of Bauchi also wrote to the colonial residents in Hausa at that time.

2.2 Ajami Type 2: Intralinear

'Intralinear Ajami' refers to African language phrases following Arabic ones written on the same line. Similarly to Type 1, such Ajami is written in a continuous act of writing.

Unlike Type 1, however, but similarly to Type 3, such manuscripts provide translations of Arabic into a local language. They have a rigid pattern of alternation between short Arabic noun/verb phrases and their translation into the target language. This is the most enigmatic Ajami type because the context and intended purpose of this layout are unclear. We do not yet understand why, but this layout is used restrictively for only two types of text.

The most frequent – popularly known as *Umm al-Barāhīn* 'The Major Evidence' – is the short theological treatise *al-ʿAqīda al-Sughrā* ('Small Creed') of Muhammad b. Yusuf al-Sanūsī (d. 1486) and various derivatives of the text. Sanūsī's work deals with the oneness of God (so-called *tawḥīd*), proofs of God's existence and God's attributes.[17]

It is possible that these manuscripts are related to fixed texts transmitted in oral domain, such as *kaɓɓe* ('creed') texts in Fulfulde which are largely based

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14 See for example Mumin and Versteegh 2014 and chapters therein by Meikal Mumin, Maarten Kossmann and Ramada Elghamis, Valentin Vydrin, Andy Warren-Rothlin, Xavier Luffin, Kees Versteegh.
15 Ngom 2010 on letters in Wolofal, Ngom et al. 2018 in Mandinka.
16 Dobronravin 2004.
17 Gutova 2011 is a detailed study of Umm al-Barāhīn translated into Kabyle Berber, which however is not written in the Ajami Type 2 layout.

on Sanusi's creed and are equivalent to popular Arabic texts on belief translated into local languages and circulated in spoken medium in poetic form.[18]

Fig. 2 shows two copies of *Umm al-Barāhīn* written in Ajami Type 2 layout with alternating phrases in Arabic (red ink) and Old Kanembu (black ink). There are striking similarities between the older manuscript from Mamma Haidara Library, Timbuktu (no one knows how it got there), and a recent one from Dr Kyari Sherif's collection, Maiduguri.[19]

Both manuscripts have exactly the same pattern of parsing the Arabic text into smaller units, and they share a large amount of identical Old Kanembu phraseology and grammatical structures, suggesting remarkable stability of transmission.

For example, the first phrase in Arabic *bi-smi'llāhi* 'in the name of God' is followed in both manuscripts by identical translation into Old Kanembu *ala-be θu-n badinuskī* (God-of name-by I.start) 'I start by God's name'. (Compare it with the same 'beginning' formula in the Nupe poem discussed under Type 1 Ajami).

The other text written in Type 2 layout is a popular elementary textbook on ritual duties *Mukhtaṣar fī l-ʿibādāt al-Akhḍārī* of ʿAbd al-Raḥmān al-Akhḍārī (d. 1585). As of now, however, we are only aware of one copy with intralinear translation in Mandinka.[20]

Interestingly, despite the popularity of these two elementary treatises, their intralinear translations are only found in manuscript form. This stands in contrast to Types 1 and 3 which in more recent times are disseminated as facsimiles.

2.3 Ajami Type 3: Interlinear Ajami (systematic annotations)

This type of Ajami refers to local languages mostly written between the lines of the Arabic text. The annotations in vernacular are in fixed specialist registers cutting across regions and ethno-linguistic groups. In the Soninke data from wider Senegambia and Mali, it is a variety of Soninke which has almost uniform grammatical structures across different manuscripts. In the Old Kanembu manuscripts from the Lake Chad region where the Kanuri and Kanembu languages are spoken, it is an archaic variety related to Kanuri and Kanembu, but unintelligible to the modern speakers of these languages. Type 3 seems to be stable in Senegambia/Mali manuscripts in terms of layout. In the twentieth century,

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18 Brenner and Last 1985.

19 See the whole manuscript at BOKIM/SOAS website.

20 Ngom et al. 2018.

however, it starts appearing in facsimile form and in southwest Senegal the language configuration changes: if in earlier manuscripts the language of translation is Soninke, in later period it changes to Mandinka.[21] The layout of the Old Kanembu manuscripts pushes this type to its most extreme; some manuscripts have only one line of the main text – the remaining space being taken by annotations.[22] Many such manuscripts move to facsimile reproduction in the twentieth century. However, the most dramatic change is observed in the Borno Qur'an manuscripts with Old Kanembu annotation: this type of Qur'an disappeared by the mid-nineteenth century.

In these manuscripts, glosses in Ajami are systematically applied to the source Arabic text in order to explicate its grammatical structures and render accurate translations.

The annotations are systematic in the sense that rather than being random occasional translations, they are written methodically above (or sometimes below) the elements of the Arabic text. The phrases in the target language are written above the corresponding phrases in Arabic and the output translations have a high degree of consistency in their lexical and grammatical features across manuscripts.

The interlinear annotations reflect the spoken translation of Arabic texts that is widely practiced in sub-Saharan Islamic Africa. In many West African cultures such translational practices had a codification effect on vernacular languages whereby the registers used for translation developed into special scholarly linguistic codes, often venerated and considered second to Arabic, prompting the terms 'awkward translation', 'learned vernaculars', 'translational reading' and 'metalanguages'.[23] Whatever the accuracy of the terms, they all point to the unique property of these linguistic codes as being (a) used in the context of translation, (b) part of scholarly and pedagogical milieu, and (c) formally acquired.

Ajami Type 3 has high potential for various areas of research. It gives clues to the scribal practices during the process of Islamic education, most typically at intermediate phases of education.[24] Additionally, it reveals cultural and ethnolinguistic identities,[25] and helps us understand the formation and stabilisation of core curricula in traditional Islamic learning. Type 3 provides rich linguistic

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21 Ogorodnikova 2016.

22 Bondarev 2017.

23 Egouchi 1975, Brenner and Last 1984, Bondarev 2013b.

24 Bondarev 2017.

25 Ogorodnikova 2016.

data for specialized registers used in Islamic education. As they shed light on earlier stages of language, they are useful data for historical linguistics. Some manuscripts of this type are important sources on interaction between languages in diglossic or multiglossic situations. Soninke for example, was used as a scholarly language for interpretation of Arabic texts in Mandinka-speaking communities.[26]

The examples in Figs 3a and 3b are from Old Kanembu manuscript tradition developed in the pre-nineteenth century Borno Sultanate. The Islamic scholars of Borno used several interpretational levels, or layers, in order to present the Qur'anic Arabic in Old Kanembu with minimal loss of grammatical and semantic content. These layers include morphosyntactic analysis, and phrase-by-phrase and sentential translation and interpretation. The samples in Figs 3a, 3b and 3c are from three different Qur'an manuscripts separated by space and time. The first sample (Fig. 3a) is from the so called 'Gwandu Qur'an' from Gwandu Emirate, in what is now northwest Nigeria/southwest Niger. The second manuscript (Fig. 3b) probably originates from the old Borno capital Gazargamu, in what is now northeast Nigeria, and the third sample (Fig. 3c) comes from Katsina which is situated between Gwandu and Gazargamu. The Gwandu and Gazargamu manuscripts are datable to the late seventeenth century, and the Katsina manuscript to sometime between the eighteenth century to early nineteenth century. The glosses in the three manuscripts exhibit a remarkable uniformity in translating the Qur'anic Arabic into Old Kanembu and thus illustrate a fixed and systematic nature of specialist registers associated with this type of Ajami manuscripts.

Table 1 provides transliteration and translation of Old Kanembu glosses applied to the Qur'anic verse of Surat al-Qasas (The Story): 'Indeed, Pharaoh exalted himself in the land and *made its people into factions, oppressing a sector among them*, slaughtering their [newborn] sons and keeping their females alive.' (*Corpus.quran.com*). The emphasised part in italics is the section exemplified by the translation into Old Kanembu. Although there is significant spelling variation, the lexical and grammatical elements of translation as well as syntactic structures are very similar in the three unrelated manuscripts, as the underlined elements in the Old Kanembu texts demonstrate. For example, the possessive pronoun *sə* 'its' (spelled as <s>, <jī> and <θ> in respective manuscripts) is systematically followed by the direct object (DO) clitic -*ka* to translate the grammatical function of the Arabic noun phrase *'ahlaha* 'its people' as direct object of the Arabic verb *jaʿala* 'he made'. The clitic -*ro* is used as a marker

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of the second direct object (which corresponds to the Arabic grammatical category *mafʿul bihi al-thani* – second direct object expressed by the accusative form *shiya'an* of the noun *shiya'* 'sects') and *-halan* is consistently used in all three manuscripts to indicate the adverbial clause of manner 'by weakening them'.

Table 1: Comparison of Old Kanembu glosses in three Borno Qur'an manuscripts.

Chapter: verse of the Qur'an	Arabic
Q.28:4	*jaʿala 'ahlaha shiyaʿan yastaḍʿifu ṭā'ifatan minhum*
	'made its people into factions, oppressing a sector among them'

MS (origin or provenance)	gloss in Old Kanembu
4MM (Gwandu)	*sdī s-ka jamāʿa yagōlōbu-ro kisadirai-ḥalan*
	'he.made its-DO people being.split-IO weakening.them'
	'he made its [people] into split communities, weakening them'
1YM (Gazargamu)	*yāl-jī-ka jamāʿa yagōlōgnro θidī jamāʿa-ka kisdrai-ḥalan*
	people-its-DO being.split he.made people-DO weakening.them
	'he made its people into a split community, weakening (this) community'
A33 (Katsina)	*θdī ahl-θ-ka… jamāʿaro yākoloro θdī … -s-ḥalan*
	he.made… to.people into.split he.made… -ing
	'he made its people into a split community, [weaken]-ing (them)'

2.4 Ajami Type 4. Occasional annotations

Occasional and random translation of some Arabic words into a local language occur in the margins of densely written Arabic texts. This type varies relative to specific parameters, such as time (more recent manuscripts have less Ajami), domain of study (*tafsīr* manuscripts may have fewer Ajami annotations than *fiqh* ones which deal with conduct and legal issues), and region (more occasional glosses in Soninke than in Old Kanembu). However, the lack of any systematic research renders these observations very tentative.

These manuscripts usually reflect a more advanced level of Islamic education when Arabic becomes the sole scholarly language with less need to use local languages as props at the intermediate phases of learning. Compared to a systematic nature of Type 3, the occasional Ajami manuscripts are not so rich in linguistic data. Yet they have a potential for understanding why local languages were still required even at this stage of education.

Type 4 manuscripts are very difficult to identify because the Ajami writing is much less conspicuous than in the other types. This partly explains why these manuscripts have rarely been studied.[27]

Our recent findings from the *African voices project* suggest that Type 4 Ajami might constitute the bulk of Ajami material. Unfortunately, to find all Ajami in occasionally annotated manuscripts would mean turning each page of ALL available manuscripts in West African collections – a task beyond any one person's capacities and life span, let alone academic funding.

As an example of what can be found in these manuscripts, we will have a look at the following page from *Tafsīr al-Jalālayn*, a very popular commentary of the Qur'an.

In the upper right hand side corner (marked with a red tick), there are two words in Hausa written upside down. The first Hausa word reads <giginiya> which most likely corresponds to *gigînyā* 'deleb palm'. The second word is written as <tufāfiyā> which is *tumfâfiyâ* 'apple of Sodom'. Both words show an attempt of the scribe to translate the Qur'anic Arabic *ʔaθl* (أَثْل) 'tamarisk' Q. 34:16 (written in red ink) which is also explained in Arabic by a synonymous word *ṭarfāʔu* (طرفاء) (in black ink) with the same meaning 'tamarisk'.

Note that the scribe also included a helpful indicator (🔶) above the Arabic *ʔaθl* (أَثْل) and repeated it in front of the Hausa word *gigînyā* to make sure that readers like us find the corresponding Arabic words easily.

2.5 Ajami Type 5: Healing and esoteric manuscripts

Type 5 Ajami manuscripts differ from the previous three (Type 2 – Type 4) in that the Ajami is not used for translation of Arabic. This type represents healing, talismanic and esoteric practices. These manuscripts are diglossic: Arabic has the agentive function towards the recipient of the amulet whereas the vernacular provides metadata about the uses and benefits of the amulet. There seems to be specific distribution of local languages in such manuscripts. In the Senegambia and Mali, Mandinka and other Manding languages predominate rather than Soninke; in Nigeria, it is mostly Hausa, rather than Old Kanembu or Kanuri. This type is most numerous in terms of individual manuscript items, currently estimated at several hundred thousand in Mali only (SaMaT 2018).

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27 See Dobronravin 2013 as a good exception.

Although the popularity of talismanic manuscripts is recognized in the secondary literature,[28] the function of Ajami content in these manuscripts has rarely been studied.[29]

Compared to Type 4 however, it is easier to find Ajami in such manuscripts. They usually consist of just one or two folios (leaves) and their esoteric nature can be inferred from visual characteristics, such as magic squares, long strings of letters conveying numerical values, and the conspicuous shapes of some words.

Medical and talismanic manuscripts are rich in socio-economic realities. For example, amulets with Bozo words and phrases are related to the social and occupational status of the Bozo ethnic group as professional fishermen. Thus, many Ajami texts from the Bozo area contain protective formulae against large fish or water animals, such as hippos ('binding hippo's mouth' is one such formula). The Ajami terms are usually used for describing the names of plants, animals, ingredients of medicinal potions and terms for diseases. As such, Ajami Type 5 is a good source for ethnobotanical and ethnomedical research.

But why do the esoteric branches of Islamic knowledge expressed in amulets and healing manuscripts require the use of African languages alongside the Arabic? One possible answer is that Arabic and vernacular serve different functional domains, as in a typical diglossic situation. Arabic has an agentive function towards the recipient of the amulet whereas the vernacular serves for instructions (e.g., how to use a healing amulet), labelling (e.g. the purpose of the amulet) and production manuals (e.g., how to produce an amulet to achieve the intended results).

When knowledge of Arabic is insufficient by the scribe, he switches to familiar terms in the language he knows best, the process resembling code-switching in speech.

3 Conclusion

The above typology is based on the relationship between Ajami, Arabic and layout, yielding five distinct types: 1. Ajami primary manuscripts; 2. Intralinear Ajami (Ajami phrases following Arabic phrases on the same line); 3. Interlinear Ajami (Ajami written between the lines); 4. Occasional Ajami in densely written

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28 Levtzion 1965, Goody 1968, Hamès 1997 and 2007 a.o.
29 Rare exceptions are Hamès 1987, Dobronravin 2005, Donaldson 2013, Vydrin and Dumestre 2014.

Arabic texts; and 5. Ajami in healing and esoteric manuscripts. Table 2 summarises these types in accordance with five parameters whose combination constitutes a type. Parameter (a) is the configuration of two distinct linguistic sets, Arabic (Ar.) and Ajami (Aj.). Most of Ajami manuscripts have both Arabic and Ajami, except for Type 1. Parameter (b) is the placement of Ajami relative to the lines and margins of the main text. Parameter (c) indicates whether Ajami is used as translation from Arabic. Parameter (d) is the density of the main text and parameter (e) signals what kind of genre is represented in the main text.

Table 2: A summary of five types of Ajami manuscripts.

type	(a) Ar &/or Aj	(b) placement: line/margin	(c) translation	(d) density of main text	(e) genre
1	Aj	–	–	dense	poetry, history, letters
2	Ar, Aj	same line	yes	dense	popular theology and ritual duties
3	Ar, Aj	between lines	yes	sparse	treatises used in intermediate to advanced education
4	Ar, Aj	margin	yes	dense	advanced level treatises
5	Ar, Aj	same line/margin	no	dense	esoteric, healing

The table represents tendencies rather than absolute categories. Overlaps may occur between some types in terms of different parameters. For example, Type 1 may have parameter (c) 'translations' activated. This happens when a poem in Ajami is translated into Arabic and thus, by parameters (b) and (d), it should be considered Type 3. The Arabic commentary is written in between the lines of the main Ajami text and by implication the main text is written with ample space between the lines. However, this kind of 'reverse' translation will not hold up as Type 3 by parameter (e) because the poems in Ajami are usually outside of the domain of advanced education.

   This typology may be helpful in applying specific approaches to specific types of Ajami manuscripts and designing research pathways pertinent to each type.

   Given that monolingual manuscript cultures are rather uncommon in human history, it would be interesting to compare this West Africa specific typology with multilingual and multiformat phenomena across the world.

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Abbreviation

BOKIM/SOAS   Borno and Old Kanembu Islamic Manuscripts digital collection at SOAS, University of London <https://digital.soas.ac.uk/LOAA000035/00001/citation> (accessed on 25 Jan. 2021).

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Fig. 1b: Cambridge, University Library, Or. 954, fol. 1ᵛ (*c.* early twentieth century); reproduced by kind permission of the Syndics of Cambridge University Library.

Fig. 1a: a facsimile from Banfield and Macintyre 1915, frontispiece.

Figs 1a–b: Poem *Miya mire* in Nupe, comparison of two manuscripts.
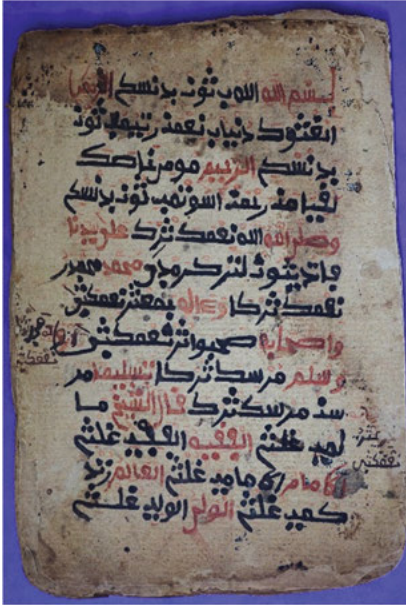
Fig. 2a: CSMC/Mamma Haidara, fol. 1ᵛ, *c*. late nineteenth century. © Mamma Haidara Library.

Fig. 2b: SOAS Digital Collections, Borno and Old Kanembu Islamic Manuscripts, fol. 1ʳ, *c*. early twentieth century. © SOAS, University of London. All rights reserved. <http://digital.soas.ac.uk/LOAA000035/00001>

Figs 2a–b: *Umm al-Barāhīn* text in manuscript form.
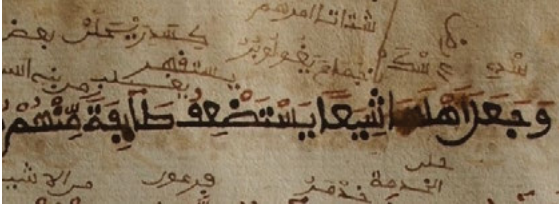
Birnin Kebbi, Vizier of
Gwandu, MS 4MM, Q.28:4.
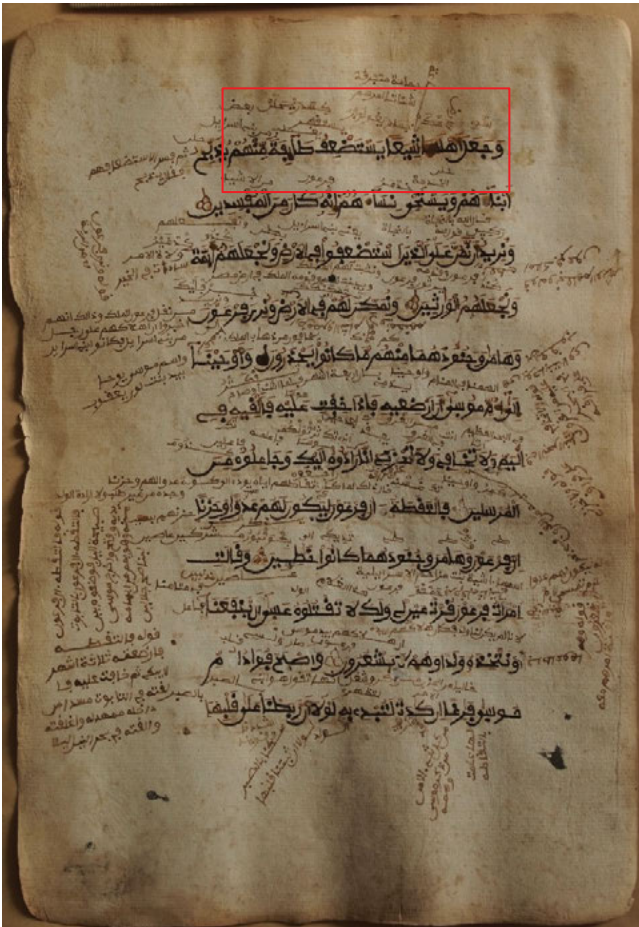
Fig. 3a: Qur'an, 28:4, SOAS Digital Collections, Borno and Old Kanembu Islamic Manuscripts, MS 4MM (the 'Malam Muhammadu manuscript' or 'Waziri of Gwandu manuscript'), *c.* late seventeenth century. © SOAS, University of London. All rights reserved.
<https://digital.soas.ac.uk/LOAA003340/00001/172>.

Figs 3a–c: Comparison of Old Kanembu glosses in three Borno Qur'an manuscripts.

Maiduguri,
Vizier of Borno,
MS 1YM,
Q.28:4.
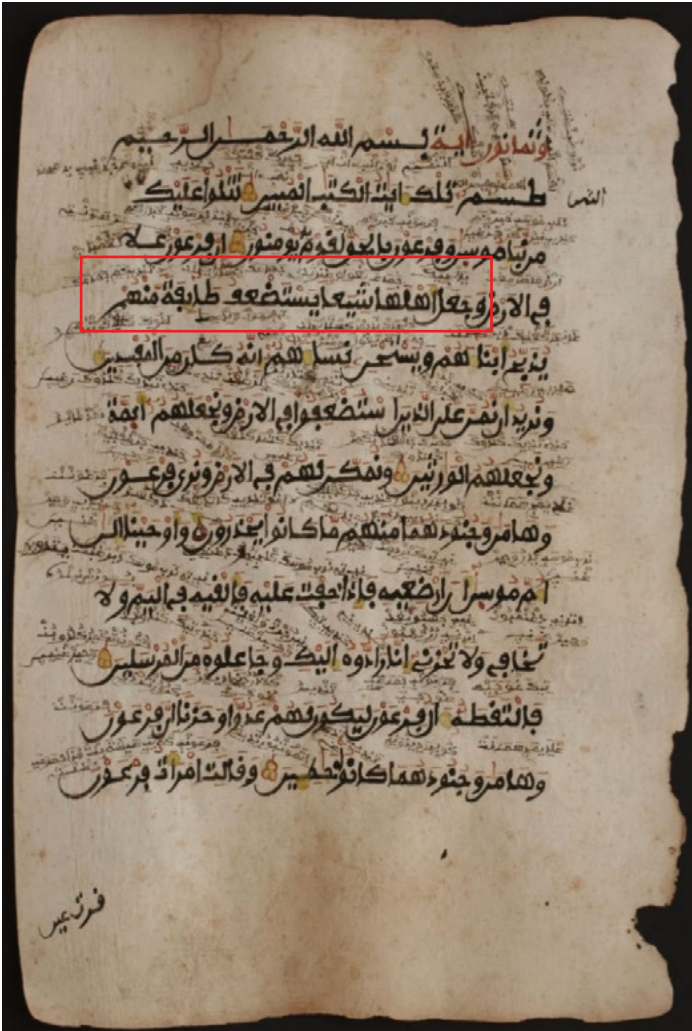
Fig. 3b: Qur'an, 28:4, SOAS Digital Collections, Borno and Old Kanembu Islamic Manuscripts, MS 1YM (the 'Yerima Mustafa manuscript'), *c.* late seventeenth century. © SOAS, University of London. All rights reserved. <http://digital.soas.ac.uk/LOAA003335/00001/481>
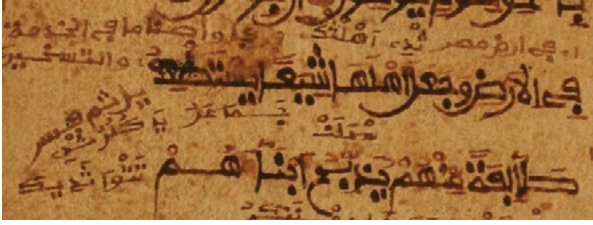
Kaduna, NAK, MS AR33,
Q.28:4
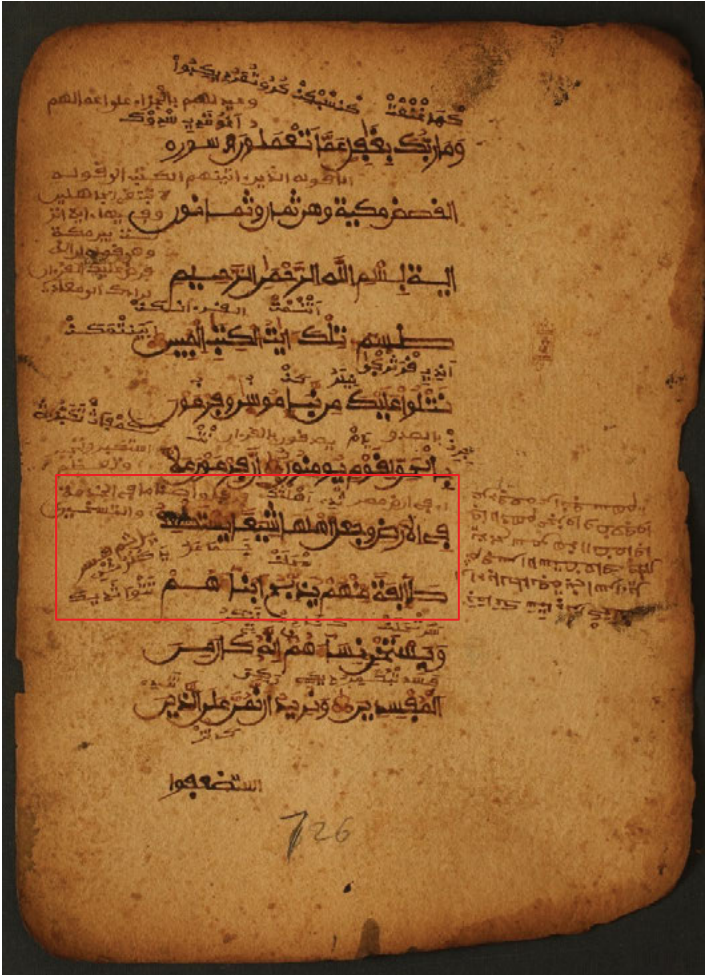
Fig. 3c: Qur'an, 28:4, SOAS Digital Collections, Borno and Old Kanembu Islamic Manuscripts, MS AR33 ('Arabic manuscript collections' from Kaduna National Archives), *c.* between the eighteenth century to early nineteenth century. © SOAS, University of London. All rights reserved. <https://digital.soas.ac.uk/LOAA003342/00001/742>

Fig. 4: *Tafsīr al-Jalālayn*. Arabic commentaries written in brown ink on Sūrat Saba' (Qur'an 34:16) written in red ink, with annotations in Hausa. Waziri Junaidu Bureau. Sokoto. *c.* mid-nineteenth century. SOAS Digital Collections, Sokoto Caliphate Islamic Manuscripts. © SOAS, University of London. All rights reserved. <https://digital.soas.ac.uk/LOAA003428/00001/6x>.

Andreas Janke

Forgery and Appreciation of Old Choir Books in Nineteenth-Century Europe

Abstract: The nineteenth century saw a revival in the illumination of manuscripts in Europe, involving amateurs as well as professional painters. Today, however, a significant part of the resulting written artefacts are declared to be forgeries without strong evidence, which often hinders further investigation into their context of origin and use. The current study aims to precisely investigate these contexts in Italy. Manuscripts, that contain musical notation as well as illuminations will be focused on as case studies. Overall, this article illustrates the broad 19th-century interest in illuminated manuscripts and discusses contemporary ideas of the terms 'original' and 'copy' in relation to newly produced written artefacts.

1 Introduction

At some point during his term as President of the United States of America, Theodore Roosevelt (1858–1919) met the publisher, book designer, and book historian William Dana Orcutt (1870–1953) and showed him an illuminated manuscript that he had received as a gift from King Menelik of Abyssinia (1844–1913). Although 'someone' had told the president that this was a manuscript from the twelfth or thirteenth century, he asked Orcutt: 'Is this an original manuscript?' Orcutt, realising that it was, in fact, a 'modern copy', steered the conversation to different topics so as not to have to reveal his opinion on the manuscript.[1] It is not clear when exactly Roosevelt received this gift; however, a letter from Menelik to Roosevelt attests to other items exchanged by the two men in 1903. No additional manuscripts are listed in this document that makes reference to a photograph, a typewriter, guns, lions, and elephant tusks.[2]

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1 This anecdote is reported in Orcutt 1926, 104–105.
2 See 'Translation of letter from Emperor Menelik II to Theodore Roosevelt', Theodore Roosevelt Papers, Library of Congress Manuscript Division, available on the Theodore Roosevelt Digital Library (Dickinson State University): <https://theodorerooseveltcenter.org/Research/Digital-Library/Record?libID=o43319> (accessed on 17 March 2021).

The situation just described reveals some of the difficulties encountered when using the terms 'original' and 'copy' in relation to manuscripts: while the illuminated manuscript was identified as an original by an unnamed individual, this was obviously not completely convincing to the president. The expert Orcutt, who had studied many illuminated manuscripts, judged the manuscript to be modern based on the parchment and the colours employed.[3] If Orcutt was right, should the manuscript have been considered a forgery?

The terms 'original,' 'copy,' and 'forgery' are still controversial[4] and are not used consistently when applied to the nineteenth- or twentieth-century illuminated manuscripts: The term 'original' often refers to an old manuscript only, and a nineteenth-century copy or imitation of a medieval manuscript is often described as a forgery. When such written artefacts are classified as forgeries today, the descriptions often resemble detective stories in which the guilty one – the forger – is pinpointed; there is often considerable drama involved.[5] While this may be an exciting read for some, analysis of the respective manuscripts as written artefacts is usually neglected. This applies to a specific group of European sources in particular, on which I will focus in the following.

Fig. 1 shows fol. 69ʳ from the manuscript Toronto, Thomas Fisher Rare Book Library, MSS 09700 ('Fisher Antiphonary'), a liturgical book that was most likely made in Northern Italy in the fifteenth or early sixteenth century and that belonged to the Franciscan order. There are some later additions suggesting that the manuscript was in liturgical use until the eighteenth century.[6] In the second half of the nineteenth century,[7] 22 folios received new historiated initials, bas-de-page miniatures, and border decorations. It is probable that the manuscript later made its way to the Libreria Franceschini in Florence; Wilfrid Voynich (1864–1930) purchased the bookshop and its inventory in 1908. In September of the following year, Voynich sold the antiphonary to the Royal Ontario Museum in Toronto, from where it was transferred to the Thomas Fisher Rare Book Library in 1964.[8]

The Royal Ontario Museum's 1909 card catalogue entry draws attention to a peculiar feature of the folio in Fig. 1, namely that the 'miniature scenes in the

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3 Orcutt 1926, 104–105.

4 See Michel and Friedrich 2020.

5 Römer 2006, 347.

6 Piazza 2019.

7 This has been proven through material analysis – using the CSMC's mobile lab – conducted by Sebastian Bosch and Andreas Janke on-site at the Thomas Fisher Rare Book Library, Toronto. See Bosch and Janke 2021.

8 See Bosch and Janke 2021.

capital letter' contain a 'Praying Madonna (from Fra Filippo Lippi: Madonna in Adoration, *c*. 1435)'.[9] The cataloguer drew attention to the fact that a section of the Florentine painting, now in the Uffizi Gallery, served as the model for this nineteenth-century illumination. The border decoration and the initial 'P' were copied from different illuminated manuscripts, for the most part choir books, and the initial 'P' does not relate to any text on this folio. Finally, it is important to point out that the historiated initial obscures text and musical notation in the antiphonary.

In addition to the Fisher Antiphonary, which contains many more such examples (e.g. Fig. 3), there is a growing number of single leaves, stemming from Late Medieval or Early Renaissance choir books, which have received additional illuminations that do not align with the liturgical content. These are listed as nos 1–4 in the Appendix, which includes additional leaves illuminated in the nineteenth or early twentieth century and which I will refer to in the following by the numbers I have assigned. Based on style and technique, no. 5, for example, seems to originate from the workshop in which the Fisher Antiphonary received its new decoration and it contains a full-page miniature, likewise copied from Lippi's painting, and additional decorative elements reproduced from different choir books. In this case, however, a piece of parchment was reused, one that had served as a credit contract in eighteenth-century Florence.

The Fisher Antiphonary and leaves nos 2 and 3 have been described as forgeries.[10] In the following, however, I would like to try to interpret such written artefacts principally in their role as copies or imitations of 'original' late Medieval or Renaissance choir books. First, I will use the example of the well-known 'Spanish Forger'[11] to highlight problems with common criteria for labelling illuminated manuscripts as forgeries. Secondly, I will demonstrate the broad interest in and access to Late Medieval and Renaissance illuminated choir books in nineteenth-century Italy. This is fundamental for, thirdly, gaining greater insights into the popular nineteenth-century practices of illuminating manuscripts and ideas on the relationship between original and copy. Finally, I will emphasize how a genuine interest in the visual organisation and materiality of choir books emerged at that time, which continues to this day.

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9 I thank Kathleen Ruffo for granting me access to the card catalogue at the Royal Ontario Museum.

10 See Michael Scott Cuthbert's online comment, <https://gregorian-chant.ning.com/group/arsnovaetarssubtilior/forum/topics/copy-of-squarcialupi-codex-auction-2014> (unless otherwise stated, all sites were accessed on 1 Sept. 2020), and W. M. Voelkle in *Holy Hoaxes* 2019, 41 and 44.

11 On the 'Spanish Forger' see Voelkle 1978 and 2007, *The Spanish Forger* 1987, and *Holy Hoaxes* 2019.

2 How to not unmask a forger

When it comes to what are identified as forged illuminated manuscripts in nineteenth- or early twentieth-century Europe, it is often assumed that they were created in forgery workshops. Such workshops, however, cannot be described in detail, let alone documented. Therefore, all investigative approaches are inevitably based almost exclusively on the objects identified as forgeries.

A frequently used example is that of the so-called 'Spanish Forger', to whom an extensive oeuvre of forgeries is ascribed, including 284 illuminated parchment leaves, 11 codices, and 117 panels, most of them have been considered to stem from the Middle Ages or the Renaissance, at some point.[12] He is often described as 'one of the most skilful, successful, and prolific forgers of all time',[13] 'master of deception',[14] and 'master of manuscript chicanery'.[15] So far, only a few assumptions have been made about his identity: he might have been active in France, first as a chromolithographer at the end of the nineteenth century and then, from about 1900, as a forger. Based on material analysis, some of his works could be proven to be not older than 1814, which does not allow for a medieval or Renaissance origin of the artefacts.[16] Attribution to the Spanish Forger is usually determined by specific and consistent features in the illuminations including, among others, '[...] sugary faces, daring décolletage, page costumes, theatrical postures and hand gestures, stock figures, tapestry-like foliage, swirling waters, and stage set architecture'.[17]

A large part of the literature on forgery focuses on the forger's techniques, usually described exhaustively.[18] Of particular interest are details by which a forgery can be exposed. The most common characteristics attributed to the Spanish Forger's manuscripts, for example, include:[19]

– the copying of miniatures and border decorations from contemporary reproductions of medieval manuscripts in printed volumes;

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12 *Holy Hoaxes* 2019, 12.

13 Voelkle 1978, 9; *The Spanish Forger* 1987, 13; Hindman and Rowe 2001, 157; Voelkle 2007, 207; *Holy Hoaxes* 2019, 12.

14 *The Spanish Forger* 1987.

15 Voelkle 2007, 207.

16 *Holy Hoaxes* 2019, 12.

17 Voelkle 2007, 207.

18 Römer 2006, 348–349.

19 See for example Voelkle 2007, 207–210, 212–213, 216–217, 219, 224; *The Spanish Forger* 1987, 32; Hindman and Rowe 2001, 158–159; *Holy Hoaxes* 2019, 3–4, 23.

- development of his own personal style;
- use of old vellum, usually from late medieval choir books;
- erasure of musical notation and text before a new miniature was painted;
- if original chant from the choir book is still visible it typically bears no relationship to the new illumination; and
- when gold paint or leaf are used they are treated to create an 'antiqued' look.

The term 'forgery' is typically used without a clear definition, since a general understanding of the term is assumed. One of the unquestionable characteristics of a forgery is that it was created with the intent to deceive someone for profit. The word 'fake' is mostly used as a synonym for 'forgery', but there are also other uses of 'fake', for example synonymous to 'hoax', meaning a forgery with the intention of being exposed as such after a certain period of time.[20]

In the recent exhibition catalogue *Holy Hoaxes* (2019) some manuscripts are identified as forgeries, although they were obviously not created with the intent to deceive[21] and should therefore instead be described as copies, pastiches, or imitations.[22] The classification of a written artefact as forgery is indeed no trivial act, as can be seen from semiotician Umberto Eco's discussion of what constitutes a forgery:

> [T]he *necessary* conditions for a forgery are that, given the actual or supposed existence of an object Oa, made by A (be it a human author or whatever) under specific historical circumstances t1, there is a different object Ob, made by B (be it a human author or whatever) under circumstances t2, which under a certain description displays strong similarities to Oa (or with a traditional image of Oa). The *sufficient* condition for a forgery is that it be claimed by some Claimant that Ob is indiscernibly identical with Oa.
>
> The current notion of forgery generally implies a specific intention on the part of the forger, that is, it presupposes *dolus malus*. However, the question whether B, the author of Ob, was guilty of *dolus malus* is irrelevant (even when B is a human author). B knows that Ob is not identical with Oa, and he or she may have produced it with no intention to deceive, either for practice or as a joke, or even by chance. Rather, we are concerned with any Claimant who claims that Oa is identical to Ob or can be substituted for it – though of course the Claimant may coincide with B.
>
> However, not even Claimant's *dolus malus* is indispensable, since he or she may honestly believe in the identity he or she asserts.

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20 See Doll 2012, 21–25 and Keazor 2018, 12 and 29.

21 For example, *Holy Hoaxes* 2019, item no. 64, p. 73 and the comment on p. 3.

22 On these terms see, for example Keazor 2018, 12.

> Thus a forgery is always such only for an external observer – the Judge – who, knowing that Oa and Ob are two different objects, understand that the Claimant, whether viciously or in good faith, has made a false identification.[23]

With regard to the Spanish Forger (B), difficulties arise immediately in defining the manuscripts on which he worked (Ob) as very similar to known printed originals (Oa), on the one hand because of the different materials used and, on the other hand, because of recognisable alterations he made. What is missing is the 'Claimant' claiming that Ob is identical with Oa. Oa can also be an object that no longer exists, in which case it would be a forgery ex nihilo.[24] It is important to emphasise that none of the criteria listed above allow the works of the Spanish Forger to be understood as 'false identifications'.

At this point, even scientific material analysis is only of limited help.[25] The hope of many scholars in the humanities – who are accustomed to weighing plausibilities – that they might use scientific methods to arrive at an unambiguous determination of whether a forgery is present must inevitably fail in most cases. Certainly, the composition of the colours in illuminated manuscripts can be determined. However, if modern pigments are identified, the analytical technique does not rise to the level of proof of intent to deceive.

Future research should focus more on the 'Claimant' in cases of suspected counterfeiting, who can either be the originator of a written artefact or the seller of a manuscript, for example. The challenges in the identification of forgeries I addressed here for a specific region and time frame are not limited to Europe or the nineteenth or early twentieth century, but remain relevant today.[26]

3 Tourist guides to illuminated choir books

Looking back in 1926, Orcutt states that no 'true lover of art' would travel to Europe without preparation and explicitly refers to illuminated manuscripts, adding that one should 'make an equal effort to prepare himself to understand and enjoy those rich treasures in the art of illumination which are now so easily

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23 Eco 1990, 180–181. On Eco see also Doll 2012, 34–39.
24 Eco 1990, 186.
25 As, for example, described in Voelkle 2007, 219–220. On the limits of material analysis, see Rabin and Hahn 2020.
26 See, for example, Gallop 2017.

accessible'.[27] In the nineteenth century, illuminations in Late Medieval or Renaissance manuscripts were considered works of arts and were, along with other important artworks, among the objects travellers were most eager to see.[28] Although scholars often assume these travellers had no access to original manuscripts and knew them only from chromolithographic reproductions, for example,[29] there were in fact specific institutions with large numbers of choir books on display. Florence and Siena are particularly good examples of this. Even for the 'unlettered visitor'[30] there were countless instructions in travel guides which revealed where the most important illuminated manuscripts – many of them choir books – were located. The three most relevant sites are briefly highlighted here: Florence's Laurentian Library and the Museum of San Marco and, in Siena, the Cathedral's Piccolomini Library.

The Laurentian Library was usually open from 9 am to 3 pm. From *Murray's Handbook of Florence and its Environs* the traveller learns that:

> The assistant will expect a small gratuity. The chief librarian is generally in attendance, and those who wish to consult or use the manuscripts will experience, as in the other public establishments of this city, all the facilities they can desire.[31]

The most valuable manuscripts of the library are listed as 'sights'.[32] Their popularity was such that in 1872 there were more tourists interested in 'the beauty of the place and the rarities that are preserved there' than scholars.[33] The place itself was certainly part of the experience, with its connections to the Medici family, Michelangelo Buonarotti, and Giorgio Vasari, among others.[34] In her 'new artistic and practical hand-book for English and American tourists', *Saunterings in Florence* (1896), Elvira Grifi reports that in the Laurentian Library 'another room has been opened for the choral books especially those of Sta. Maria del Fiore and Sta. Maria Angioli'. She remarks as well that 'the Librarian is usually willing to show any desired Mss.'[35]

The Museum of San Marco has been a similarly attractive destination for tourists since 1869; there, in addition to the illuminated choir books exhibited in

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27 Orcutt 1926, 152.

28 This interest began well before the nineteenth century. See Chapron 2004.

29 Wieck 1996, 243; Hindman and Rowe 2001, 160; Voelkle 2007, 216.

30 Murray 1867, 37.

31 Murray 1867, 38.

32 Murray 1867, 37.

33 Anziani 1872, 36.

34 See Horner's *Walks in Florence* 1884, vol. I, 134–140.

35 Grifi 1896, 128.

vitrines (organised according to their provenance)[36] travellers could also admire frescoes and the former monastery. In 1872 the director, Ferdinando Rondoni, published an extensive inventory including, among other items, all miniatures found in the library's 82 choir books and identifying the respective miniaturists when known.[37] Choir books could be examined in detail by the visitors by making a request.[38] The vitrines are explicitly referred to in travel guides,[39] and in Horner's *Walks in Florence* it is even suggested that visitors purchase Rondoni's guide at the museum's entrance.[40]

Before Rondoni's work, Gaetano Milanesi wrote a history of Italian miniature painting in 1850, which, in addition to biographies of individual miniaturists, lists about 40 choir books in different archives and describes their miniatures in detail.[41] His interests were scholarly in nature and he was concerned about the preservation of the manuscripts. He stated that the illuminated choir books should be stored as carefully as possible and – where still in use – replaced with copies. This had apparently already been done at Siena Cathedral, where the old choir books were now exhibited in the Piccolomini Library. Milanesi noted, however, that 'those codices are not completely saved from the slow but continuous offense that they receive from the everyday opening and unfolding to the curiosity of visitors'.[42]

4 Designing manuscripts

Nineteenth-century interest in illuminated manuscripts was quite diverse and included collection and research, among others. Often initials and miniatures were cut from the manuscripts and the cuttings then often rearranged in collages. In addition to these practices, manuscripts or parts of manuscripts were more and more frequently copied.[43] In London in particular, institutions such as

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36 For a recent study of the twenty-two choir books that originate from different Franciscan houses, see Labriola 2020.
37 Rondoni 1872.
38 Rondoni 1872, VI.
39 E.g. Grifi 1896, 158.
40 Horner 1884, vol. I, 422 (footnote).
41 Milanesi 1850. On Milanesi see Labriola 2016.
42 'Ma questo non basta, imperciòcche quei Codici non sono del tutto salvati dalla lenta ma continua offesa che ricevano dal quotidiano aprirli e svolgerli alla curiosità de'visitatori della Sala Piccolominea' (Milanesi 1850, 192).
43 See Hindman and Rowe 2001.

the South Kensington Museum (later the Victoria and Albert Museum) and the Arundel Society commissioned professional facsimilists to produce high-quality copies especially of Late Medieval and Renaissance frescoes and illuminated manuscripts. The facsimilists were active in the places I have highlighted above. Fig. 2 shows a parchment leaf commissioned by the Arundel Society that was copied from fol. 3ʳ of the 'Gradual B' (MS 516) in San Marco.[44] Arranged as a collage, only the initial 'R' and some border decorations were copied and rearranged.[45] In addition, a hand-painted facsimile of the complete folio, including a correct reproduction of the chants, was created by Jacopo Olivotto (Appendix, no. 6). It seems, therefore, that certain manuscripts had become especially attractive as templates and the direct access to original choir books was not only of importance for tourists and scholars, but also for all those who wanted to use the manuscripts directly as templates from which to copy.[46]

The monastery of San Marco was already a destination for illuminators and copyists even before it opened as a museum. The English writer and art historian Elizabeth Eastlake (1809–1893), for example, who studied choir books in Brussels and Bologna in 1860,[47] was at San Marco on 30 September 1863 to copy from choir books.[48]

Such interests were fuelled by publication of numerous – principally British – manuals offering step-by-step instructions on how to illuminate manuscripts. A major motivation for this was commercial interest on the part of paint manufacturers, who published most of the manuals.[49] Some of these included reproductions of initials and miniatures, particularly those from the fourteenth and fifteenth centuries, along with instructions for tracing which enabled amateur painters to quickly achieve good results without much practice. Many of the manuals also promulgated a revival of manuscript illumination as the higher goal for ambitious amateurs and professional illuminators. In Italy, the first such known manual of this type was published in 1905 by Vittorio Vulten.[50]

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44 The manuscript is described in Rondoni's *Guida* (Rondoni 1872, 33–34).

45 The Arundel Society also commissioned copies from the Siena choir books in the Piccolomini Library, many of which were made by Ernesto Sprega (Ledger 1978, 128 and 292).

46 At the time the monastery of San Marco received special mention in travel guides for its illuminated manuscripts. See Murray 1867, 40.

47 Rigby 1895, vol. 2, 148 and 156.

48 Ribgy 1895, vol. 2, 171–172.

49 Watson 2007, esp. 93.

50 Vulten 1905.

However, template books with initials, miniatures, and border decorations from different manuscripts had been published earlier as chromolithographs.[51]

The appeal certain manuscripts held for painters is documented at the Laurentian Library; for example, a *Breviarium Romanum* (Florence, Biblioteca Medicea Laurenziana, Pluteo 17,1), illuminated by Boccardino the Elder (1460–1529), attracted a particularly large number of painters towards the end of the nineteenth century. The library's 'list of readers'[52] of this manuscript contains the name of the aforementioned Jacopo Olivotto several times, as well as many others whose professions were clearly given as painters. The director of the Laurentian Library was not unaware of the attention given his collection of illuminated manuscripts and so in 1890 he published an article connecting the most famous illuminator from this group – Nestore Leoni (1862–1947)[53] – with the miniaturist Boccardino the Elder, after he explained that 'today it is fashionable to have diplomas and parchments executed in imitation of ancient miniatures [...]'.[54]

Returning to the examples from the Fisher Antiphonary (Figs 1 and 3), it becomes clear, based on these parameters, that they were not intended to serve as facsimiles – they are, rather, pastiches. In Fig. 3 the same initial 'P' seen in Fig. 1 recurs, though the border decoration is based on different models. The painted scene within the initial also has a different source, it is based on Benozzo Gozzoli's frescoes in the chapel of the Palazzo Medici-Riccardi (see also Fig. 4). This is not unprecedented, as frescoes served as models for the decoration of other manuscripts (see Appendix, no. 7).

Gozzoli's frescoes had long been one of the main tourist attractions in Florence[55] and the group of angels that served as the model for Fig. 3 was particularly renowned: 'The most beautiful group is of kneeling angels with their hands

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51 Melani 1896. The intended audience included not only illuminators, but also calligraphers, sign painters, embroiderers, engravers, and type designers. Tables XVII–XVIII and XI contain initials copied from choir books located in Venice and Pistoia.

52 Florence, Biblioteca Medicea Laurenziana, *Elenco dei Lettori che hanno studiato il seguente Manoscritto: Plut. 17,1*, from 6 Nov. 1889 to 23 May 1998.

53 Nestore Leoni saw manuscript Plut. 17,1 in the Laurentian Library on 6 Nov. 1889. See Florence, Biblioteca Medicea Laurenziana, *Elenco dei Lettori che hanno studiato il seguente Manoscritto: Plut. 17,1*, no. 1. On Nestore Leoni in the context of an Italian revival of the manuscript illumination tradition see Ascoli 2007 and Guernelli 2011.

54 Biagi 1890, 269.

55 The frescoes are highlighted in almost every tourist guide to the city. See, for example, Grifi 1896, 145: 'The frescoes by Benozzo Gozzoli [...]. They constitute one of the most interesting works in Florence both for their merits as pictures as well for their excellent preservation'.

joined, for when they arrive at the crib, where the Redeemer is, they worship and pray.'[56] Gozzoli's works also received considerable attention in England, where he was considered 'a "God" among Painters' in Pre-Raphaelite circles.[57] The Arundel Society made many efforts to have the frescoes at the Palazzo Medici-Riccardi copied on-site and then reproduced as lithographs or chromo-lithographs.[58] This undertaking was especially complicated due to unfavourable lighting conditions in the chapel.[59] But, following the advent of photography, copyists were not limited to making reproductions on-site. A wide range of photographic reproductions were available as templates, including detailed shots of the adoring angels.[60] The connection between the late nineteenth-century photograph (Fig. 4) and the example in Fig. 3, from the Fisher Antiphonary, is not limited to the possibility that this sort of photograph might have served as a model for Fig. 3 and leaf no. 1 in the Appendix. Both the copying of illuminations and the colouring of photographs were considered possible activities for 'wet mornings'.[61] Fig. 4 is such a hand-coloured photograph.

To understand the rationale that lies behind these modern illuminations it is necessary to trace the nineteenth-century interest in manuscript production and, specifically, illumination practices. The manuals that instruct students in the art of illumination are very informative regarding how a manuscript should be designed. One of the most successful of these, *A Manual of Illumination on Paper and Vellum*,[62] was in its eighteenth edition by 1870. In this volume, under the headings 'conception', 'invention', and 'completion', the stated rules for manuscript design can be related to the examples from the Fisher Antiphonary.

'Conception' addresses selection of the individual elements to be copied, such as border decoration, initials, and text. The purpose is not to create a facsimile but, rather, to rearrange and borrow, and the reader is advised to: 'First dispossess yourself of the idea that good "design" must be entirely original'.[63] It is with 'invention' that deviations from the template are encouraged:

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56 'Il gruppo più bello è di angioli genuflessi con le mani giunte, perchè arrivati al presepio, dove è il Redentore, adorano e pregano' (Benvenuti 1901, 19–20).

57 Ledger 1978, 181.

58 Ledger 1978, 181, 183, 278 and 295.

59 Ledger 1978, 123 and 131.

60 See, for example, the sales catalogues from two different shops: Alinari 1873, 138 and Brogi 1878, 75.

61 Watson 2007, 94.

62 Bradley et al. 1870.

63 Bradley et al. 1870, 95–96.

> For our second point – invention – the beginner, with a view to gradual improvement, should at first copy a part of an illuminated page, the mere border for instance, and the miniature capital or great initials (according to word required to begin a certain passage) from another page of the same MSS., so as to ensure same style, and unite it to [the] border, [...]. In your next attempt you might alter the details a little, such as the setting of leaves.[64]

However, not only illuminated manuscripts were put forward as models; in principle, everything could be used according to one's taste. The reader is advised that '[...] when you see a good thing in drawing and colour that strikes you as adapted for illumination, to take note thereof, and try something like it'.[65] The aspiring illuminator should ideally create a personal model book and annotate the copies with dates of their originals,[66] because mixing elements from different centuries was not recommended.[67] Finally, colours and additional decorative elements complete the newly created manuscript page.[68]

With such ideas for designing manuscripts, the Fisher Antiphonary – and related objects –[69] can be better located within the nineteenth century, at least as far as its new decoration system and related decisions are concerned.

5 Music as image

In *A Manual of Illumination on Paper and Vellum* the reader is informed that, as part of the 'conception', the textual content plays an essential role and the text should coordinate with the illumination.[70] The primary deviation of the Fisher Antiphonary, and leaves nos 1–4 from the manual's design rules lies in the disjunction between motifs in the modern miniatures and initials, and the liturgical contents of the Late Medieval or Renaissance choir book pages that were used to paint on (e.g. Figs 1 and 3).[71]

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64 Bradley et al. 1870, 96.
65 Bradley et al. 1870, 98. Architecture and glass paintings are explicitly mentioned.
66 Bradley et al. 1870, 73.
67 Bradley et al. 1870, 36.
68 Bradley et al. 1870, 98.
69 Discussion of the Spanish Forger's manuscripts may profit from including the ideas of conception, invention, and completion.
70 Bradley et al. 1870, 39.
71 The use of parchment to paint on was recommended in the manuals, because 'it is obvious that good copies of ancient illuminated manuscripts can be made on this material only, for there is a charm about the colour and texture of well-prepared calf-skin, which no paper can be

There is no question that the musical notation of the chants no longer served their function of celebrating Mass or Office. However, in leaving most of the musical notation intact and visible it could serve as part of the 'conception', which was not intended to be a collage of single elements (as in Fig. 2), but rather an imitation of the layout of choir books that travellers could marvel at in Florence and Siena. This function of musical notation becomes particularly clear in cases in which new parchment was used, and invented notation was entered as part of the design (Appendix, no. 8).

Musical notation as an image can also be found in the painting templates of Vittorio Vultens's *La Miniatura sulla Pergamena*. Fig. 5 shows one of his painting templates. An initial 'P' contains a scene showing Saint Cecilia, the patron saint of music, standing in front of a huge choir book with two angels behind her. While Cecilia is usually represented with an organ or other instruments, here it is the choir book that stands out. To the best of my knowledge, this is a representation of Cecilia originating in the nineteenth century and especially popular among nineteenth-century painters, who not only collected illuminated choir books and single leaves, but also integrated them into their paintings.[72] In fact, this depiction comes not from Vulten himself, but is a copy of a painting by Giulio Aristide Sartorio (1860–1932), which was reproduced as an engraving in the magazines *L'Illustrazione Italiana* and *L'illustrazione popolare*.[73] Several differences between these two can be identified. While Sartorio's choir book, for example, only shows large initials, Vulten adds invented notation. Although Vulten uses a contemporary model, he describes the style of his initials as 'stile antico' – which he defines as the period between the ninth and sixteenth centuries.[74]

Taken as a whole, in the late nineteenth century we can see a shift from specific interest in single initials or miniatures to general interest in the complete parchment leaf or codex. Additionally, by the beginning of the twentieth century, a large number of printed books were available that imitated the look of illuminated manuscripts, as, for example, Jacopo Olivotto's *S. Francesco*

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made to possess'. On the other hand, new parchment was considered costly (Tymms and Wyatt 1860, 50, and Bradley et al. 1870, 29).

72 For example, John William Waterhouse, *Saint Cecilia* (1895), <https://commons.wikimedia.org/wiki/File:Waterhouse,_John_William_-_Saint_Cecilia_-_1895.jpg>.

73 *L'Illustrazione Italiana*, 5 April 1891, *L'illustrazione popolare. Giornale per le famiglie*, 20 December 1891, 803, 804, and 812. Later Sartorio created a similar work including an enormous notated Missal, published in *L'Illustrazione Italiana*, 6 January 1895, p. 1 and 15.

74 Vulten 1905, 18–20.

d'Assisi nel Poema di Dante e negli Affreschi di Giotto (Florence, 1905), which was reviewed with a great deal of interest:

> The Canto XI of Dante's Paradiso is printed with characters, with friezes and initials, which perfectly imitate the most beautiful manuscripts of that century, and the chromo-lithographs reproducing Giotto's most beautiful paintings lead us to the originals [...].[75]

In this spirit, the Fisher Antiphonary and Appendix nos 1–4 can be understood as souvenirs of a sort. The 'conception' of each newly illuminated leaf imitates the old choir book openings in the display cases and each of the individual elements copied refers to a different original. In the case of the folios, which include motifs from Gozzoli and Lippi, reference is made to especially well-known Florentine tourist attractions. In the two folios with copies of Gozzoli's adoring angels (Fig. 3 and Appendix, no. 1), one might even interpret the notation as a representation of the angelic singing, as the choirs of angels in the two Palazzo Medici-Riccardi altar panels sing the Gloria. This point is emphasised in the travel guides:

> [...] with the heavenly expression of the angels who, hand in hand, advance singing the praises of the Virgin. The illusion is so complete that it seems as if, looking intently for a few minutes, one must hear their voices'.[76]

This study set out to gain a better understanding of manuscript illumination in Nineteenth-Century Italy, which so far has received only little attention compared to studies on Great Britain, France, or Belgium. One task was to explore the different agents in the context of contemporary manuscript admiration, which was mostly centred on strong visual characteristics and the material object as such, rather than on the actual content. In some cases the content was of interest only because of its visual quality, as for example the musical notation in the Fisher Antiphonary. It is beyond the scope of this article to examine the relationship between the illuminations made in the nineteenth century or early twentieth century and their models in detail, however, in a future study, I will analyse a music manuscript which was copied from frequently in Nineteenth-Century Florence.

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[75] 'Il Canto XI del Paradiso di Dante è stampato con caratteri, con fregi ed iniziali, che imitano perfettamente i più bei manoscritti di quel secolo, e le cromo-litografie riproducenti i più bei quadri di Giotto ci portano col pensiero agli originali che in quell'epoca furono fissati nelle artistiche pareti di S. Francesco in Assisi e di S. Croce in Firenze.' Fiumi Roncalli 1906, 36.
[76] Grifi 1896, 145. See also Benevenuti 1901, 19–23.

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Appendix:
Modern illuminations on parchment leaves

No. 1

New York, Doyle, Auction, 3 May 2006, Books and Print, Sale 06BP01, Lot 3004[77]
Dimensions: *c.* 381 mm × 260 mm.
Description: The framed fragment from a Late Medieval choir book was sold for
$2,400; the current owner is unknown. The modern miniature includes three
adoring angels copied on top of musical notation and text. The template was the
left panel of Benozzo Gozzoli's fresco in the Chapel of the Magi in the Palazzo
Medici-Riccardi in Florence, or some other media that reproduced the fresco;
see, for example, the hand-coloured photograph from the late nineteenth centu-
ry at <http://doi.org/10.25592/uhhfdm.1881>.
The decorations around the miniature stem from different Florentine illumi-
nated manuscripts coeval with the creation of Gozzoli's fresco. The artefact was
most likely illuminated in the same environment as the Fisher Antiphonary.

No. 2

New York, Private Collection, William Voelkle (acquired from Thomas Carson,
1987).
Dimensions: 425 mm × 315 mm.
Description: A leaf from an Italian Antiphonary. A modern historiated initial 'B'
was entered in the upper left corner, covering the musical notation and text.
Voelkle demonstrates that the historiated initial does not relate liturgically to
the leaf's contents.
Bibliography: *The Spanish Forger*, 1987, 32, no. 24; *Holy Hoaxes* 2019, 41.

No. 3

San Francisco, Fine Arts Museums, Achenbach Foundation for Graphic Arts,
25644[78] (Gift of Sarah M. Spooner, acquired 3 March 1904).
Dimensions: 387 mm × 274 mm.
Description: A leaf from an Italian choir book. On its recto the parchment leaf
contains the foliation number 'vi'. More than half of the recto side is taken up by

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77 <https://doyle.com/auctions/06bp01-books-and-prints/catalogue/3004-illuminated-
manuscript>.
78 <https://art.famsf.org/anonymous/page-choral-miniature-resurrection-christ-25644>.

a large historiated initial 'R' which obscures the chant. The leaf was probably illuminated in the same environment as the Fisher Antiphonary.

No. 4

New York, Private Collection, William Voelkle (from the collection of Cornelius J. Hauck).

Dimensions: 245 mm × 310 mm.

Description: The incomplete parchment leaf was acquired at Sotheby's New York auction 'The History of the Book: The Cornelius J. Hauck Collection' (27–28 June 2006) for $720. It is a palimpsest; the lower script contains a Jewish marriage contract from the eighteenth century, whereas the overwriting shows part of a Gradual with border decorations and an initial N that were copied from the same template as no. 8. The scene within the initial, however, does not fit liturgically as Voelkle points out.

Bibliography: *Holy Hoaxes* 2019, 44.[79]

No. 5

San Francisco, Fine Arts Museums, Achenbach Foundation for Graphic Arts, 25650[80] (Gift of Sarah M. Spooner, acquired 3 March 1904).

Dimensions: 264 mm × 180 mm.

Description: This parchment leaf contains a Florentine credit contract from 2 October 1800, main text printed with handwritten inserts. On the verso a full-page miniature was added in the nineteenth century. The image was copied from Fra Filippo Lippi's *Adoration of the Child*, *c.* 1435, now in the Uffizi Galleries, Florence, and it resembles the style of the historiated initial in fol. 69[r] of the Fisher Antiphonary (Fig. 1).

No. 6

New York, Pierpont Morgan Library, Manuscript M.260e[81]

Dimensions: not indicated.

Description: Facsimile of Florence, Museo di San Marco, gradual B, MS 516, fol. 3[r]. The lower left corner contains the name of the illuminator, Jacopo Olivotto.

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79 See also <https://www.christies.com/lot/lot-4747496/?hdnSaleID=20680&LN=140&intsaleid= 20680>.

80 <https://art.famsf.org/anonymous/parchment-miniature-nativity-25650>.

81 <corsair.themorgan.org/vwebv/holdingsInfo?bibId=278210>.

No. 7

Milwaukee, Haggerty Museum of Art, 79.21[82] (Gift of Eva K. Ford, Genoa, Nebraska)
Dimensions: 533 mm × 432 mm.
Description: Leaf from a choir book with a modern historiated initial M. The scene within the initial was copied in 1908 – and signed – by E. Giandotti from Fra Angelico's fresco *The Annunciation* in the monastery of San Marco.
Bibliography: Voelkle, *The Spanish Forger* 1987, 33 (No. 37).

No. 8

Vienna (Deutsch Auctioneers), Lot 53, two framed folios[83]
Dimensions: 420 mm × 300 mm.
Description: The two framed leaves were offered at auction on 25 September 2018 with an estimated price range of €1600–2800. From the online images it can be seen that the two leaves were created in the nineteenth or early twentieth century on new parchment. The first leaf is a facsimile of fol. 7^v in manuscript Florence, Biblioteca Medicea Laurenziana, Med. Pal. 87. The second leaf is an imitation of decorations in the same codex – the initial 'N' and most of the marginal decoration are taken from the same exemplar as no. 4. The musical notation is invented.

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82 <http://museum.marquette.edu/eMuseumPlus?service=ExternalInterface&module=
collection&objectId=3591&viewType=detailView>.
83 I thank Margaret Bent for bringing this auction to my attention. Lot 53 was advertised under the following link – accessed 18 Sept. 2018 – the images and descriptions are no longer available online at the auctioneer's website (<deuart.at/index.php/auction/upcoming-auction/detail-view/116-lot53-detail>). But see: <https://www.invaluable.com/auction-lot/pair-of-illuminated-incunables-53-c-7864ec2a06>.

Fig. 1: Toronto, Thomas Fisher Rare Book Library, MSS 09700, fol. 69ʳ. Manuscript digitised: <https://collections.library.utoronto.ca/view/fisher2:F6521>. © Thomas Fisher Rare Book Library, Toronto.

Fig. 2: London, Victoria and Albert Museum, Museum number E.120-1996, recto. <https://collections.vam.ac.uk/item/O94146/manuscript-strozzi-zanobi>. © Victoria and Albert Museum, London.

Fig. 3: Toronto, Thomas Fisher Rare Book Library, MSS 09700, fol. 139ʳ. © Thomas Fisher Rare Book Library, Toronto.

2132. FIRENZE - Palazzo Medici - Il Paradiso; B. Gozzoli (parete a destra dell'altare).

Fig. 4: Photograph of Benozzo Gozzoli's fresco on the wall at the right of the altar in the chapel of the Palazzo Medici-Riccardi, late nineteenth century, hand-coloured (private collection). High-resolution colour images are available at <doi.org/10.25592/uhhfdm.1881>.

Fig. 5: Detail from Table 8 in Vulten 1905.

Luigi Orlandi

A Lesser-Known Member of Bessarion's Milieu: The Scribe-Bishop Makarios

Abstract: This paper aims to examine some Greek manuscripts produced in the mid-fifteenth century. Prosopographic, palaeographic and codicological pieces of evidence lead to the identification of the handwriting of the scribe-bishop Makarios.

1

Coordinated by Cardinal Bessarion, the intense campaign of transcription of manuscripts that led to the rescue of many works of ancient Greek literature has long been the subject of historical, philological, codicological, and, above all, palaeographic studies. Fundamental works about the activity of the copyists recruited by Bessarion between the 1440s and the 1470s represented the basis for all later studies which, in turn, contributed towards progressively detailing the graphic and intellectual environment of that period.[1]

Within the framework of this fruitful field of research, recent studies are gradually bringing to light some lesser-known Byzantine émigrés in fifteenth century-Italy who performed, either intensely or marginally, the task of copying manuscripts in the cardinal's *milieu*.[2] These are mostly neglected characters, who have been left in the shadows for different reasons.

More than once the impossibility of associating a name and a well-defined historical background with the manuscripts copied by scribes working for the Cardinal has been complained about, despite considerable discoveries; and this is the case, for instance, with some anonymous scribes who were grouped together a few decades ago by Dieter Harlfinger. Only in more recent times has it been possible to recognize historical personalities among them: consider the

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1 The articles by Diller 1967 and Mioni 1976 have been pioneering in investigating this topic. Most of the copyists working for Bessarion are recorded among the *specimina* published in Harlfinger 1974.

2 Fundamental are the findings of Speranzi 2015, 2016, 2017, and 2018; see also Giacomelli and Speranzi 2019, Martínez Manzano 2013, Martinelli Tempesta 2013 and 2015, Orlandi 2015, 2019b and 2020b.

case of the monk Gregorios (formerly *Anonymus KB*)[3] or that of Emmanuel of Constantinople (formerly *Anonymus Ly*).[4]

In contrast, historical personalities – well-known to contemporary literary and documentary sources and yet lacking a definite shape from a palaeographic point of view – had to wait many years before they were finally assigned a handwriting. The long path that led to the identification of the hand of the Moreote émigré Alexios Keladenos is striking.[5] When he was still a boy, Alexios was greeted by Bessarion at the time of the Turkish conquest of the Peloponnese (which led to the surrender of Mystras in 1460), and he was initiated by the Cardinal himself into an undemanding ecclesiastical career in Italy. Much about him was known, save for his writing.

Eventually, under peculiar circumstances, it was only a change of perspective that made it possible to gather together manuscripts that appeared incongruent to each other. This is the case with Theodoros Gazes[6] – whose writing bears two stylistic forms (calligraphic and cursive, the latter resembling Bessarion's own writing) – and with Athanasios Chalkeopulos,[7] whose manuscripts have sometimes been unduly attributed to the Cardinal.

2

A similar case, briefly outlined in these pages, concerns a scribe who has remained anonymous until now, and yet had already been inscribed among Bessarion's collaborators for some time; this copyist contributed to the making of at least two manuscripts produced in the Cardinal's *milieu*: most of Proclus'

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3 See Harlfinger 2011, 289 n. 13 and Martinelli Tempesta 2013, 126–130. A detailed biographical account of Gregorios (along with an update on his movements in Italy and his contacts to Italian humanists) is now provided in Giacomelli and Speranzi 2019.

4 See Orlandi 2019b.

5 For Keladenos, who has long been known as '*Anonymus* δ-καί Harlfinger' (= no. '2' of the list by Harlfinger 1971, 418) see Speranzi 2015 (with previous bibliography, necessary to follow the steps leading to the identification). Outside of the circle of Bessarion, we can refer to the case of Georgios Amirutzes; for a tentative identification of his writing see Orlandi 2019a.

6 For a study on the versatility of Gazes' writing refer to Speranzi 2012. This contribution provided the basis for a series of new findings: see Martinelli Tempesta 2013, 144; Orlandi 2015; Speranzi 2016, 83–87; Speranzi 2018, 195; Orlandi 2020a and 2020b.

7 See Speranzi 2018.

Munich, BSB, Cod.graec. 547 (hereafter Monac. gr. 547) and a great number of folios within Aristotle's Vienna, ÖNB, phil. gr. 64 (hereafter Vind. phil. gr. 64).[8]

Within the manuscript Monac. gr. 547 (see Fig. 1), a small fifteenth-century paper codex,[9] dating to *c.* 1455–1460 as both internal and external evidence shows,[10] Henri-Dominique Saffrey found autograph notes, written by the hand of Bessarion himself,[11] including some accounting for the Cretan properties of the Latin Patriarchate of Constantinople:[12] this is a first clue to a connection between the activity of the scribe and the Cardinal's *milieu*. Moreover, the Munich manuscript, which was still preserved in Venice in 1562,[13] was proved to have been part of Bessarion's collection, as its inclusion in the inventories of the Marciana studied by Lotte Labowsky clearly shows: in the catalogue 'B', compiled in 1474, it corresponds to *item 529 Theologiae Platonis per Proculum.*[14] The results of philological investigations confirm in turn that the Munich manuscript originated in Bessarion's circle,[15] as the text of Proclus' *Theologia Platonica* at fols 1ʳ–301ʳ is supposed to be a 'clean' transcription of that from another book owned by the Cardinal (that is Venice, Biblioteca Nazionale Marciana, gr. Z. 192).[16] Then, in a codicological unit which is independent of the previous one, the transcription of the text of Proclus' *Institutio theologica* (fols 304ʳ–354ʳ) – descending from the more ancient Marc. gr. Z. 512 (thirteenth century)[17] – was started by a still-unidentified Byzantine hand (fols 304ʳ–335ᵛ l. 3) and was then completed by Bessarion himself (fols 335ᵛ l. 4–354ʳ).[18]

In the Vienna Aristotle, Phil. gr. 64, completed in Rome on March 25, 1457 ('in the second year of the papacy of Callistus III', as explicitly mentioned in the

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8 Diktyon 71178. See Speranzi 2013, 126–128 and Speranzi 2018, 197–198.

9 Diktyon 44995. See a description by Paolo Eleuteri in Fiaccadori 1994, 419 no. 35 (with a *specimen* of the writing).

10 For further details regarding these chronological terms see here below.

11 Saffrey 1965.

12 These notes have been published and studied by Saffrey 1979.

13 See more below, n. 18.

14 Labowsky 1979, 219 and 487.

15 See Saffrey and Westerink 1968, CXXVII. See also Giacomelli 2020, 284–288.

16 Diktyon 69663. Details about the making of this 'allogenetic' manuscript – which is in fact a result of a project that took place over the sixth decade of the fifteenth century at different times and places (between Bologna and Rome), and involved more than one scribe working for Bessarion – are in Speranzi 2016, 63 n. 55.

17 Diktyon 69983. More information on the manuscript tradition of this work in Dodds 1963, XXXIII-XLI.

18 A copy of the text transmitted by the Monac. gr. 547 is found in Paris, BnF, gr. 1828 (Diktyon 51454), copied in Venice by Nicola Della Torre in the year 1562; see Dodds 1963, XXXVIII.

subscription),[19] the anonymous copyist of the Munich Proclus – collaborating in this case with Manuel Atrapes, Iohannes Rhosos, Hysaias of Cyprus (formerly known as '*Anonymus* 25 Harlfinger') and the '*Anonymus* 26 Harlfinger'[20] – was responsible for fols 139ʳ–216ᵛ (see Fig. 2).[21] The Vienna manuscript, which belonged to Hysaias of Cyprus, provides therefore a first precise chronological and geographical frame of reference to date and locate the activity of this copyist: Rome, at the end of the 1450s.

3

On closer inspection, it is possible to associate the Greek hand of Monac. gr. 547 and Vind. phil. gr. 64 with a name. If we compare Figs 1–2 to Fig. 3, we will immediately notice the identity of the hands. The folio shown in Fig. 3 is from a volume of miscellaneous content, Arundel 528, currently in the British Library in London.[22]

As already indicated in the first volume of the *Repertorium der griechischen Kopisten*,[23] the main copyist of Arundel 528 (fols 9ʳ–60ᵛ, 111ʳ–181ʳ, 185ʳ–192ᵛ)[24] signed his name in the London manuscript four times, presenting himself as Makarios, Bishop of Halicz (or Galyč),[25] which is the eponymous city of the

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19 ἐτελειώθη τὸ παρὸν βιβλίον ἐν ἔτει ἀπὸ Χριστοῦ α‑ῶυ‑ῶνζ‑ω ἰνδικτιώνος (*sic*) πέμπτης μηνὸς μαρτίου κε‑η, τῆς ἀρχιερωσύνης τοῦ μακαριωτάτου κυρίου ἡμῶν κυρίου Καλλίστου πάπα Γʹ ἔτει β‑ω [...].

20 Harlfinger 1971, 419. See more about this scribe below, p. 757 and 758 n. 33.

21 A detailed description of the hands involved in the making of codex Vindobonensis (studied by Harlfinger 1971, 409, 419 and Rashed 2001, 31–32, 295–304) can be found in Speranzi 2013, 126–128. Speranzi was the first to connect the writing of fols 139ʳ–216ᵛ with that of Monac. gr. 547. A full-page reproduction of this copyist's writing is already in Rashed 2001, Plate 46 (fol. 139ʳ). For the critical edition of Theodoros Gazes' *Solutiones* (that is, solutions to problems dealing with Aristotelian physics) see Brockmann, Lorusso and Martinelli Tempesta 2017.

22 Dyktion 39279. A complete digitisation, including an analytical description of the content, is available at <bl.uk/manuscripts/>. From a philological point of view the manuscript was studied in Darrouzès 1961 and was used for the publication of the writings and letters of the monk Niketas Stethatos (for details on the manuscript transmission see Darrouzès 1961, 40–51).

23 See *RGK* I 244.

24 Fols 1ʳ–8ᵛ and 63ʳ–110ᵛ are the work of other hands (see more below).

25 Here is the text of the four subscriptions: τοῦ ταπεινοῦ ἐπισκόπου τοῦ γαλίτζης μακαρίου ('by the humble Bishop of Halicz, Makarios', fol. 60ᵛ); ὁ γαλίζης μακάριος ('Makarios of Halicz', fols 162ʳ and 181ᵛ, both as a *monokondylion*); μακάριος ('Makarios', fol. 182ᵛ).

historical region of *Galicia*, incorporated during the fifteenth century into the Kingdom of Hungary and today under the jurisdiction of Ukraine.

Before moving on with further considerations about Makarios' activity, we shall examine other palaeographic aspects of the London manuscript, for two more hands appear in this book. While the one responsible for fols 1ʳ–8ᵛ cannot be identified for now, the hand of fols 63ʳ–110ᵛ is not at all unknown: we are dealing with a little-known Byzantine copyist, whose name is Philippos. The identity of this scribe was acknowledged some time ago by Rudolf S. Stefec.[26] To the documentation collected by Stefec we can add evidence highlighted by other scholars. In a recent paper David Speranzi has attributed to an anonymous copyist – who is actually none other than Philippos – the following pieces:[27] Vatican City, BAV, Vat. gr. 133 (Dyktion 66764); Milan, Biblioteca Ambrosiana, A 159 sup. (Dyktion 42245); part of Venice, Biblioteca Nazionale Marciana, gr. Z. 523 (Dyktion 69994) (fols 166ʳ–186ᵛ, 187ᵛ–198ʳ), copied in collaboration with Emmanuel Zacharides, whose activity on the island of Crete is well-known.[28] In a detailed description of the Venice manuscript,[29] Ciro Giacomelli pointed out that part of London, BL, Add. 58224 (Dyktion 39250) (fols 1ʳ–65ʳ) is work of the same scribe; the collaboration with Zacharides in this manuscript, just as in Marc. gr. 523, is remarkable. Of Philippos' hand, in addition to Arundel 528, I have found three more witnesses, which I report here for the first time: the whole manuscript Paris, BnF, gr. 1969 (Dyktion 51596) (containing Plotinus' *Enneads* and dating to March 1467); Paris, Bnf, gr. 2141 (Dyktion 51770) (with exception of fols 348ʳ l. 10 [ἠρτύετο]–349ʳ); parts of Paris, BnF, gr. 1815 (Dyktion 51441) (fols 71ʳ–82ᵛ, 221ʳ col. B–269ʳ, 267ʳ–307ᵛ l. 20, 325ʳ–348ᵛ).[30]

Besides the subscriptions by Makarios, Arundel 528, a small paper volume, also stands out due to the presence of some sections (fols 61ʳ–62ᵛ, 183ʳ–184ᵛ) containing religious writings in mixed ecclesiastical Slavonic, Bulgarian and Serbian. In his surveys of manuscripts in Cyrillic alphabet kept in English and Irish collections,[31] Ralph Cleminson already pointed out that Arundel 528 shows some similarities in language, writing and content with Arundel 527, another Greek codex (with musical writings) containing short Slavonic texts (fols 129ᵛ–131ᵛ).[32] It will not

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26 See Stefec 2013, 308–310.

27 See Speranzi 2018, 214.

28 See *RGK* I 114 = II 146 = III 189.

29 Available *online* at <cagb-db.bbwa.de>.

30 In a forthcoming study I shall present further insights into Philippos' activity as a scribe.

31 Cleminson 1988, 144–147.

32 A full digitisation and a detailed description of this manuscript is available at <bl.uk/manuscripts/> as well.

come as a surprise to find here, too, though only on the two folios (5ᵛ–6ʳ), the hand of Makarios, which had so far gone unnoticed (see Fig. 4).[33]

With the group of the four manuscripts entirely or partially written by Makarios it is possible to associate a further witness, Paris, BnF, gr. 1312 (Dyktion 50921; see Fig. 5). This small-sized paper manuscript, which is entirely written by Makarios' hand, contains an anonymous collection of 137 *Capita moralia et theologica*, to which a long index covering almost the whole first two quires (fols 1ʳ–15ʳ, l. 5) is premised. In order to support the arguments addressed by these *Capita*, statements have been extracted from various types of texts: religious, liturgical, patristic, juridical, council acts.[34] Copied in the monastery of St John the Prodrome-Petra, Par. gr. 1312 still preserves its original Byzantine binding. This kind of binding has been studied by a specialist such as Dominique Grosdidier de Matons, who called it 'couture provisoire par surfilage'.[35] According to these elements, the Paris manuscript should therefore be considered a product of Makarios' scribal activity in the Byzantine East, which had remained in the shadows until now.

The Greek handwriting of Makarios, as it appears from the examination of the collected material (see Figs 1–5), is characterized first of all by a significant inclination of the axis to the right; generally speaking, it appears accurate and confident, not without a certain tendency to a calligraphic style. It is possible to give an account of some of its peculiar features (see Table 1): *delta* (1) is provided with a hook at its upper extremity and is mainly capital shaped; *zeta*, when tied with the previous letter (2), is traced in a peculiar way by means of the sequence of two left-handed loops; *rho* (3), as well as *tau*, ordinarily ties at the bottom with the following letter; peculiar is the *sigma* in ligature with the circumflex accent (4), produced by the upward extension of the horizontal stroke of the letter; very showy and characteristic is, finally, a flourish on the lower margin in the shaping of the abbreviation for the word καὶ (5), when it occurs within the text on the last line of the written area.[36]

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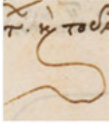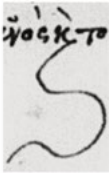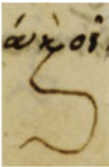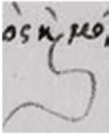
33 Fols 1ʳ–5ʳ and 100ᵛ–116ʳ are the work of different hands. On the name and the activity of the main scribe (see, for instance, fols 11ʳ–100ʳ, containing musical works, ἀναγραμματισμοὶ and τροπάρια), whom I here identify as the so-called '*Anonymus 26 Harlfinger*', who worked for Bessarion too, I shall give further insights in a forthcoming paper.

34 In the first chapter, for instance, which addresses the question of obedience to the monarch as the guarantor of divine order on earth, there are excerpts from St Peter and St Paul's sayings, a short passage Περὶ ὕβρεων from the *Synopsis basilicorum* and, at the end, a few lines from the liturgy of St Basil.

35 See Grosdidier de Matons 2008.

36 See also Figs 2, 3 and 5.

Table 1: The handwriting of Makarios of Halicz (details)

	1. delta	2. zeta (in ligature)	3. rho (in ligature)	4. sigma (+ circumflex)	5. καὶ (abbreviation)
Vind. phil. gr. 64					
Monac. gr. 547					
Lond. Arundel 527					—
Lond. Arundel 528					
Par. gr. 1312		—			

4

Having completed these first palaeographic surveys concerning the five manuscripts which are witnesses to the activity of Makarios as a copyist, it is possible to proceed further to some biographical remarks.

The personality of Makarios is not unknown in the studies of Byzantine prosopography, as an entry in the *Prosopographisches Lexikon der Palaiologenzeit* (*PLP* 16192) was dedicated to him. A member of the clergy and of Serbian origin, Makarios, before becoming bishop, had been a monk of the Basilian monastery

of St Cyprian in Constantinople. His appointment as bishop of Halicz took place in Rome on January 16, 1458 on the initiative of Pope Callistus III.[37] This historical event matches perfectly in terms of chronology with what we already knew about the activity of Makarios; that is his participation in the making of the Vienna manuscript Phil. gr. 64, which was completed in Rome in 1457 in co-operation with other scribes working for Bessarion.

In the frame of a structural reorganisation of the Byzantine-Slavic metropolis, the aim of the Roman Curia in those years was to gain jurisdiction over people following the Eastern rite and living in the Kingdom of Hungary (which also included the region of Halicz) by appointing a Byzantine-Slavic orthodox bishop who was not at odds with the stance of the Council of Ferrara-Florence (1437–1439); a project strongly contested by the Hungarian bishops and Latin clergy, who had never even officially signed the definitive document of the Union in 1439. Cardinal Isidoros, who had signed the Council Acts as Metropolitan of Kiev and All Russia, was at that time pontifical legate for those regions but not for the lands of Hungary, whose rulers were continuously quarrelling with the popes of Rome due to the long-standing issue of the direct nomination of the bishops.[38]

Makarios seems to have distinguished himself in the eyes of Callistus III for his many qualities (*religionis zelus*, *litterarum scientia*, *vite mundicia*, *honestas*, *morum spiritualium prudencia*, and *temporalium circumspetio*).[39] Given his intimacy with Cardinal Bessarion, Makarios could have been appointed bishop of Halicz through the intercession of the Cardinal himself (and of the former Metropolitan Isidoros of Kiev). He certainly maintained his office, despite opposition from the Latin Hungarian clergy, at least until some time after 1466, when he was confirmed by Pope Paul II.[40] From this date on, there is no more evidence about the activity of this scribe-bishop.

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37 The text of the letter granting Makarios the nomination as bishop is published in Prochaska 1923, 64–65.
38 For a reconstruction of the story see Hofmann 1946, 227–229 and, more recently, Adam 2008. An updated biographical account of Isidoros is found in Philippides and Hanak 2018. Makarios' predecessor in Halicz was another orthodox monk, a certain Matthaios (remaining in office for the years 1440–1458): see Adam 2008, 333–336.
39 See Prochaska 1923, 65.
40 See Adam 2008, 336–337; the text of the letter of Paul II to the Archbishops of Esztergom and Kalocsa confirming the authority and jurisdiction of Makarios can be found in Bunea 1904, 301–303.

5

We will now try to take a further step in the shaping of the biographical and intellectual profile of Makarios of Halicz by examining the possibility of a shared identity with other contemporary namesake individuals.

The first figure to be taken into consideration is the half-unknown Makarios of Serres, who has also been recorded, under different entry numbers, in the prosopographic and palaeographic repertoires (*PLP* 16274; *RGK* III 402). The only information referring to this Makarios, otherwise unknown to the documentary sources of the time, comes from a short letter handed down by the manuscript Vatican City, BAV, Vat. gr. 1858 (Dyktion 68487) (fols 2ᵛ–3ʳ). The text of the epistle dates to the year <1447> and is in all likelihood autograph, as some editorial corrections show.[41] Makarios, who presents himself in the first lines as the Metropolitan of Serres, addresses a request to an orthodox monk and hegumenos, named Isidoros:[42] the purpose of the letter is to obtain permission to return to the monastery he belonged to – unfortunately it is not specified which one – provided that Makarios refuses the unionist positions of the Council of Ferrara-Florence which he had supported for some time.[43]

The handwriting of Makarios of Serres as it appears in the Vatican manuscript (fols 2ᵛ–3ʳ) is marked by an extremely cursive style, which perfectly fits the 'personal' character of the document, but which does not easily match with the pieces of evidence previously ascribed to the hand of Makarios of Halicz, as they were are all quite calligraphic. Because of this formal distance, the two writings would therefore seem, at first sight, completely foreign to each other. Nevertheless, as shown by some palaeographic features (listed below in Table 2), the main characteristics of the writing of Makarios of Serres overlap with those of the Greek hand of the Bishop of Halicz, some of which have

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41 See Mercati 1926, 36, who pointed out the autography and the dating of the epistle. In this regard, convincing arguments have been presented by Mercati for dating the manuscript at <1447> on the basis of the indication of the month (August) and of the indiction (the tenth). During the middle decades of the fifteenth century the indiction fell in August only in the years 1432, 1447, 1462, 1477: the first date is for obvious reasons impossible since the text mentions the Council of Ferrara-Florence (1437–1439); the last two appear far away in time from the events reported and are therefore not suitable.
42 Not to be confused with the better known Isidoros of Kiev, who had already embraced the cause of the Union of Churches for several years.
43 The text, which is also preserved in manuscript Vatican City, BAV, Vat. gr. 1147 (Dyktion 67778) (sixteenth century; fols 215ʳ–216ʳ), has been published and translated into French by Laurent 1959, 198–200.

already been highlighted earlier. Consider, for example: the ligature of *rho* with the following letter, traced from the descender stroke (1); the sequence *pi-alpha-rho* (2), with an upwards bending of the head-stroke of the minuscule letter *pi*, letter *alpha* above the headline and the bow of *rho* originating from the descender stroke of *alpha* (the same occurs in the sequence *alpha-rho* in ligature with the following letter [3]); *sigma* conjoined with the circumflex accent (4), as already noticed above; the ligature *sigma-omega* (5), realised by means of a series of left-turning curves leading to the making of two bows for the closed *omega*; *sigma* conjoined with *iota* (6); the sequence *tau-rho-iota*, made up of the succession of four strokes (7); finally, the ligature *iota-omega* realised beneath the baseline (8).

Table 2: Makarios of Halicz and Makarios of Serres: two hands or one?

	1.	2.	3.	4.	5.	6.	7.	8.	
Makarios of Serres (*PLP* 16274)									Vat. gr. 1858
Makarios of Halicz (*PLP* 16192)									Lond. Arundel 528
									Monac. gr. 547

6

The palaeographic examination carried out on Vat. gr. 1858 unexpectedly raises the question – not uncommon in the case of Byzantine scholars and copyists of the Renaissance period – whether two different styles and graphic expressions may actually be attributed to a single historical personality. Here are some observations on this topic by David Speranzi:

> The gap between the different expressions of the same hand [...] and the difficulty of clearly tracing the boundaries of the variability of a writing are the reasons why works by several scribes of the fifteenth and sixteenth centuries have been assigned to their

'palaeographic Doppelgänger', who proved later to be lacking in historical consistency. [...] A problem [...] that can be summarised in the question 'two or one?'.[44]

An unintentional conflation of the two figures – which probably originated from the indication by Mercati – had already emerged in a study by Georg Hofmann, in which, about the Greek monk Makarios appointed as bishop of Halicz by Pope Callistus III, is said: 'Es ist bis jetzt kein Beweis dafür gebracht worden, dass Makarios von der katholischen Kirche *wieder* abgefallen sei';[45] the statement made by Hofmann, as is easy to understand, makes sense only if one identifies Makarios of Halicz as a well-known member of the clergy who had already rejected the Union promoted by the Catholic Church, such as Makarios the Metropolitan of Serres.

Provided that the hypothesis of a conflation is right, it might be easier to understand at this point the decision taken by the Roman Curia on the issue of the appointment of a bishop charged with task of safeguarding the concerns of the Eastern-rite Greeks of Galicia: an orthodox monk of some reputation, who had already been a metropolitan and who had in the past – even if only temporarily – embraced the concepts of the Council of Ferrara-Florence, might be in the end the most suitable candidate.

A last, a not insignificant detail pointing to a shared identity between the two Makarioi comes from the manuscript itself which preserves the letter of the Metropolitan of Serres. In fact, some sections of the Vatican codex, which is composed of multiple independent codicological units to be ascribed to different periods, most probably belonged to Isidoros of Kiev, who also transcribed some folios (fols 44^r–47^r, 49^r–50^r);[46] with these sections, in addition to the letter by Makarios, it should also be associated the first sheet, containing the draft of Bessarion's epistle to the sons of Georgios Gemistos Plethon, in the hand of Bessarion himself (fol. 1^{rv}).[47] It is difficult to imagine that the recurrence of these

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44 Speranzi 2013, 15–16: 'Proprio la distanza tra le diverse manifestazioni di una stessa mano [...] associata alla difficoltà di tracciare con nettezza i possibili limiti della variabilità di una scrittura, ha fatto sì che diversi scribi dei secoli XV e XVI abbiano visto alcuni dei propri prodotti assegnati a loro "doppi paleografici", rivelatisi poi privi di consistenza storica. [...] Un problema [...] sintetizzabile nell'interrogativo "due o uno?"'.

45 Hofmann 1946, 228–229.

46 Within this quire one finds a fair copy of the text *Sermo V inter concilium Florentinum*, edited by Hofmann and Candal 1971, 81–94; regarding the manuscript's belonging to Isidoros, see Mercati 1936, 36–39.

47 Identification by Mercati 1917. The known hands recognized in the Vatican manuscript are those of Dositheos of Drama (4^r–5^r), Manuel Kalekas (fols 7^r–8^r), Makarios of Ancyra (fols 28^r–42^r), Gregorios Alyates (fols 60^r–62^v), Georgios Moschos (fols 250^r–257^v); for these attributions

figures (Isirodos and Bessarion), who are central to the biography of Makarios of Halicz,[48] in the only manuscript that has preserved the memory of the Metropolitan of Serres is due to a mere coincidence.

Table 3: The manuscripts of Makarios (overview)

#	Manuscript	Contents
1.	Vienna, Österreichische Nationalbibliothek, phil. gr. 64, fols 139ʳ–216ᵛ	Aristotle
2.	Munich, Bayerische Staatsbibliothek, gr. 547, fols 1r–301ʳ	Proclus
3.	London, British Library, Arundel 527, fols 5ᵛ–6ʳ	music
4.	London, British Library, Arundel 528, fols 9ʳ–60ᵛ, 111ʳ–181ʳ, 185ʳ–192ᵛ	miscellany
5.	Paris, Bibliothèque nationale de France, gr. 1312	ethics, theology
6.	Vatican City, Biblioteca Apostolica Vaticana, Vat. gr. 1858, fols 2ᵛ–3ʳ	miscellany

7

All the data collected so far about Makarios – former metropolitan of Serres (before 1447), later a monk of the Basilian monastery of St Cyprian in Constantinople and then, once he arrived in Italy, a copyist working in the circle of Bessarion before his nomination as bishop of Halicz at the end of the 1450s – match with another namesake personality. We learn from Athanasios Chalkeopulos (a Byzantine scholar from the Cardinal's circle), the author of the *Liber Visitationis*, that he was accompanied on his journey to the monasteries of southern Italy by a certain Makarios, archimandrite of the Basilian monastery of St Bartholomew of Trigona.[49] The journey was undertaken at the behest of Pope Callistus III; it began in Rome on 1 October 1457 and ended on 5 April 1458. The purpose of the

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see *RGK* III 182, 413, 401, 145, 111 (with bibliography). The scribe of fol. 6ʳᵛ is to be identified with the so-called '*Anonymus χ-λ* [= 29] Harlfinger', who was in contact with Bessarion: see Harlfinger 1971, 419; Harlfinger 1974, 18 (no. 15); Stefec 2014, 197. Other anonymous hands appear in other leaves: fols 63ʳ–88ᵛ; 89ʳ–110ʳ; 111ʳ–202ᵛ; 203ʳ–233ᵛ; 258ʳ–259ʳ (Otrantine scribe?); 260ʳ–262ᵛ. A full digitisation of the manuscript is available at <digi.vatlib.it/>.

48 See above, p. 759–760.

49 It is worth remembering that the ecclesiastical dignity of archimandrite was mostly a title of honour and did not require settlement in the eponymous monastery; for the history of this cloister refer to Falkenhausen 1999.

mission was to gather information on the history of southern monasticism through the exploration of 78 Basilian monasteries.[50]

The coincidence of characters (again Pope Callistus III and Bessarion), times (the months between the end of 1457 and the beginning of 1458) and places (the city of Rome) is undoubtedly striking. The hypothesis of a shared identity between the one Makarios (first metropolitan of Serres and later bishop of Halicz) and the other, archimandrite of Trigona, may not rely on a mere combination of coincidences. Unfortunately, nothing emerges from the pages of the *Liber Visitationis*. It will be the task of future investigations to find new evidence that will enable us to give this hypothesis a confirmation.

Abbreviations

PLP	Erich Trapp (ed.), *Prosopographisches Lexikon der Palaiologenzeit*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1976–1996.
RGK I-III	Herbert Hunger, Ernst Gamillscheg and Dieter Harlfinger, *Repertorium der griechischen Kopisten 800-1600*, I: *Handschriften aus Bibliotheken Großbritanniens*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1981; II: *Handschriften aus Bibliotheken Frankreichs und Nachträge zu den Bibliotheken Großbritanniens*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1989; III: *Handschriften aus Bibliotheken Roms mit dem Vatikan*, Vienna: Verlag der Österreichischen Akademie der Wissenschaften, 1997.

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50 The results of the enquiry by Makarios and Athanasios reported in the *Liber Visitationis* were published by Laurent and Guillou 1960 (references to the figure of Makarios are in particular found in the pages XIV–XVI, XXIII–XXIV). According to Piromalli 1996, 63, Athanasios was accompanied on his journey by a certain 'Macario Sergi' (a distortion of the Latin word *Servi*, 'from Serbia', or of 'Serres'?); however, the source of this information is unfortunately not indicated.

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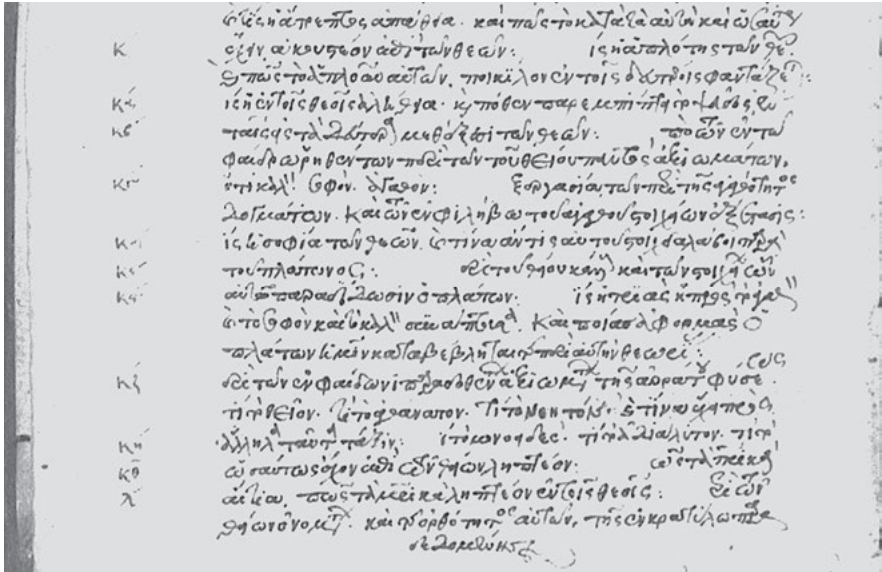
Fig. 1: Munich, BSB, Cod.graec. 547, fol. 1ᵛ (part.). © Bayerische Staatsbibliothek.
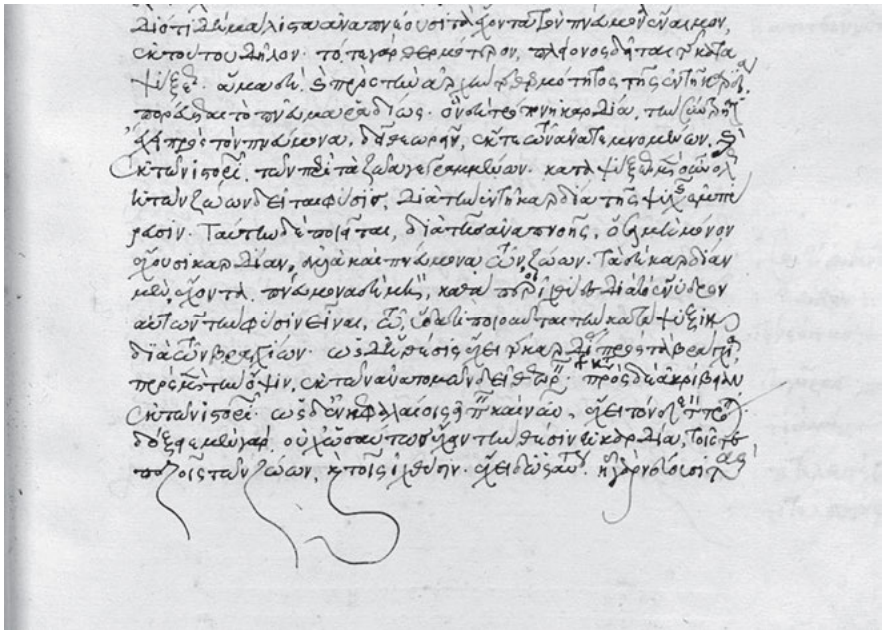
Fig. 2: Vienna, ÖNB, phil. gr. 64, fol. 205ʳ (part.). © Österreichische Nationalbibliothek.
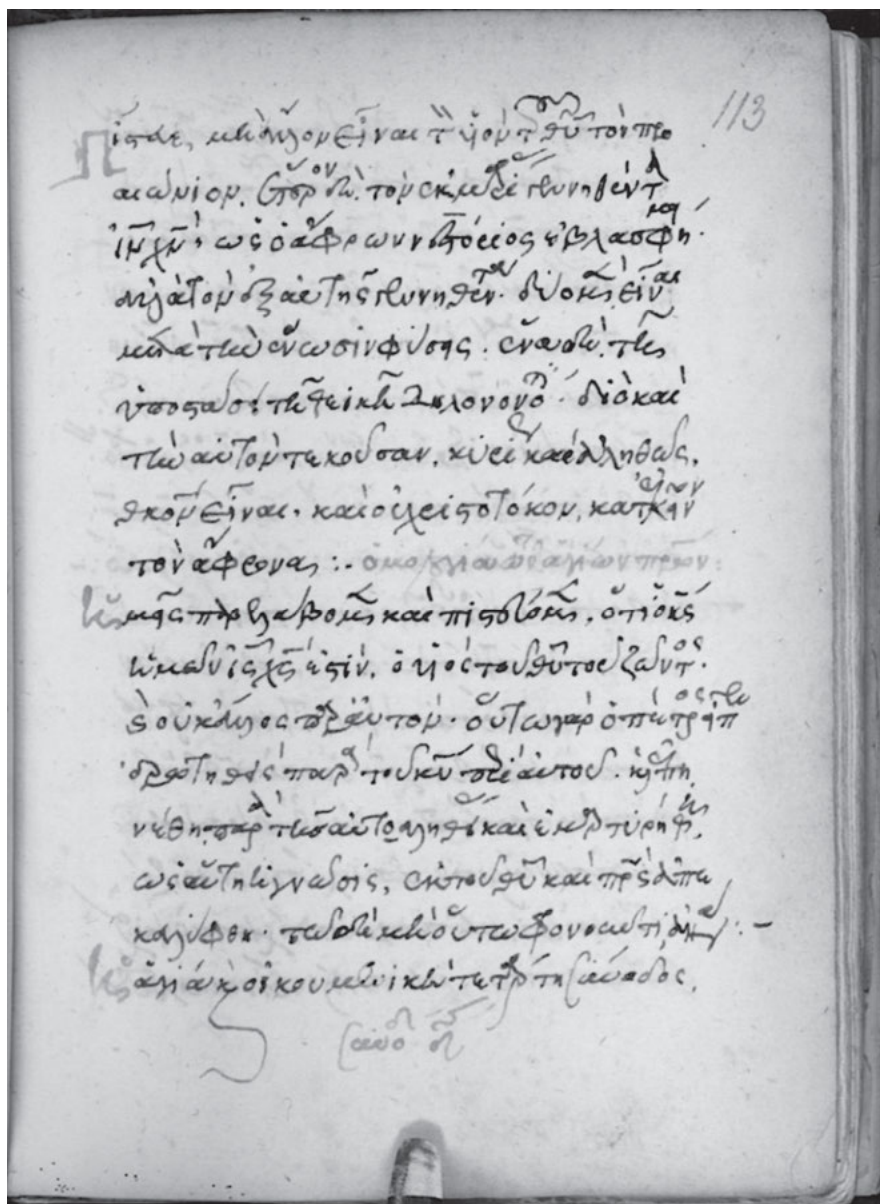
Fig. 3: London, BL, Arundel 528, fol. 113ʳ. © British Library.

Fig. 4: London, BL, Arundel 527, fol. 6ʳ. © British Library.

Fig. 5: Paris, BnF, gr. 1312, fol. 9ʳ. © Bibliothèque nationale de France.

Bruno Reudenbach

Enigmatic Calligraphy: Lettering as Visualized Hermeneutic of Sacred Scripture

Abstract: The introductory pages, which in early medieval gospel books are placed at the beginning of a gospel, often stage an antithesis of enigmatic calligraphy and clear legibility. As a visual reflection on writing and script this juxtaposition is related to a hermeneutic of Holy Scripture. The initial pages in particular demonstratively break the rules of readable and linearly ordered script. They do not require reading in the usual sense, which linearly follows the succession of words. As 'script-images' they must be contemplated by simultaneous consideration, that should reveal a meaning behind the material letters. Their illegibility can be understood as a visual cue for the transition from meditative reading to contemplatively seeing the purely intelligible.

1 Incipit openings as 'critical form'

In a gospel book from the Leipzig Universitätsbibliothek (Ms. 76), written in the first half of the tenth century in the monastery of Corvey in Westphalia, each of the four gospels is introduced by two double pages.[1] Their sequence is the same for each gospel. The first opening starts with the incipit on the verso page, five or six lines with large capitals written in gold. The recto page opposite displays an initial and the first letters or words of the Gospel, also written in gold and richly decorated (Figs 2 and 3). The following opening is written in uncial script. On the left page the continuation of the gospel text appears in silver on a field of purple. The parchment on the right is uncoloured, and the lines of text are double spaced. On the verso of this folio, the text continues in Carolingian minuscule. The whole series is structured according to a hierarchy of script that starts with large capitals and ends with minuscule. The artistic effort follows this hierarchy and marks the first opening as the highpoint of the sequence. Both pages of this opening are surrounded by a wide and ornamented frame, and the page with the beginning of the gospel shows an artistic arrangement of letters and ornamentation.

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1 <http://www.manuscripta-mediaevalia.de/dokumente/html/obj31560411> (accessed on 28 Oct. 2020). Bauer 1977, 2: 89–100; Kahsnitz 2001.

Initial pages featuring a composition of letters, words, ornamentation, and sometimes images, all artfully combined and interwoven with each other as in the Leipzig gospel book, are widespread in early medieval European manuscript culture. Regarded as highlights of the art of writing and book illumination in the Medieval Latin West, these initial pages exhibit the artistic imagination and creativity of scribes and painters.[2] Since the late eighteenth century, this estimation of decorated pages has also led to them being separated from their respective manuscripts and traded and collected as single sheets, like autonomous works of art.[3] For a long time, this perception has obscured the important role these pages play in the overall structure of their original manuscripts. Usually placed at the beginning of a work, a chapter, or an important passage, such pages help to structure the codex. In early medieval gospel books, these initial pages are regularly found at the beginning of each of the four gospels, and such pages are at the same time part of a sequence introducing those gospels. In addition to the initial page, this sequence can include incipit pages, the respective evangelist's image, and pages exhibiting only ornamentation, a coloured field, or, as in the case of the Leipzig gospels, a specially written text. In a sometimes slightly varied order, all these pages form a fixed set of decorated pages, such as developed early on in insular manuscript culture.[4] This set that clearly marks, on the one hand, the four parts of the gospel book and, on the other hand, its unified appearance expresses the unity and harmony of the fourfold gospel.

There is no fixed terminology for labelling pages with display script, that is, with decorated and enlarged characters. According to their content, one can speak of incipit and initial pages. Terms such as 'ornamental', 'decorated', or 'decorative pages' primarily refer to their aesthetic and artistic value. It is obvious that these terms focus on functions such as decoration and embellishment, and of course, embellishment and decor are among the aims of these pages. They invite aesthetic appreciation and contribute to the manuscript's aura, which may be due to many factors.[5] Gospel books, for example, represent Christ himself and contain his Holy Word.[6] Accordingly the artistic and material effort expended on these pages, evident in rich ornamentation, in colours, and in gold

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2 The basics and a general overview about the form and function of initials are given by Gutbrod 1965; Nordenfalk 1970, esp. 117–134; Alexander 1978; Pächt 1985, 45–95; Jakobi-Mirwald 2004, 178–187.

3 Wieck 1996.

4 Brown 2017.

5 Rohrbach 2008, 200–202.

6 Kendrick 1999, 65–109; Heinzer 2009; Palazzo 2010; Reudenbach 2014.

and silver, make visible the preciousness and sacredness of the word of God, even though, especially in early Christianity, precious writing material could also be regarded with scepticism and reserve.[7] Above all, however, it has often been shown that ornamented pages with decorated letters cannot be regarded as only decorative; they also visually convey a lot of other information, in addition to the wording of the script.

From half a century ago in the field of insular art, we have path-breaking studies by Werckmeister or Lewis, which deal with insular examples such as the famous Chi-Rho-page of the Book of Kells.[8] Such scholars discussed the concrete meaning of ornamental motifs beyond the aspect of embellishment, and they explained the often highly sophisticated iconography of initial letters. Recently, scholars of medieval art have further developed this approach, referring in their discussion of such pages to a methodological concept called 'graphicacy', which focuses on the meaning of non-figural graphic forms.[9] It seems that insular art and a proximity to an iconographic methodology remain the dominant interests of most of these studies.[10] Their great merit is that they reveal these pictorial elements as a complex, coherent, and meaningful visual system composed of decorated letters, ornamentation, geometric forms, and images, rather than understanding such elements as merely decorative or as an external adjunct to the script. It is obvious that in addition to the general visual organization of the pages, and in addition to the design or ornamental framing of the text, decorated initials are particularly suitable objects of study for scholars interested in the extra-linguistic properties of writing.[11] This aspect of lettering is also central to the concept of *Schriftbildlichkeit*, which in this respect bears some similarity to the term 'graphicacy'. For *Schriftbildlichkeit* also deals with the iconic dimension of writing, with the connection of script to imagery rather than to language.[12]

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[7] See n. 28.

[8] Werckmeister 1964, 1967, esp. 147–170; Lewis 1980.

[9] Garipzanov 2015; see also the introduction in Brown et al. 2017. Related is the approach to *unfigürlicher Ikonographie* ('non-figural iconography') by Victor H. Elbern; see his summary article, Elbern 1983.

[10] Tilghman 2011a, b, 2016, 2017; Garipzanov 2017; Karkov 2017.

[11] Tilghman 2011a; Garipzanov 2017; Karkov 2017. See also the article by Erika Loic, which deals with the materiality of script and focuses on self-reflexive initials that contain images of authorship and scribal practice, which the author describes as a 'networking structure' (Loic 2020).

[12] Krämer et al. 2012. See also Hamburger 2011; Christin 2016; Polaschegg 2018, 177. For the relationship between display scripts and ornament, see Bonne 1996 and Ganz 2017a, 126–127.

These scholarly impulses are taken up in this article, but the focus is neither on insular art nor on the iconography of letter shapes, ornamentation, or non-figural motifs. This article's focus is rather on a certain combination of pages, as can be found several times in liturgical books written in the Carolingian and Ottonian empires from the ninth to the eleventh century. The gospel books of this era almost always contain the aforementioned series of pages introducing each gospel. Within this sequence, the actual beginning of the text, the so-called initial page, is often so dominated by the ornamental mode that deciphering letters and reading words is very difficult or even impossible. This illegibility cannot *a priori* be explained as a sign of appreciation and esteem for writing and Sacred Scripture, especially when we are talking about manuscripts that are, at least in part, intended for liturgical reading. Of course, no cleric needed to actually read the beginning of a gospel because everyone knew it by heart. In fact it can be said that display script was often used for formulas or beginnings that most readers knew by heart.[13] Nevertheless, that illegibility is associated with great artistic effort in manuscripts intended for reading, is not self-evident and requires an explanation. Moreover, the initial page that is difficult or impossible to read is juxtaposed with clear legibility and a completely different mode of writing on the following or preceding page; an example is the incipit of the previously mentioned Leipzig gospels, which is written in capital letters (Fig. 2).

This remarkable arrangement is difficult to notice if one considers decorated initials to be an isolated phenomenon, and if one understands them solely as an artistic form and an aesthetic sensation to be explained by the methods of analysing form, style, or iconography.[14] No page of an elaborately designed manuscript, however, is an isolated work, despite the practice of cutting out and collecting single leaves. Rather, that leaf forms a continuum with the preceding and following pages and occupies a very specific place in the *architecture* of the manuscript.[15] Particularly the introductory sequence of the gospels is consciously and calculatedly designed such that every element is related to each other. In this respect, the presentation of two fundamentally different modes of writing and the direct juxtaposition of legibility and illegibility is remarkable and meaningful. Such an opening appears as a 'critical form' that

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13 Ganz 2017a, 131.
14 An exception is O'Driscoll 2011.
15 For the importance of double pages as units, see Toubert 1990; Schneider 2000, 2002; Hamburger 2010; Ganz 2016.

pertains to the specific status of script in a gospel book. It visually expresses an attitude towards the *written* word of God.[16]

2 Initial pages between legibility and illegibility

To pursue and justify this thesis, we shall first take a closer look at the set of pages introducing each gospel in the gospel book from Leipzig. As already explained, the incipit and the beginning of the respective gospel text are placed next to each other on the first double page, e. g. in Luke's Gospel (Figs 2 and 3) '*INCIPIT EVANGELIVM SECVNDVM LVCAM*' on the left (fol. 109ᵛ) and '*QVONIAM QVIDEM*' on the right (fol. 110ʳ). Both pages are clearly marked as belonging together, as their size, colour, and an ornamented frame indicate. But at the same time, they are quite different. The wording of the incipit is written in large capitals and exactly in five lines, clearly legible, while the '*QVONIAM QVIDEM*' can hardly be deciphered at all. The usual arrangement of letters, which constitutes words and makes them readable, and the sequence of characters in horizontal lines from left to right are completely negated and destroyed, with the result that we see more of an ornamental mesh than two written words. The large and ornamented initial letter Q is placed in the centre. The following letters, of different sizes, are freely grouped around it but interwoven with each other and with golden interlace in such a way that they are very difficult to identify completely. The visual organization of the page is closer to that of a monogram or a centralized image than to continuous script.[17] These observations equally apply to the other three gospel beginnings in the Leipzig gospel book.

Examination of another gospel book, which was also written in the tenth century at the Corvey monastery and is now in the Pierpont Morgan Library (M. 755), reveals similar features.[18] In this case, however, the introductory sequence of all four gospels is arranged in an unusual way; incipit and initial page do not appear as a double page, but on recto and verso of the same folio.[19] Because of this arrangement, the beginning of the gospel text is in the centre of the sequence, starting with the initial page and continuing on the opposite recto.

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16 Here I follow the important and stimulating considerations Tobias Frese has offered on a special constellation, namely, the double page at the beginning of the Gospel of Mark in the Hildesheim Guntbald Gospel (1011): Frese 2014, 4–8.

17 Otto Pächt uses the term *Monogrammseite* ('monogram page'): Pächt 1985, 63–76.

18 Bauer 1977, 2: 41–49; Euw 1991, 59–61, no. 10 (Gerd Bauer); O'Driscoll 2011.

19 Bauer 1977, 1: 128–132, 156–183; O'Driscoll 2011, 314.

All pages of the introductory sequence are emphasized by frames and by patterned and coloured writing surfaces. The initial page with the first words of the gospel text is especially prominent due to the size of the decorated initial, which takes up the entire height of the full-page framed area, and exhibits a systematic disturbance or even destruction of readability.

The initial page of Matthew (fol. 17ᵛ) '*LIBER GENERATIONIS IHV XRI FILII DAVID FILII ABRAHAM*' ('The book of the genealogy of Jesus Christ, the Son of David, the son of Abraham') (Fig. 1), for example, displays the large initial L on the left, in the upper part of which the following I is set. To the right of this are four groups of large golden letters – (LI) BER / GENE / RATIO / NIS – which are intertwined with each other and with tendrils to form a dense network that can hardly be disentangled by the eye. The following words IHV XRI FILII DAVID, on the other hand, are written in much smaller golden capitals. But they are not directly connected to LIBER GENERATIONIS at the bottom. Rather, they appear in a single line at the top and continue in descending order with FILII ABRAHAM immediately next to the initial L.

The visual organization of the page thus follows the hierarchy of fonts, from the large initial in descending order to the small capitals. At the same time, however, the usual arrangement of words, one after the other from left to right and in lines from top to bottom, has been destroyed. The reader's eye is forced to change directions and make abrupt jumps on the page. In addition, the clear and concise capitals are juxtaposed with letters that are difficult or even impossible to identify due to the interwoven ornamentation.

The beginning of the Gospel of John (fol. 157ᵛ) '*IN PRINCIPIO ERAT VERBUM*' (In the beginning was the Word) is similarly designed and composed; it contains the same formal elements: initials, large gold letters intertwined with ornamentation, and small capitals (Fig. 4). Here the large initial I forms the central axis of the page, spanning its entire height; on the right are three groups of large decorated letters, N / PR / IN, arranged like a column and corresponding to the letters CI / PI / O on the left of the large initial I. This arrangement is augmented by the small capitals ERAT VERBV(m) that are written at the top of the page, beneath the upper frame.

Here, too, reading directions are from right to left or in vertical instead of horizontal sequence. The organization of the entire page is oriented more towards the mode of an image than that of writing. The shaft of the large initial I, with the letters PI and PR on the left and the right, forms an ornamented cross, dividing the framed field into four quadrants. In this way the beginning of the Gospel, which formulates the equation of the body of Christ with the Holy Word, is connected with the cross. The written 'image' puts the incarnation and

Christ's death on the cross in a relationship and thus also confirms that letters do not merely record the words of the gospel. The broad field of theological discourse and symbolic interpretation that the appearance of the page opens up cannot be pursued here. Of particular interest for present purposes, however, is the function of illegibility and the visual and artistic procedures that make reading difficult or impossible. These procedures include hiding letters in an ornamental mesh, abruptly changing the font and letter size, disrupting words, and negating the usual reading direction by arranging letters either from right to left or in a vertical instead of horizontal order.

Obviously, these principles of visual organization go beyond the qualities that scholars have always attributed to decorated letters alone. As a combination of letter form and ornament, decorated initials have an 'illogical connection' with a resulting 'loss of legibility'.[20] This may be true for the individual decorated letter; but on the pages that have been described here, pages which contain complete word sequences apart from the initial, the reduced legibility is only partially due to the ornamentalisation of the letters. Rather, a systematic break with the rules of normal writing is evident here, through the unexpected alteration of font, letter size, and reading direction or through the abandonment of ruled writing in favour of a free and seemingly arbitrary positioning of the letters on the writing area.

We are not dealing with pages that show a generally illegible script, but rather with pages that oscillate between legibility and illegibility. Individual, clearly identifiable, and legible letters challenge the reader to read, while the writing in the immediate vicinity may be closed off to legibility by a texture of ornamentation.[21] This simultaneity of openness and enigma can be present on a single page, as in the *Liber generationis* page of the Morgan gospels (Fig. 1). But it can also determine the composition of an opening, in which an ornamentally closed page is juxtaposed with a page that displays the text in large letters, as in an inscription on a stone tablet (Figs 2 and 3).[22]

In addition, on the remaining pages of the introductory sequence, we observe another method that can obscure the script and disguise the text, a method that was very popular in the tenth and eleventh centuries. In these cases the

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20 Alexander 1978, 8–9.

21 Polaschegg 2018, 176–182, with general remarks on the history of the perception and use of illegible scripts, i.e. 'really existing writings that can be recognised but not read' (176).

22 This arrangement can be found, e.g. in the Leipzig gospels at the beginning of each gospel (fols 12ᵛ/13ʳ; 71ᵛ/72ʳ; 109ᵛ/110ʳ; 177ᵛ/178ʳ) or in Morgan gospels at the beginning of Mark (fols 64ᵛ/65ʳ) and Luke (fols 99ᵛ/100ʳ).

text is written on a patterned writing surface. The background can be so dominant that it is difficult to see the golden lines of the text. The patterned writing area often alludes to the patterns of textiles, mostly of precious silk from the East. [23] From here it is only a small step to pages that are part of the introductory series, but on which only coloured areas or fields with textile patterns appear, without any writing at all. In the famous *Codex aureus Epternacensis* (*c.* 1030) from Nuremberg, Germanisches Nationalmuseum (Hs. 156142), each of the extensive sequence of pages introducing the four gospels even includes a double page, up to the outermost edge of the parchment, that is exclusively and completely covered with a pattern reminiscent of textiles.[24]

In a Gospel book from the treasury of St. Gereon, which was written around 990/1000 in Cologne, the page preceding the images of the evangelist contains only a framed blueish-purple or reddish-purple field.[25] The same is the case with a gospel book that was also made in Cologne, perhaps originating from St. Andreas, and which is dated to the first half of the eleventh century.[26] These pages are usually referred to only as 'coloured' or 'decorated', as 'textile' or even very misleadingly as 'carpet' pages. Because they appear without writing, they have often been considered unfinished, even though the respective manuscript does not otherwise provide any evidence of this unfinished state. In this respect, the famous Gospel of St. Maria ad Gradus in Cologne (*c.* 1030) is revealing.[27] The first page introduces not the first gospel but the manuscript as a whole and contains a purple field without any writing on fol. 1^r, followed by an illumination of the *Maiestas Domini* on fol. 1^v. In a sequence of this sort, no text should be expected on the purple field at all.

If pages that are not covered with writing and contain only colour or ornamentation are also part of the introductory sequence, along with the initial pages, the pages with patterned background, or pages with capitals of demonstrative clarity, then it is necessary to include the wordless pages in the spectrum of the different forms of writing presented there. It is as if letters and words are not hidden in an enigmatic visual organization, but are instead completely invisible. To exaggerate, one could say that these are not pages without writing, but pages with invisible writing. The introductory series thus covers a wide range,

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[23] Bücheler 2014, 2016.

[24] Fols 17^v/18^r (Matthew), fols 51^v/52^r (Mark), fols 75^v/76^r (Luke) and fols 109^v/110^r (John) <http://dlib.gnm.de/item/Hs156142/1> (accessed on 28 Oct. 2020).

[25] Cologne, Historisches Archiv, Cod. W 312. Euw 1991, 30–34, no. 2.

[26] Darmstadt, Hessisches Landesmuseum, AE 679. Märker and Jülich 2001, 27–37.

[27] Cologne, Erzbischöfliche Diözesan- und Dombibliothek, Cod. 1001a.

from hard-to-read, to illegible, to invisible script – often in juxtaposition with the almost demonstrative clarity of large capitals. This arrangement, which unfolds programmatically at the beginning of each gospel, is to be understood as a visualized reflection on the nature and status of writing and script, which in this case is Holy Scripture, as well as on the recognition of God in the divine Word.

3 Enigmatic calligraphy and the 'veil of the letter'

If one looks at the elaborate ornamentation and decorated letters which can be seen on the aforementioned initial pages, it is obvious that such elements do not fit into the ideas and definitions that medieval Christian scholars had of script and letters. Even the Church Fathers rejected more or less the visual luxury of manuscripts containing the word of God.[28] This attitude was based on a purely functional understanding of writing as a representation of spoken words. For speech, however, the material preciousness of writing is irrelevant. When the Church Fathers condemned and rejected preciously elaborate script, their arguments followed, in some respects, older theories of language and writing, which can be traced back to Aristotle and the Stoics. This attitude was no longer shared by the writers and painters of the Early and High Middle Ages, as the large number of ornamental pages and decorated letters proves. This is true even though Aristotle's teachings remained authoritative for most late antique and medieval scholars and for the early medieval *ars grammatica*.[29]

Medieval treatises on the *ars grammatica*, almost all of which go back to ancient Greek and Roman authors, often deal with letters and writing. The definition of letters that exercised the most influence during the Middle Ages comes from the late classical grammarians Diomedes (fourth century) and Priscian (sixth century). The definition states that a letter is determined by three properties, *nomen, figura,* and *postestas,*[30] that is, name ('what is said'), figure ('what is observed or noted with writing'), and phonic value (*potestas*).[31] This definition, which is also reported by Isidore of Seville (*c.* 560–636) in his *Etymologiae*,[32] is the consensus definition among early medieval scholars – and it is irrelevant for

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28 Nordenfalk 1970, 89–96; Kendrick 1999, 36–39; Tilghman 2011a, 294.

29 Irvine 1994, 30–33.

30 Vogt-Spira 1991, 304–311; Irvine 1994, 97–104; Assmann 1992, 1420.

31 Irvine 1994, 98–100.

32 Isidore of Seville, *Etymologiarum sive originum libri XX*, I, 4.16.

the decorated letters discussed here, for which sometimes neither *nomen* nor *figura* can be identified. But in a short paragraph about five Greek letters, Isidore also reports on what he calls *litterae mysticae* ('mystical letters').[33] 'Mystical' here means that a letter has a disguised meaning beyond its sound, a meaning that is only visually recognizable; Isidore offers symbolic explanations, some of which are deduced directly from the shape of the letters.[34] These explanations exhibit an awareness of the materiality of writing or even of display lettering, a materiality that can be accessed through iconography; Isidore's specific explanations of Greek letters are less important here than the fact that the 'mystical letters' are not Greek letters by chance. Like all medieval scholars and commentators, Isidore understood Hebrew, Greek, and Latin to be the three sacred languages, with Greek and Latin descending from Hebrew, the original source.[35] He and many other grammatical sources constructed a genealogy of script from biblical origins, thus touching on a broad tradition of creation myths in which the invention of script or the origin of texts was linked to supernatural events.[36]

Within the biblical narratives, this tradition is exemplified by the events on Mount Sinai (Ex. 31,18), when God *dedit quoque Mosi* [...] *in monte Sinai duas tabulas testimonii lapideas scriptas digito Dei* ('gave to Moses [...] the two tablets of the testimony, tablets of stone, written with the finger of God') and by the *scriptura Dei* ('the writing of God') (Ex. 32,16).[37] Narratives such as this one can give people who are concerned with letters and writing a sacred aura.[38] In this sense writing is understood as bound up with supernatural mysteries and not accessible to everyone. Isidore reports this constellation of ideas and mentions that among the Egyptians the priests and the people had different scripts.[39]

So it can be supposed that this idea of writing – the idea of a script that only a few can understand, a script that appears enigmatic and seems to contain a secret – is still alive in the enigmatic visual organization of the decorated pages.

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33 Isidore of Seville, *Etymologiarum sive originum libri XX*, I, 4.8–9. Ernst 2006, 210. For the iconographic potential of Greek letters in insular manuscripts, see Tilghman 2011b, 101.
34 For other sources, besides Isidore, about the symbolic meaning of letters, see Ganz 2017a, 130; cf. Schreiner 2002, 278–292; Kiening 2008, 31–32.
35 Isidore of Seville, *Etymologiarum sive originum libri XX*, I, 3.4. Tilghman 2011b, 96.
36 Irvine 1994, 102.
37 Kiening 2008, 22–26. Even the emergence of different languages due to human hubris at the Tower of Babel was 'healed' by divine power, through the descent of the Holy Spirit at Pentecost. For this idea and the use of mixed scripts in gospel books, see Tilghman, 2011b, 101–104.
38 Kiening, 2008.
39 Isidore of Seville, *Etymologiarum sive originum libri XX*, I, 3.5.

This enigmatic dimension of writing touches on the fundamental question about the relationship between seeing the written text of Sacred Scripture and a true understanding of these texts as divine revelation and as a means of access to God; this relationship is a special one in Christianity. A famous passage from the Apostle Paul's second letter to the Corinthians sums up this relationship concisely. Paul, referring to the report in Exodus of the stone tablets, writes:

> Manifestati quoniam epistula estis Christi ministrata a nobis et scripta non atramento sed Spiritu Dei vivi non in tabulis lapideis sed in tabulis cordis carnalibus.

> And you show that you are a letter from Christ delivered by us, written not with ink but with the Spirit of the living God, not on tablets of stone but on fleshy tables of the heart.
>
> (2 Cor. 3,3).

And he continued with the much-quoted striking formula: *Littera enim occidit Spiritus autem vivicat* ('For the letter kills, but the Spirit gives life') (2 Cor. 3,6).[40]

In contrasting *littera et spiritus,* letter and Spirit, the apostle refers to the difference between old and new, that is, the Old Testament, which could only be based on the letter of the law, and the New Testament, in which the life-giving Spirit of God could be experienced through Christ himself. Besides this salvation-historical meaning, in early Christianity Origen in particular understood the Pauline word in the sense of a scriptural hermeneutic, namely, that letters are only external signs, a visible veiling of the actual truth, which is spiritual and invisible.[41] This position of scepticism towards script is different from the view of Aristotle and rather reflects the view of Plato, who in his dialogue *Phaidros* narrates the anecdote of Thoth, the inventor of letters in Egypt.[42] When he advertised it to King Thamos, Thoth claimed that this invention would make the Egyptians wiser and strengthen their memories. King Thamos replied that the opposite would be true; trusting in writing produced by external characters which are no part of ourselves would produce forgetfulness. In the remarks that follow his account of this myth, Plato puts writing and painting on the same level; both are dumb and lifeless. If one asks them, they cannot answer, and they always say the same words. Script is only a pale shadow or imitation of lively and inspired speech.

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40 Assmann 1994, 327–329; Walter 1995.

41 Walter 1995, 377; Kiening 2008, 24.

42 Plato, *Phaidros*, 274d–276a. Assmann 1994.

It is not surprising that in the third century Origen interprets Paul's formula and the contrast between letter and spirit in this sense. As he argues in *De principiis*:

> 'Littera occidit, spiritus autem vivificat'. In quo [apostolus] sine dubio per litteram corporalia significat, per spiritum intellectualia, quae et spiritualia dicimus.

> 'The letter kills, but the Spirit gives life'. By 'letter' [the apostle] undoubtedly means the physical things; by 'spirit' the intelligible ones, which we also call spiritual.[43]

Without a spiritual understanding of Scripture, and here Origen again quotes the apostle Paul (2 Cor. 3,15), *velamen est positum super cor eorum* ('a veil covers their hearts'), the truth remains veiled. In this sense, Paul's juxtaposition of *littera* and *spiritus* characterizes words and letters as visible but merely external and dead signs, written in ink or carved in stone, while the living truth is inscribed on the heart as immaterial, spiritual writing.

In this respect, the idea of the *littera* that kills and the life-giving *spiritus* can be related on the one hand to the doctrine of the multiple senses of Sacred Scripture, including allegory, as a method for interpreting texts, and, on the other hand, to the epistemological model that understands the knowledge and vision of God as a multi-level ascent from the material to the immaterial. Medieval exegetes agreed that the true, spiritual meaning of Sacred Scripture is hidden behind the literal meaning of words and letters.[44] Like Paul and Origen, medieval theologians talked about this idea via metaphors of veiling and revealing.[45]

In the early ninth century, Claudius of Turin took Origen's argument literally, in part, and concisely explained the idea of the letter as a *velamen* ('veil').[46]

> Ita et cum per prophetas vel legislatorem Verbum Dei profertur ad homines, non absque competentibus profertur indumentis. Nam sicut ibi carnis, ita hic litterae velamine tegitur: ut littera quidem aspicitur tanquam caro, latens vero spiritalis intrinsecus sensus tanquam divinitas sentitur. [...] Beati sunt illi oculi qui velamen litterae obtectum intrinsecus divinum spiritum vident.

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43 Origen, *De principiis*, I,1.2.

44 For the basics of this idea and its consequences for the medieval hermeneutics of Scripture, see the concise summary by Ohly 1958.

45 Spitz 1972, 23–39.

46 Claudius of Turin, *In libros informationum litterae et spiritus*, in Jacques-Paul Migne, *Patrologia Latina*, 104, 617AB. Translation by Smalley 1983, 1; Kessler 2000, 187.

> When the Word of God was shown to men through the lawgiver and the prophets, it was not shown them without suitable clothing. There it was covered by the veil of flesh, here by the veil of the letter. The letter appears as flesh; but the true spiritual sense within is known as divinity. [...] Blessed are the eyes which see divine spirit through the letters veil.

The true meaning of Sacred Scripture, the spiritual meaning, cannot be understood by simply reading the words; it is instead revealed through intensive consideration, continuous repetition of words and sentences, meditation, and careful thinking about the text. In medieval monasteries this way of reading was called *ruminatio*, which refers to the permanent and constantly repeated internalization of a text, as if one were ingesting and ruminating on it.[47] This approach is fundamentally different from normal reading, that is, simple and cursory reading. For this reason, in examining the calligraphy of the initial pages, we may conclude that their writing does not have to obey the rules of normal reading. Instead, such pages activate a concentrated and meditative *seeing* of the text as the right way to understand the divine word and unveil its meaning.

This intent was often enhanced by the coloured or patterned pages which are often, as in the Morgan gospels, part of the introductory sequence. These pages evoke patterned textiles and are therefore to be understood as a visualization of the metaphor of *velatio* and *revelatio*, of veiling and unveiling.[48] Such textile allusions can also be seen in the name of the gospel book, which changed in the eleventh century when it was increasingly no longer referred to as *liber* or *codex* but as *textus Evangelii*.[49] In this way, the twofold meaning of *textus*, as textile and as text, comes into play, both senses deriving from the Latin *texere*, which means 'to weave'. Not only textile background patterns but also the interweaving of letters and ornamentation, the under- and over-layering of letters, tendrils, and interlaced ornaments allude to this etymology and to the idea of the 'veil of the letter' concealing the truth.

The pages of the introductory series thus show, in summary, various forms of distance from the common, readable script. Especially the initial pages assume pictorial qualities and provoke a form of perception different from simple reading – more viewing and contemplation than just reading.[50] In this way, the introductory pages can also be related to a widespread epistemological model originating in Antiquity, a model which understands the knowledge and vision of God as a gradual ascent from the material to the immaterial. This model

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47 Ruppert 1977; Carruthers 1990, 164–166, 170–172; Illich 1993, 54–57.

48 Bücheler 2014, 70–114.

49 Lentes 2006.

50 Czerwinski 1997; Kiening 2008, 39–40.

touches on the hermeneutics of Scripture as outlined above: the view behind the curtain of the script and the letters is not a physical viewing but rather a spiritual viewing and ultimately the vision of God.

In the twelfth century, especially in the school of Saint-Victor, the method of a knowledge that ascended in stages was widely discussed and systematized with a clear definition of terms. Its main features, however, can also be traced back to Antiquity and the Early Middle Ages. In his three-stage model, Hugh of Saint-Victor (*c.* 1096/7–1141) defines *meditatio* as the persistent pursuit of an object, which leads to *contemplatio*, the highest level of knowledge, which in turn grants access to the purely intelligible and therefore to the vision of God. [51] Intensive reading in permanent repetition can thus be the starting point of meditation; interestingly, Augustine already saw a close connection between *ruminatio* and *meditatio*.[52]

The page sequence, which in early medieval gospel books is always placed at the beginning of a gospel, i.e. in an important, distinctive, and prominent position, can be understood as a visual reflection on writing, script, and the nature of Holy Scripture. The entire sequence offers readers a wide range of visual organization, writing surfaces with frames and coloured or patterned backgrounds and scripts that differ greatly from the continuously flowing text on the following pages. The sequence contains a wide spectrum that can include writing that is clearly legible, difficult to read and illegible, and even invisible, often staging an antithesis of enigmatic calligraphy and clear legibility. In this way, the sequence of pages activates different forms of perception that challenge normal reading. Within that sequence, it is above all in the initial pages that the rules of readable script, which is linearly ordered word by word, are demonstratively broken. Here the identification of the words is made impossible by abrupt changes in the size of the letters or the reading direction, by arbitrary grouping of the letters, and by ornamental interweaving: the initial pages are not organized as text pages, but as images and ornaments.[53]

The eye must walk on the page with careful and thorough consideration. The illegibility of the initial pages activates an attitude which makes the readers aware that there is a meaning behind the material and readable letters that must be revealed. Such pages therefore do not require reading in the usual sense, which linearly follows the succession of words. Their disposition as, often centralized (Figs 3 and 4), 'script-images' must be contemplated by simultaneous

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[51] Meier 1990, *passim*, esp. 40.

[52] Ruppert 1977, 86–87.

[53] Werckmeister 1967, 162–167.

consideration and contemplative synopsis. Such consideration detaches itself from the material letter and enables the transition to *contemplatio*, to the highest level of knowledge.[54]

Understood in this way, these pages are proof of a great artistic dilemma. How could medieval artists, scribes, and painters, follow the apostle's doctrine that the letter kills, and only the invisible Spirit gives life? How could they show that their own work, the material script, is worthless? Their way out of this dilemma was a paradox that satisfied both artistic ambition and the demands of theology. It was precisely the most elaborate parts of the manuscript with ornamented letters and lavishly decorated script that drew attention to the worthlessness of material writing by their demonstratively presented illegibility. At the same time, the illegibility of the page was a visual cue for the transition from meditative reading to contemplatively seeing the purely intelligible, that is, to the *visio Dei*.

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54 Czerwinski 1997. In twelfth-century theories, *contemplatio* is supplemented by *contuitus* as a term for comprehensive synoptic vision; see Meier 1990, 41.

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Fig. 1: Gospel book from Corvey, 9th c.; New York, Pierpont Morgan Library, M. 755, fol. 17[v]: LIBER GENERATIONIS IHV XRI FILII DAVID FILII ABRAHAM. © The Morgan Library & Museum, New York.

Fig. 2: Gospel book from Corvey, 9th c.; Leipzig, Universitätsbibliothek, Ms 76, fol. 109[v]: INCIPIT EVANGELIVM SECVNDVM LVCAM. © Universitätsbibliothek, Leipzig.

Fig. 3: Gospel book from Corvey, 9th c.; Leipzig, Universitätsbibliothek, Ms 76, fol. 110[r]: QVONIAM QVIDEM. © Universitätsbibliothek, Leipzig.

Fig. 4: Gospel book from Corvey, 9th c.; New York, Pierpont Morgan Library, M. 755, fol. 157[v]: IN PRINCIPIO ERAT VERBVM. © The Morgan Library & Museum, New York.

Dick van der Meij

Sailing-Ships and Character Illustrations in Three Javanese Literary Poetic Manuscripts

Abstract: This paper will look at three manuscripts from the collections of the British Library and the Staatsbibliothek zu Berlin to explore the various ways sailing-ships and characters that play a role in the stories are portrayed. Also some attention will be paid to the combinations we find of ships, other illustrated elements, and the *wayang*-like figures in the illustrations. The manuscripts we are concerned with in this contribution are *Serat Selarasa*, British Library MSS Jav. 28, *Serat Damar Wulan*, British Library MSS Jav. 89, and *Serat Panji Jaya Kusuma*, Berlin Ms. or. quart. 2112. Below some illustrations will be presented and commented upon. We will see that manuscripts may have been produced in various ways. However, at present due to lack of detailed studies of illustrated Javanese manuscripts no definitive answers can be given to many questions about Javanese manuscript production in the past.

1 Introduction

The text-oriented approach of philologists working on Javanese texts often had interesting and prejudicial consequences for the appreciation and understanding of the manuscripts they worked with. In textual studies of Javanese manuscripts, the presence of illustrations and illuminations, indeed, any adornments, were and often still are, silently passed over. This is a pity as they form essential parts of the manuscripts and of the texts they adorn and they add to the understanding and appreciation people have of the texts and the manuscripts in which they are contained. A similar situation exists for other features of manuscripts. In their recently published edited book *In the Author's Hand. Holographs and Authorial Manuscripts in the Islamic Handwritten Tradition*, Frédéric Bauden and Élise Franssen write in their introduction: 'The lack of a general study of the holograph manuscripts produced in the Islamic world is probably because holographs are only mentioned casually in catalogues, articles and studies, and the researcher does not have access to an exhaustive and unique repertoire which he/she could browse through to identify the particular

handwriting of a given person.'[1] Because of this dearth of data, researchers may thus miss information and clues that may be important for their understanding of the material they work with.

The same situation applies to the study of manuscripts in Indonesia and those from the Javanese tradition are no exception. The inclusion of illustrations and illuminations in Javanese manuscripts is not always stated in catalogues or text editions and when their presence is mentioned, it is not infrequently done in a derogatory manner but appreciation has changed over time. In 1977, for instance, catalogue compilers wrote that MSS Jav. 89 in the British Library was '[i]llustrated throughout with drawings in colours and gilt, which are of great interest although *not of a high artistic standard* (emphasis mine)'.[2] However, some 35 years later, for Annabel Teh Gallop, the same manuscript is 'one of the loveliest Indonesian manuscripts in the British Library, with a treasury of illustrations depicting Javanese society in the late eighteenth century. The pictures are rich in humor and the artist had a marvellous eye for facial expressions and bodily postures (for example, a woman sleeping with her arm across her eyes, a sandal just balanced on a foot).'[3] The study of illustrations in Javanese manuscripts is also hampered by the relatively few illustrations in publications. Apart from the odd illustrations in other places, some publications that contain information on and pictures of illustrated Javanese manuscripts are Pigeaud's third volume of his four-volume catalogue of Javanese manuscripts in the Netherlands (1967–1980); *Golden Letters* published by Annabel Teh Gallop and Ben Arps in 1991; *Illuminations* edited by Ann Kumar and John McGlynn of 1996 where Tim Behrend published a chapter on Javanese manuscripts with many illustrations from Javanese manuscripts; the catalogue of an exhibition of Indonesian manuscripts in Berlin published by Wieringa and Hanstein of 2015; and my *Indonesian Manuscripts from the Islands of Java, Madura, Bali and Lombok* of 2017. Luckily, many manuscripts have nowadays been digitized so that we can explore these manuscripts much more easily than was ever the case before. All three manuscripts used in this contribution have been digitised and can be accessed on-line.

Illustrated Javanese manuscripts come in all sorts and sizes and most of these manuscripts contain Javanese narrative literary poems with stories that

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1 Bauden and Franssen 2020, 8–9.

2 Ricklefs and Voorhoeve 1977, 71.

3 See <https://southeastasianlibrarygroup.wordpress.com/2013/03/21/everyday-life-in-java-in-the-late-18th-century-serat-damar-wulan/> (all internet sites mentioned in this article were accessed on 18 May 2021).

were once popular among the Javanese. These poems concern the exploits of princes and kings in Java and elsewhere and are written using Javanese poetic structures and conventions.[4] Other manuscripts contain illustrated divination almanacs (*pawukon*) of which a large variety exists in public and private collections,[5] and illustrated versions of the *Asthabrata* (variously glossed as 'the eightfold teachings', 'the eight ways of life', and 'the eight royal virtues').[6] Apparently the eighteenth to nineteenth century was a time when illustrated and illuminated manuscripts of literary texts were en vogue in Java. To mention some examples preserved in the National Library of Indonesia, these manuscripts include beautiful richly coloured illustrated versions of the *Serat Panji Jayakusuma* made *c*. 1840, *Serat Angling Darma* made *c*. 1845, *Serat Dewakusuma Kembar* made *c*. 1850, *Menak Jobin* made 1862, and *Serat Asmarasupi* made in 1893.[7] Other collections, both inside and outside Indonesia, also contain illustrated Javanese manuscripts, such as the Library of the University of Indonesia in Jakarta, Museum Sonobudoyo in Yogyakarta and the various palaces in Yogyakarta and Surakarta in Central Java. Outside Indonesia one might look for these manuscripts in the collections of the British Library, Leiden University Libraries and the Staatsbibliothek (Stabi) zu Berlin, to mention the most important of them.

Although many literary poetic stories in Javanese manuscripts tell of events that happen in fictive times and places, the illustrations in these manuscripts may show depictions of matters from a totally different time and place, and take their inspiration from a variety of sources. I will look at three manuscripts to explore how sailing-ships and the characters in the stories are portrayed. Also some attention will be paid to the combinations we find in illustrations of ships and characters portrayed in the style reminiscent of shadow play *wayang* puppets. The manuscripts we are concerned with in this contribution are *Serat Selarasa*, British Library MSS Jav. 28,[8] *Serat Damar Wulan*, British Library MSS Jav. 89,[9] and *Serat Panji Jaya Kusuma*, Berlin, Stabi, Ms. or. quart. 2112.[10]

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4 For a detailed description of these verse structures see van der Meij 2017a, 243–313.

5 For many illustrations, see van der Meij 2019, 135–174.

6 See Wieringa 2018, 180–215 and Prabu Suryodilogo 2012.

7 Indonesian National Library, KBG 737, KBG 139, KBG 19, KBG 721 and KBG 543, respectively. Pictures can be found in Kumar and McGlynn 1996, 180–181.

8 Digitally accessible at <http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=MSS_Jav_28>. Since the three manuscripts I use here are all digitized and can be accessed on the internet I suggest that interested readers open these digital versions to form a better impression of the manuscripts than I can offer in this short contribution.

9 Digitally accessible at <http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=MSS_Jav_89>.

2 The illustrations

We will see that in one manuscript, the sailing-ships are meticulously drawn depicting foreign as well as indigenous vessels as they were thought to look in the real world, or in other words, in a 'naturalistic' way. Conversely, in other manuscripts, ships are portrayed in a naive way with dramatically less realistic detail, and therefore rather 'un-naturalistic'. The same notion of 'realistic' and 'un-realistic' applies to the way other elements in the illustrations are portrayed, including the *wayang*-style[11] illustrations and the depiction of non-*wayang*-style characters.[12] Apparently, the artists were struggling to find a way to meet the expected rules of manuscript illustration for fictive stories – by keeping to the *wayang*-style – but at the same time to add non-expected and new elements to these illustrations.

Usually, in illustrations in Javanese manuscripts that contain fictive narrative poems, no attempt is made to depict the characters of the stories as real people.[13] Rather, they are shown in the form of, but not quite the same as, existing parchment puppets of the Javanese shadow-play (*wayang kulit*). These puppets were given the form they still have today probably to circumvent the Islamic ban on the depiction of people and animals.[14] *Wayang* puppets are flat, made of buffalo hide and elaborately perforated, so that during performances, their shadow comes over clearly on a white screen. Each individual shadow puppet character can be identified by its dress, jewellery and other adornments, its body and posture, hairdo and facial features as well as its facial and body colour. For instance, a refined character has an aquiline slim nose and thin

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10 Digitally accessible at <http://orient-digital.staatsbibliothek-berlin.de/receive/SBBMSBook_islamhs_00007747>.

11 I am not in favour of the expression '*wayang*-style' but will use it in this contribution for want of a better term. For readability's sake, I will not use quotation marks whenever I use the term.

12 It would go too far for this contribution to look at the way backgrounds, houses or horses are (or are not) depicted.

13 Note that in this contribution I am not talking about illustrated historical chronicles (*babad*) which some also perceive as largely fictive. The illustrations in these poetic or prose texts tend to depict matters much more in line with the periods they deal with, such as *Babad Demak* Cod.Or. 23.742, and *Babad Dipanegara* D Or. 13 in Leiden University Libraries (for illustrations see van der Meij 2017a, 63–65). *Babad*s are moreover illustrated much more naturalistically than truly fictive poetic texts. See also a very good example of this in the illustration of the *Babad Blambangan* (Indonesian National Library, KBG 63, see Kumar and McGlynn 1996, 183).

14 See Ras 1976, 78–79.

limbs whereas coarse characters are larger, have big noses, large bulging eyes and long curly hair. The puppets are rather stiff and although they can be manipulated endlessly, their basic forms do not change and do not allow alterations of the positions of the limbs. For instance, they cannot sit cross-legged or turn their heads.[15] The same character in the *wayang* stories can be represented by more than one puppet to indicate his or her stage in life but the puppets themselves do not change and have stayed the same over a long period of time. Regional variations exist and are often easily recognizable, but only concern minor changes as to size, colour and precision with which the puppets are made.[16] The *wayang* iconography was known throughout Java and most people would make no mistakes in recognizing the characters that were most often used in stories or to recognize a character's characteristics when it only rarely featured in a story and was thus less popular. In short, a coarse or refined character in *wayang*-style illustrations would look like a similar character from the *wayang* theatre. However, illustrations may show *wayang*-style figures in bodily poses that actual puppets would not allow next to positions puppets would adopt during actual shadow-play performances. Not all characters are depicted in a *wayang* way and and they display individual characteristics and a range of emotions that *wayang*-style illustrations cannot display. The combination of the *wayang* and non-*wayang*-styles creates many possibilities but these have so far not been explored. It seems that specific characters in stories are depicted in the *wayang*-style such as kings, queens and their children, while others are not and this makes for a curious and often humorous mixture. The often elaborate and meticulously executed *wayang*-style figures are often combined with unrefined and ill-executed backgrounds and props so the question arises whether these elements of the illustrations were indeed executed by the same artists.

Indeed, an important issue in the study of Javanese manuscripts is that we have little knowledge about when or by whom they were produced. Many manuscripts are undated, the scribes and artists are anonymous and no Javanese sources have so far been found that explain how manuscripts should be made and what the aesthetic qualities were to which they were bound textually, chirographically and with respect to illustrations and illuminations. Should we

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15 A concise and still very useful description of *wayang* puppets and how they are made and used is Scott-Kemball 1970. A much later and much more extensive and copiously illustrated work was published in 2007 by Walter Angst in which he compares various *wayang*-styles from Java and Bali. For examples of illustrations figures in *wayang*-style and staged as in the shadow-play theatre made in the early twentieth century, see van der Meij 2017b.

16 See especially Angst 2007 for an elaboration on a large number of different regional *wayang* puppet styles.

think of one person who both wrote the text and also made the illustrations? Or should we perhaps assume that more than one person was at work and that, as often is the case with the text, also in the illustration production more than one person was involved? Did the scribe and the artist know each other and, if they did, what was their relationship? Indeed, the assumption that the individuals involved in making these manuscripts all came from the same cultural background may be mistaken. Perhaps in the case of the production of Javanese manuscripts, it may well have been that people from outside Java, for instance Holland, were involved too. It may also be that advisors were present to clarify illustration problems. Looking at all the illustrations included in one manuscript the conclusion often may be that indeed more than one person was at work, each making his own, separate, illustrations, or that more than one artist worked on the same illustration.

Illustrations are usually put in, or near, that part of a text, it refers to. However, this logic is not always clear in the case of Javanese manuscripts, which is probably due to the manuscript production process where the text was often written first and space was left blank to be filled later with illustrations, or the other way round. One might even assume that both practices took place at the same time and that in the same manuscript, some illustrations were made before the writing of the text and others after the writing was finished. Illustrations often precede the text in manuscripts of poetic texts at the start of a new canto. This is often the case when a new canto starts on a new page, but also when it does not and space was left blank when one canto ends and a new one starts halfway a page as on fols 18^r, 49^v and 120^v in the manuscript of the *Serat Damar Wulan* MSS Jav. 89 used here. Illustrations were probably made to match the expectations of the manuscript's future owner who may have ordered it to be made, or to lure and satisfy the people who borrowed the manuscript in a lending library. It seems that the size, visual impact and number of ships in the illustrations and the words in the text devoted to them do not always match.

2.1 *Serat Selarasa*

The first manuscript *Serat Selarasa* (also spelled *Sela Rasa*) is part of the collection of the British Library and has the shelfmark MSS Jav. 28.[17] The information

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17 Ricklefs and Voorhoeve 1977, 61. The manuscript is described in the catalogue of Indonesian manuscripts in Great Britain made by Merle C. Ricklefs and Petrus Voorhoeve which was updated in 2014 by Merle C. Ricklefs and Annabel Teh Gallop from the British Library, and

from the catalogue states that the manuscript is dated in the Javanese calendar 24 Sapar A.J. 1731 = AD 4 June 1804. According to information in the manuscript, the original owner was a certain 'Mrs. Sakeber' which may be either that she was the wife of the Gezaghebber (Lieutenant Governor) or perhaps an also unidentified Madame Schaber of Surabaya in East Java. The subsequent owner, Lt.-Col. Colin Mackenzie, became interested in Javanese history and antiquities when he accompanied the British Indian force to Java in 1811. Many of his Javanese manuscripts derive from the sack of the court of Yogyakarta in 1812. His manuscripts were sold to the English East India Company and ended up first in the India Office Library and are now part of the collection of the British Library.[18] As stated by Mackenzie himself on fol. vʳ, he received this manuscript from a certain Mr. Rothebuhler in Surabaya in February 1812. It measures 40.3 × 20 cm and has 294 pages, of which the text occupies pages 6–284.[19] It is assumed that the story was popular in West Java only,[20] and if that is the case, one wonders if the present manuscript was indeed from Surabaya in East Java and if it was, how 'Sakeber' came to own it.

Vreede's catalogue of the Javanese and Madurese manuscripts in the collection of Leiden University published in 1892 includes an extensive Dutch summary of the plot of the story.[21] The story is about the four sons of King Sekberen of Campa: Selangkara, Selacara, Selagada and Selarasa. After the king's death, Selangkara succeeds him to the throne but he rules tyrannically and his three brothers leave the country in a boat and encounter many difficulties at sea, where they are almost shipwrecked. In the subsequent long story, the youngest, Selarasa, is shown to be the smartest and the most successful in the many wars he fights in many countries against non-Muslims who, once defeated, all convert to Islam. All three brothers have many romantic adventures and marry beautiful ladies. At the end of the story, they are reunited with their eldest brother. The story is set in the early time of the Islamization of Java and surrounding places

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several pages with illustrations from this manuscript were included (Ricklefs, Voorhoeve and Gallop 2014).

18 Ricklefs and Voorhoeve 1977, xxvi. The manuscript is also described and two illustrations are included in Gallop and Arps 1991, 88–89. The manuscript has already been looked at in great detail by Annabel Teh Gallop who provides more background to the manuscript and the way it was illustrated, see Gallop 2014 at <https://britishlibrary.typepad.co.uk/asian-and-african/2014/12/javanese-manuscript-art-serat-selarasa.html>.

19 Ricklefs and Voorhoeve 1977, 61.

20 Pigeaud 1980, 226, and Behrend 1998, 404.

21 Vreede 1892, 198–200.

and clearly in a time that precedes the use of the seventeenth-century ships portrayed in this manuscript by several centuries.

The picture in Fig. 1 shows the three boys Selacara, Selagada and Selarasa in a sailing-boat at sea after they had abandoned their tyrannical king brother Selangkara waiting for a storm to subside. The picture combines distinct styles of depiction. The first is a rather realistic depiction of the ship and its rigging and the way the sails, (Dutch) flags and pennants are blown in the same direction by the wind. The waves and the dark sky indicate that the weather was rough. The figures in the ship are clearly inspired by leather shadow-play puppets from the Wayang Gedhog variety. Distinct from the puppets of the much more popular Wayang Purwa, which are used in the shadow play theatre of stories derived from the Mahabharata and Ramayana, the Wayang Gedhog variety was specially designed and used for the shadow play performances of Panji stories. The puppets can be distinguished because the hairdo and hair ornaments of both *wayang* varieties differ and the puppets of male characters of the Wayang Gedhog usually wear a Javanese dagger (*keris*) in their waistband. In the manuscript the two different styles of *wayang* are used as is the case in the *Serat Panji Jayakusuma* discussed below. The Wayang Purwa puppet style in this manuscript is the one from Yogyakarta as can be seen from the clothes and the hairdo of the princesses portrayed in fol. 114^v. The way they have been put aboard the ship looks somewhat awkward.[22] To begin with, they are too large for the ship and sit without any indication of movement and despite their precarious predicament, they display no fear or other emotion whatsoever, as indeed, *wayang* puppets cannot do. They look as they would have looked in a shadow play performance. The only thing we see is their heads, shoulders, and parts of their upper arms. Their heads are looking downward and their hairstyles and jewellery indicate they are princes. Their flatness contrasts with the implied depth of the rest of the picture. The placement at the upper part of the page of the illustration shows that space was left open for it. Because the illustration does not infringe on the text this makes me believe that the text and illustration were not made at the same time, as probably was the case in other places in this manuscript where some penetration of the illustration into the text occurs, such as on fols 17^r, 19^v (in Fig. 2), 36^r, 123^r (as in Fig. 3) and others.[23]

That the scribe of the text and the illustrator worked closely together in this manuscript may probably be concluded from the fact that the spaces left open for the illustrations do not always have the same size. Fol. 52^v, for instance, has

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22 A second picture showing *wayang* figures in a boat is in fol. 139^r.

23 Fol. 19^v is reproduced in Ricklefs, Voorhoeve and Gallop 2014, iv.

a much larger illustration than many of the others, and this can only have happened if both producers worked in tandem. Of course, one wonders how the discussions between the scribe and the artist(s) went and who was in charge of what the final product would look like. The same can be concluded from the fact that sometimes the space left blank was at the top and in other cases at the bottom of the page. Another possibility is that the production process was even more complicated and some pages may have had the illustration made before the text was added or that more than one illustrator was at work. It seems that the person who made the illustrations in the *wayang*-style is a different artist than the one who made the other illustrations or the non-*wayang* part of the illustrations. It may be that each artist had his own specific expertise in depicting certain elements. As we see sometimes in other manuscripts, rough drawings were made first (and sometimes some of them were never finished), then the text was added after which the manuscript's illustrations were finished and colours were added. In some manuscripts, like the one of the *Serat Panji Jayakusuma*, discussed below, all illustrations are at the bottom of the page and none penetrate into the text. Two pictures that strongly resemble the one illustrated in Fig. 1 is in a manuscript of the *Serat Panji Jaya Kusuma*, which is included in *Illuminations*[24] while a second one is in a manuscript also of the *Serat Panji Jaya Kusuma* in the British Library MSS Jav. 68, made in 1805, fol. 11ᵛ.[25] In this picture, the *wayang* figures are also of the Wayang Gedhog variety and are placed in the ship in a similar way. The question thus arises as to whether the makers of the illustrations in these two manuscripts knew each other or knew of each other's work. We do not have enough material for comparison yet, but it may be that for certain illustrations the artists met the expectations of the public by copying from each other. Because *wayang* used to be ubiquitous in Java, the Javanese iconography was the standard to portray story characters. The public expectation was probably that characters in fictive stories should be portrayed as *wayang* figures and this may explain why in many Javanese illustrated manuscripts no attempt was made to portray characters in a more natural manner.

This *Serat Selarasa* contains no less than 18 pictures of foreign ships and Javanese boats,[26] apart from many other scenes. Some will be highlighted here. Fig. 1 shows the little ship with Selacara, Selagada and Selarasa on board which is put right where the scene is being narrated. Other illustrations show ships

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24 *Serat Panji Jaya Kusuma* from the collection of the Indonesian National Library, KBG 139 which was produced around 1840 on Java's north coast, Kumar and McGlynn 1996, 183.

25 Ricklefs and Voorhoeve 1977, 68; Kieven 2021, 196.

26 Fols 6ʳ, 73ʳ, 90ᵛ, 91ᵛ, 92ᵛ, 93ᵛ, 105ᵛ, 116ᵛ, 120ʳ, 123ʳ, 127ʳ, 130ʳ, 135ᵛ, 136ᵛ, 137ᵛ, 138ᵛ, 139ʳ, 139ᵛ.

anchored in harbour or at sea, right where the scenes where they play a role, are told. This manuscript of the *Serat Selarasa* portrays the ships in a realistic manner but they do not seem to be ships of the nineteenth century but rather from the seventeenth century. The rigging of the sails, the way the masts are portrayed in relation to each other and to the size of the ships is naturalistic, the Dutch flags and pennants and the sails look realistic, and the way they are blown by the wind looks natural. It almost seems that the artist had seen them in harbour or even at sea and that he has made drawings of them more often to familiarize himself with how to portray them. But since the ships precede the artist by more than one and a half century that is impossible. It may be that he has seen illustrations of ships in paintings or book illustrations or on old maps of Batavia where ships are also often seen waiting in harbour. For instance, Fig. 3 shows three ships anchored in the harbour and three little boats are in front of them. The people climbing the masts to fix the sails of the ship at the left are not made in *wayang*-style, perhaps to show that they are not Javanese. Note that the tops of the masts penetrate into the text. The way the flags are flying and the general outlook of the picture are very reminiscent of Dutch paintings from the seventeenth century. Can the artist have known these oil paintings? If that were the case one wonders where he might have seen these paintings. Were they on the walls of the Dutch in Java and had the illustrator visited these places? The illustrations presented here clearly show different kinds of ships that were used by the Dutch to get to the Indies to establish trade relations and 'inspire' the local populations to grant the Dutch monopolies on the trade of spices and other commodities. In the seventeenth century, one kind of vessel was especially popular and was created with a narrow main deck to circumvent high taxation by Denmark on the Baltic Sea trade, which depended on the size of the main deck. This vessel is the *fluyt* or *fluit* in Dutch. The vessels were equipped with only relatively few cannons to protect themselves from pirates, as they were not designed to engage in maritime warfare. Specially designed *fluits* were made to enable them to cross the seas in the tropics, as those made for European trade tended to break up in the warm humid tropical climate. Of course, more research is needed to establish the validity of the idea that we are indeed talking about *fluits* because the Europeans used many other different sailing ships to cross the Southeast Asian seas.

Not all characters in the manuscripts are depicted in *wayang*-style, as can be seen in Fig. 4. This picture is interesting as the figure in the small indigenous vessel is depicted in a more realistic way. The illustration is also noteworthy as the placement of the ships in relation to each other shows a form of perspective, which is rarely seen in this or other, illustrated manuscripts.

2.2 *Serat Damar Wulan*

The manuscript of the *Serat Damar Wulan*, British Library MSS Jav. 89 measures 25.5 × 20 cm and is dated in the Javanese calendar Jumahat-Manis, 9 Rabingulawal but does not mention the year.[27] Lt.-Col. Raban presented it to the India Office Library in 1815,[28] so it must have been made before that year. The fictive story takes places in the time of the East Javanese kingdom of Majapahit (1292 – early fifteenth century) and details the exploits and adventures of the legendary hero Damar Wulan, who, in the story, was to rule Majapahit as King Brawijaya.[29]

Contrary to the *Serat Selarasa*, the *Serat Damar Wulan* is said to originate from East Java rather than West Java and was a very popular text. Many manuscripts may be found in manuscript collections, many more than that of the *Serat Selarasa*. Of course, being a popular text, many variations exist, which can be seen from the information Pigeaud gives us of this text, and his division of it into versions that he dubbed versions A, B and C, and versions written or copied in other places like Yogyakarta in Central Java.[30]

The relation between the text and the illustrations is interesting in this richly illustrated manuscript. Sailing ships are portrayed on fols 3[r] and 4[r] and 155[v] and 156[r] so much less than in the *Serat Selarasa*. The illustrations on fols 3[r] and 4[r] each show one ship that carries two of the story's characters, Wandan and Anggris, who arrive in order to seek the hand in marriage of the maiden queen (Prabu Kenya) of Majapahit (which is refused). This short piece of information gave rise to two detailed illustrations of the ships. In the first illustration on fol. 3[r], the ship is welcomed by a small indigenous vessel that is dwarfed by the large Dutch ship – as can be seen from the Dutch flags – it is headed to. The large ship has anchored and its sails fastened, while a strong wind is blowing as can be seen from the flying flags and pennants and the sail of the small boat that welcomes the ship.

In the second illustration on fol. 4[r], apart from the second Dutch ship, a small rowboat is heading for the coast. The large ships in these two illustrations are not from Java and the illustrations were clearly inspired by European ships.

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27 Some pictures from this manuscript have been reproduced in the updated catalogue of Ricklefs, Voorhoeve and Gallop published in 2014. The manuscript is also described and three illustrations are included in Gallop and Arps 1991, 87. In 1953, Coster-Wijsman gave extensive descriptions of the illustrations of the manuscript, but she only mentions the ships portrayed in the illustrations on fols 3[r] and 4[r] and unfortunately not the ones on fols 155[v] and 156[r].
28 Ricklefs and Voorhoeve 1977, 71.
29 Coster-Wijsman 1953, 155.
30 Pigeaud 1980, 231–333.

That we are dealing with a prospective joyful event may be gathered from the illustration on fol. 4ʳ (Fig. 4), where the ship is enthusiastically decorated with flags and pennants. It is clear that the artist had seen, or was even familiar with, Dutch seventeenth century paintings where this kind of scene is often portrayed. On fol. 155ᵛ both ships are seen anchored in harbour, while one ship is being loaded by small vessels on fol. 156ʳ, and the scene accompanies the text where these illustrations are placed.

The characters in the manuscript were not made in *wayang*-style, are much more natural and often tongue-in-cheek although the heads and faces of more exalted characters somewhat resemble *wayang* puppets.[31] The characters are portrayed in 'realistic' postures and they have a range of different facial expressions. In particular in this manuscript, the characters are portrayed with much humour, and many of them contrast with *wayang*-like figures who are incapable of showing this kind of variety in mood. An example of this difference may be seen in Fig. 6 where we see the mother of vizier Logender seated on a chair with her servants behind her sitting on the floor. She is attentive while the angle of her shoulder indicates the intensity of her interest in what she is being told.[32]

2.3 *Serat Panji Jaya Kusuma*

The third manuscript is part of the collection of the Staatsbibliothek zu Berlin with shelfmark Berlin Ms. or. quart. 2112. It measures 34 × 21 cm and has 250 pages.[33] According to a note at the end of the manuscripts, the writing of it was finished on 26 January 1887 by a certain Koesoemoatmadja.[34] The text tells the story of how Panji conquered the Island of Bali.[35]

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31 See, for instance, fols 59ʳ, 82ʳ, and 93ʳ.

32 Coster-Wijsman 1953, 163.

33 The manuscript is described in the catalogue of Indonesian manuscripts in the collection of the Staatsbibliothek zu Berlin, compiled by Titik Pudjiastuti and Thoralf Hanstein, published in 2016. Other illustrated manuscripts of this text exist are, for instance, L255 in Museum Sonobudoyo in Yogyakarta (Behrend 1998, 364), and British Library MSS Jav. 68 (Ricklefs and Voorhoeve 1977, 68). As they have not yet been digitised I have been unable to use them for this contribution.

34 Pudjiastuti and Hanstein 2016, 315.

35 In his catalogue of Javanese manuscripts in Leiden and elsewhere in the Netherlands, Pigeaud makes no mention of the title of the *Serat Panji Jaya Kusuma*. However, the name of the text is included in R. M. Ng Poerbatjaraka's comparison of a large number of Panji versions published in 1940 in Dutch and in 1968 in Indonesian translation and subsequently the name was used in catalogues of Javanese manuscripts. The *Serat Panji Jayakusuma* has been the

The *Serat Panji Jaya Kusuma* (also spelled *Jayakusuma*) is part of the enormous Panji cycle which relates the exploits and adventures of Prince Panji Inu Kertapati of the Kingdom of Koripan who is destined to marry Princess Galuh Candra Kirana of Daha, but, before the wedding can take place, the prince and the princess are separated and have many adventures before they can finally be united. Many versions exist both in Java and Bali and a wealth of manuscripts is preserved in collections all over the world. The version in Bali is called Malat, of which a large number, but virtually no complete, manuscripts exist.

Fig. 7 from the *Serat Panji Jaya Kusuma* shows a ship illustrated in a modest way, flat and devoid of details. It does not give rise to much pondering about what the ship may actually look like in reality or what kind of ship it is. It was made much as a child would have made it. Indeed, children were apparently also engaged in manuscript illustration, as evidenced by a manuscript of the *Serat Asmarasupi* in the collection of the Library of the University of Indonesia.[36] This being so, the complicated rigging of the sails is suggested and the maker probably had seen this kind of ship or pictures of it, perhaps in another Javanese manuscript, but his way of making the illustration is not quite as realistic as the others. The scene that is depicted here is when Panji has arrived at the coast of Bali and has dropped anchor. The illustration and the text are both on the same page 82. The flags on this ship are red and white, which are supposedly the colours of the Kingdom of Majapahit and nowadays the colours of the national flag of the Republic of Indonesia. The dark clouds and the waves indicate that the ship was sailing in rough weather and the fish in the sea are rolling about because of the huge waves. A similar naive way of depicting a vessel in a manuscript of the *Serat Asmarasupi*, can be found in the collection of the Indonesian National Library, which is almost exactly the same as on page 45 of a manuscript entitled *Serat Semarasupi* in the collection of the Staatsbibliothek zu Berlin.[37] For that illustration, I also have the impression that we are dealing with a simple depiction that has no pretence to represent anything realistic. The story tells that the ship on which the prince travels sails in great haste, but this does not show in the picture at all.

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subject of an article by Lydia Kieven 2021. She looks at illustrations of lovers, sailors and fighters and also ships as represented in three manuscripts. She also offers an extensive summary of the plot of the story.

36 Ms. CS.4, see Behrend and Pudjiastuti 1997, 333‾334 with pictures on pages 108, 328, 334, 341, 365 and 428.

37 *Serat Asmarasupi* ('Romance of Asmarasupi') in the Indonesian National Library, KBG 543 dated 1893 AD from Central Java, 50–51 (Behrend 1998, 224). *Serat Semarasupi*, Berlin Ms. or. oct. 4033 (Pudjiastuti and Hanstein 2016, 245–247).

The characters in this manuscript are depicted in a style that is reminiscent of *wayang* but different from the *wayang*-style in the other manuscripts. The way they are dressed and the jewellery they wear are not seen in real *wayang* puppets. In addition, compared to *wayang* puppets, their colours are very strange; the bodies of some characters are blue, purple, light green and light pink, colours not found with true *wayang* puppets. The inspiration for the illustrations was moreover taken from both the Wayang Gedhog and the Wayang Purwa and a *wayang*-style that the artist invented was added that belongs to neither. It seems that Panji and members of his party are portrayed in Wayang Gedhog style but his protagonists in the style of the Wayang Purwa, but more research is needed to see if this is true. Animals also play a role in the illustrations in this manuscript and they have sometimes been portrayed together with a *wayang*-style characters, as in Fig. 9. The way the prince has been put on the elephant strongly reminds us of the *wayang* theatre where puppets are manipulated at the same time as the animals they ride.

3 Conclusion

I have shed some light on the illustrations of only three manuscripts from the many illustrations still waiting to be explored. Studying these illustrations and becoming familiar with them leads to observations relevant to our understanding of how manuscripts were made and on the aesthetic notions of the makers of the manuscripts. A more comprehensive understanding of how manuscripts were made may have far-reaching consequences for the way future text editions will be made. Looking at non-textual parts of manuscripts is in essence an integral part of texts studies. The balance between text and illustration and, indeed, the merge between textual preciseness and illustrative freedom is a thing scholars need to come to terms with. In the manuscripts above, ships are portrayed in different ways, and what kind of vessels they show is not easy to establish. This is especially so with illustrations that contain few details of the ships, such as in the instance from the *Serat Panji Jaya Kusuma* in Fig. 7 and the *Serat Asmarasupi*. In these illustrations, the flags are unclear and the rigging and the sails are depicted in a rather clumsy way. The illustrations are naive and may have been made by an artist who was not very familiar with making illustrations that reflect reality. In the manuscript of the *Serat Selarasa*, ships are included that look much more realistic and they were made with apparent great care. The ships in the *Serat Damar Wulan* are somewhere in between, as they portray much more detail but still fail to look as realistic as those in the *Serat Selarasa*. The draw-

ings in the *wayang*-style that artists working on all three manuscripts made of the characters in the stories also differ in quality. Each *wayang*-like figure is represented in such a way that he or she is recognizable as a distinct character in the story and thus his or her social status is immediately clear. In real *wayang,* this is done by means of fixed facial colours, facial expressions, the forms of eyes, noses, hairdo and headdress and the garments they wear, and this is fixed for each individual character.

These iconographic rules are applied in the illustrations of all the three manuscripts in such a way that they are clearly recognizable with regard to their social status and character, but they are still distinct from puppets of real *wayang* characters from other stories. Interestingly, for certain characters, the Wayang Purwa and Wayang Gedhog iconographic styles were mixed probably to indicate that these *wayang*-like figures belong to neither. Mixtures of illustrations in *wayang*-style and more realistic depictions of other characters also occur in the three manuscripts. In addition, the depiction of the characters in the illustrations combines that of the *wayang*-style with added naturalistic elements. As I noted elsewhere, it is hard to make *wayang*-style figures for stories that are not used in the repertoire of the Javanese *wayang* shadow theatre. On the one hand, they have to abide by the general rules for the depiction of figures from specific social backgrounds – kings, princes, retainers – and for the depictions of their characters. On the other hand, they may not lead people to think they are looking at pictures of *wayang* figures from other stories.[38] In the *wayang*-like illustrations, animals and all kinds of props are used that are not used in the shadow play theatre and the artists were free to decide on how to portray them. This often has a comical effect and that may have been exactly what the artists wanted.

Acknowledgements

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38 See van der Meij 2019, 141–144.

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Fig. 1: *Serat Selarasa*, London, British Library, MSS Jav. 28, fol. 6ʳ. © British Library Board.

Fig. 2: *Serat Selarasa*, London, British Library, MSS Jav. 28, fol. 19ᵛ. © British Library Board.

Fig. 3: *Serat Selarasa*, London, British Library, MSS Jav. 28, fol. 123ʳ. © British Library Board.
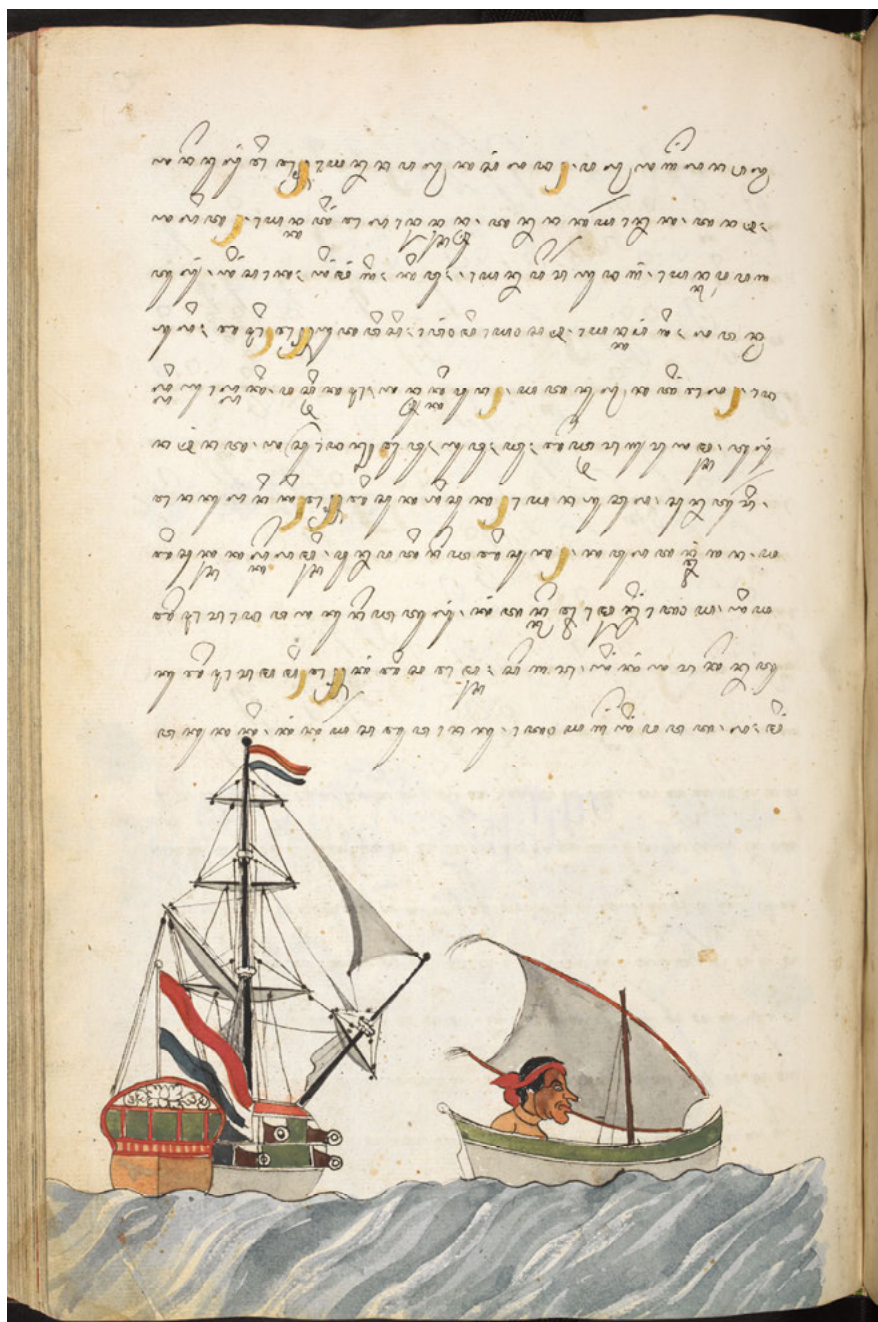
Fig. 4: *Serat Selarasa*, London, British Library, MSS Jav. 28, fol. 90ᵛ. © British Library Board.

Fig. 5: *Serat Damar Wulan*, London, British Library, MSS Jav. 89, fol. 4ʳ. © British Library Board.

Fig. 6: *Serat Damar Wulan*, London, British Library, MSS Jav. 89, fol. 205ʳ. © British Library Board.
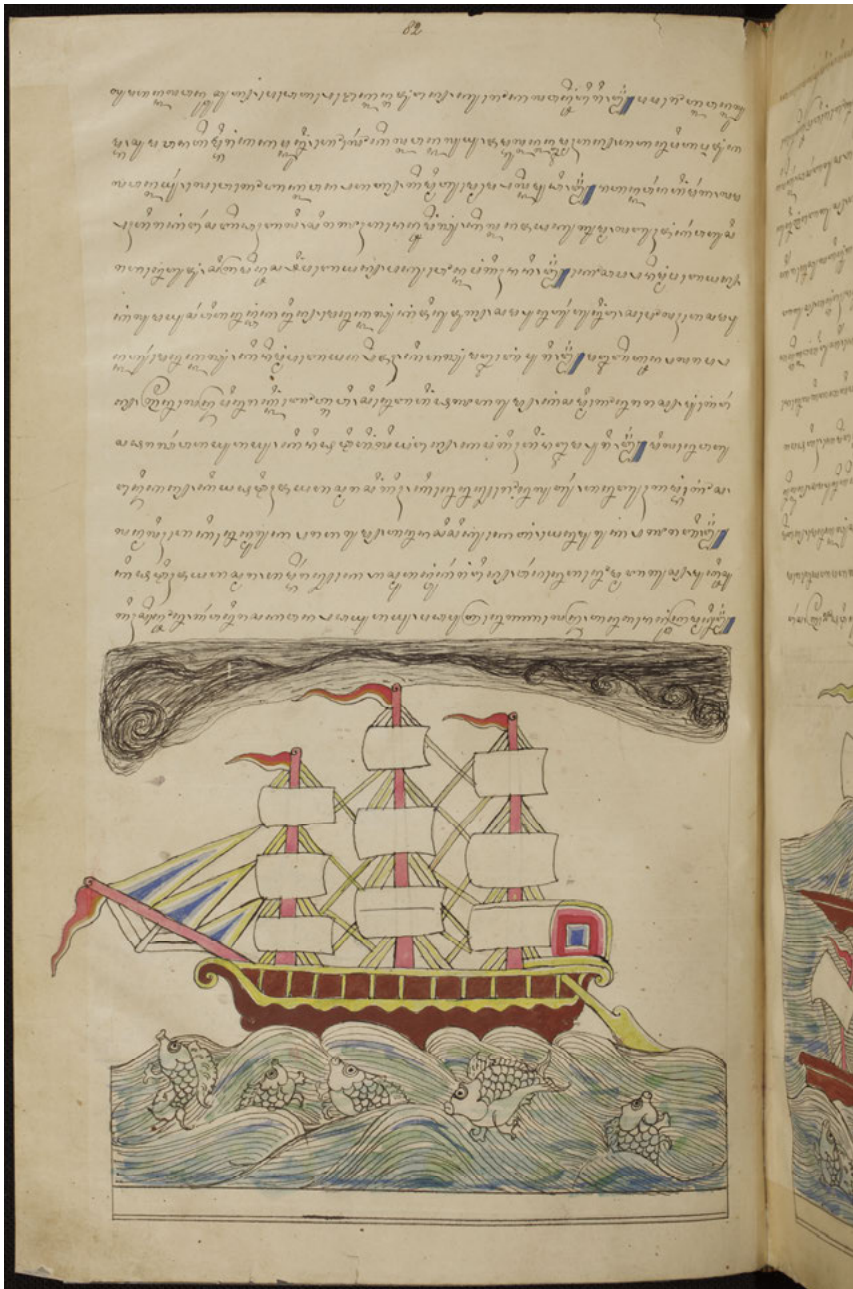
Fig. 7: *Serat Panji Jaya Kusuma*, Berlin, Stabi, Ms. or. quart. 2112, p. 82. © Staatsbibliothek zu Berlin – Preußischer Kulturbesitz.

Fig. 8: *Serat Panji Jayakusuma*, Berlin, Stabi, Ms. or. quart. 2112, p. 95. © Staatsbibliothek zu Berlin – Preußischer Kulturbesitz.
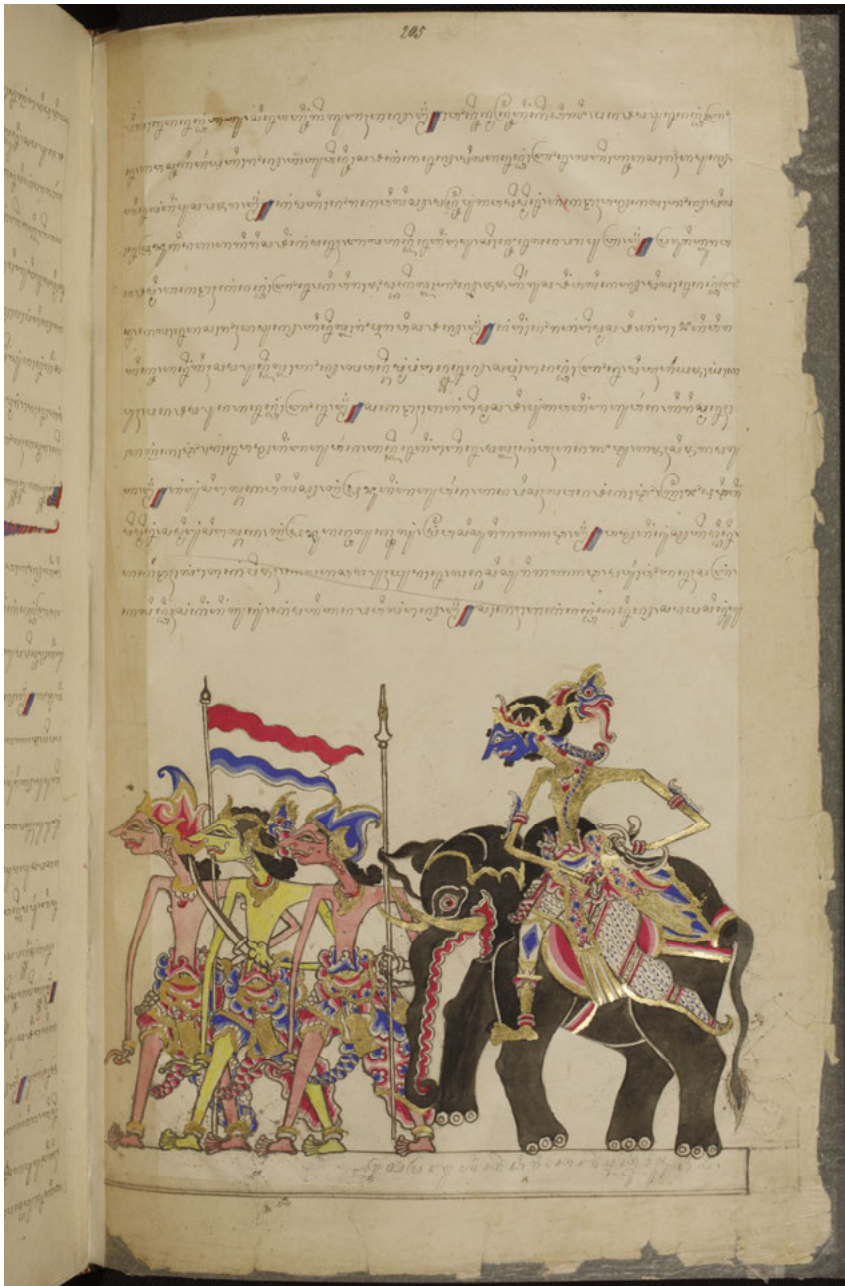
Fig. 9: *Serat Panji Jaya Kusuma*, Berlin, Stabi, Ms. or. quart. 2112, p. 205. © Staatsbibliothek zu Berlin – Preußischer Kulturbesitz.

Hanna Wimmer

Peripatetic Readers and a Dancing Maiden: Marginal Multigraphic Discourse in a Medieval Latin Multiple-Text Manuscript

Abstract: Triggered by an encounter with a drawing of a foot among the pointing hands that scholars usually take for granted in medieval manuscripts, this contribution analyses the layers of pictorial and written paracontent in a scholarly manuscript from the second half of the thirteenth century, Schlatt, Eisenbibliothek, MSS 20. In the rubricators' and illuminators' contributions, a playful discourse unfolds that reflects on contemporary concepts of reading and shapes the way that later users read the contents and left their mark on the manuscript.

1 Introduction

Manicules, drawings of hands with extended index fingers, are a familiar sight in the margins of medieval and early modern European books. Drawn by scribes or, more often, by readers, they usually serve to highlight particular passages of text and are therefore both traces of use and significant elements of a book's visual organization that guide the reader's interaction with the book and its contents. It is rare, perhaps unique, to find among the manicules in a book a little foot – a pedicule, so to say – daintily perched on the end of the last word of a line (Fig. 1). The line belongs to a paragraph that marks the conclusion of the pseudo-Aristotelian *De secretis secretorum* in a manuscript dated to the second half of the thirteenth century, Schlatt, Eisenbibliothek, MSS 20.[1] When readers turn four more leaves, they encounter a second foot, attached to a vertically-positioned line of a rubric as if to a leg. The function of the feet is revealed on reading the rubric: 'Incipit liber 5us liber [*sic*] de secretis secretorum aristotelis • et vadis ad tale signum in 4° folio superius' – 'Here begins the fifth book of

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[1] A digital reproduction of the entire manuscript is available at <https://www.e-codices.ch/de/list/one/ebs/0020> (accessed on 18 Jan. 2021). On the manuscript, see Gamper and Marti 1998 (reproduced in the description accompanying the digital reproduction); Gamper 1998; Volpera 2018; and Flüeler 2020. As the description of the manuscript in Gamper 1998, by and large, follows the more detailed description in Gamper and Marti 1998, Gamper 1998 will henceforth be cited only in cases when it diverges.

Aristotle's *De secretis secretorum*, and you go to such a sign on the fourth leaf above'. The choice of feet as cross-reference signs resonates beyond the playful pictorial pun on the rubricator's words that send the reader on a journey across the pages to find the correct place for the text. As a book-maker's mark, the pedicules are part of contemporary practices of book production while also commenting on medieval scholarly practices of book use and scholastic concepts of reading. They are elements within a network of communication between various individuals who left their mark on the leaves of this book: a team of producers who collaborated, very closely at times, and a number of users who responded to the written and drawn contents and paracontents of their manuscript.

2 The manuscript and its Aristotelian part

The sole medieval manuscript in the Eisenbibliothek's collection offers an example of both the challenges and rewards that what Peter Gumbert has termed a 'non-homogenous codex' holds in store for scholars.[2] The manuscript, comprising one hundred leaves and measuring 23.5 × 15.5 cm, has three distinctive parts. Physically separated by quire breaks, they are heterogeneous in terms of their contents, their scribes, and details in their visual organization. The first part contains a series of treatises mostly spuriously attributed to Aristotle: *De secretis secretorum*, *De planetis* (labelled as part of *De secretis secretorum*), *De pomo*, *De coloribus* and *De motu animalium* (two short, genuinely Aristotelian treatises), *Physiognomia*, *De bona fortuna*, and *De lineis indivisibilis* (the attribution of the last two to Aristotle having stood the test of time). At least two scribes are distinguishable, the change of hands coinciding with a quire boundary and the beginning of a new treatise, *Physiognomia* (fol. 25^r). These are not the texts at the heart of the scholastic university curricula.[3] They were, however, widely read in the thirteenth and fourteenth centuries, in particular *De secretis secretorum*, which claims to have been written by Aristotle for his former pupil Alexander the Great. It covers a wide range of subjects, from wise rulership and prudent behaviour in general, to astrology, diet, and hygiene,[4] some of which

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2 Gumbert 2004, 18.

3 Compare e.g. Weisheipl 1964; Grabmann 1934.

4 The *De secretis secretorum* presents itself as advice to a king, and manuscripts containing it are known to have been presented to rulers, e.g. London, British Library, Add. MS 47680, given to the young King Edward III by his advisor Walter de Milemete; see Sandler 1986, n. 85 and the

are further explored in the following treatises, especially *De planetis*, *De pomo*, and *Physiognomia*.

The second part contains two treatises by Albertus Magnus and a fragment of one by Avicenna, written by one scribe. The third part, written in its entirety by a fourth scribe, is a collection of commentaries on philosophical texts and another short Aristotelian treatise, *De inundatione Nili*.[5] The contents are invariably in the latest translation and accompanied by paracontents such as prologues that had been composed as recently as the 1250s.[6] Beyond a general interest in up-to-date scholarly publications on a rather broad range of topics, mostly from the fields of natural philosophy and ethics, however, little can be discerned that connects the contents of the three parts particularly closely. They may well have been conceived as individual or separate codicological units,[7] and, beyond the bi-columnar *mise en page* and similar dimensions of the written area, their scribes used different patterns for the visual organization of the text.[8] The parts must have been joined together not very long after they were

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digital reproduction at <http://www.bl.uk/manuscripts/FullDisplay.aspx?ref=Add_MS_47680> (accessed on 12 Jan. 2021). As demonstrated by Williams 2003, however, the treatise was known and read in much wider circles. The title of Gamper's article, 'A compendium fit for a king' ('Ein fürstliches Kompedium'; Gamper 1998) may therefore be misleading. While the use of historiated initials and gold-leaf make this an expensive manuscript, many similarly lavish Aristotle manuscripts have come to light since the time of Gamper's publication, showing that expensively illuminated manuscripts of 'the Philosopher's' works had become covetable status symbols to many well-heeled learned individuals and institutions; see Wimmer 2018.

5 Albertus Magnus, *De mineralibus* (fols 33^r–61^v); *De natura loci* (fols 62^r–79^v); Avicenna, *De anima* (prologue only, fol. 80^r); the commentaries in the third part of the manuscript are Michael Scot's on Johannes de Sacrobosco, *De Sphaera* (fols 81^r–93^v); an anonymous commentary on Boethius, *De arithmetica* (fols 94^r–99^r); and Averroes' *Compendia on Aristotle's Parva naturalia* , labelled here as Ptolemy's commentary on Aristotle's *De longitudine et brevitate vitae* (fols 99^r–100^r); Gamper and Marti 1998.

6 Gamper and Marti 1998.

7 Peter Gumbert defines this useful term as 'a discrete number of quires, worked in a single operation [...], containing a complete text or set of texts (unless it is an unfinished, defective or dependent unit)'; Gumbert 2004, 40.

8 On the differing line numbers and lining techniques, see Gamper and Marti 1998. It may be added to Gamper and Marti's observations that unlike the other scribes, the scribe of the first section left no space for the initials that mark the beginnings of chapters within the left columns, and minimal indentations, two lines high, in the right column. Accordingly, the initials were inserted outside the column, in the margin and in the intercolumnium. The latter is so narrow that the slight indentations were crucial to allow the rubricator enough space. Placing initials outside the script column, except in verse texts, appears to be more common in Northern Italian manuscripts than in those from large centres of production in Northern Europe. See e.g. London, British Library, Add. MS 18720/2 (a bible from Bologna, late thirteenth century);

written, however, as the final touches – the rubrication and the sumptuously illuminated initials adorned with gold leaf – were applied to them in a single workshop, probably in the second half of the thirteenth century.[9] Two illuminators and at least two rubricators were at work. The question of where their workshop was located is made more difficult by the fact that the two illuminators represent very different artistic traditions.[10] Most recently, it has been suggested that the manuscript was illuminated in a workshop in Genoa that may have been connected with the local Dominican monastery.[11]

The producers' differences in style highlight the ways in which they worked together to finish and visually tie together the three parts of the manuscript, to articulate the structure of their contents visually, from the treatise as a content unit down to a book chapter, and accordingly to make them easily accessible to their readers.[12] Many treatises in the Aristotelian part, as well as their various books, open with large historiated initials with images that refer to the title or contents of the text, which makes them particularly effective finding aids.[13] The other content units begin with ornamental initials painted in tempera colours or, in the case of the commentaries in the third part, in blue and red ink. While, as Federica Volpera has argued, the historiated initials were probably based on existing models, the resulting distinction of the works by scholasticism's most important philosopher over those of his later commentators and contemporary scholars is found in many other manuscripts of the time.[14]

London, British Library, Harley MS 5266 (Euclid's *Elements*, Northern Italy, early fourteenth century). Digital reproductions of both manuscripts are available at <http://www.bl.uk/manuscripts/Default.aspx> (accessed on 12 Jan. 2021). This appears to strengthen the hypothesis that the manuscript (or another of its various parts and production layers) is of Italian origin. In the same part of the manuscript (fol. 24ᵛ), a scribe's signature uses the Italian rather than the Latin spelling of 'dextera' in his signature: 'Ego frater Guifredus scripsi hoc opus. Scriptorem libri conservet gratia Christi. Auxilio cuius destera scripsit opus'; Gamper and Marti 1998.

9 Volpera 2018, esp. 44–45; Gamper and Marti 1998.

10 Gamper and Marti 1998; Volpera 2018, 44.

11 See Volpera 2018, 38, with references to previous research on manuscript production in Genoa, and Flüeler 2020.

12 On the visual organization of scholarly manuscripts since the later twelfth century and its functions, see e.g. Parkes 1976; Illich 1993; Rouse and Rouse 1982; and Wimmer 2018, esp. 33–50.

13 On the iconography of the historiated initials and their reference to the text, see Volpera 2018, 39–42.

14 On the similarities of the depictions in the initials of *De secretis secretorum* with those of other extant manuscripts containing the treatise, see Volpera 2018, 39–42. Many manuscripts that include historiated initials for Aristotelian works do not do so for all his treatises, and texts by more recent or even living authors are significantly less frequently afforded this distinction.

It is difficult to reconstruct the exact order in which the two illuminators and rubricators worked. Evidently, however, the work was not simply shared as it was between the scribes, each working on a separate section or quire. The first illuminator, who painted the historiated initials, has a repertoire of motifs familiar from Northern European manuscript painting, with its characteristic leaf-tailed dragons in the border extensions. The second was trained in an Italian style.[15] Volpera has pointed out that not only did the two illuminators occasionally draw on each other's repertoire of motifs, suggesting that they were working in the same workshop at the same time, but that in some cases, both contributed to the same initials.[16] In these instances, the second illuminator added ornamental extensions or elaborate border bars to historiated initials previously painted by the first illuminator. Given the manuscript's probable Italian place of production, the addition of the Italian-style elements to the initials may have been a nod to the unknown commissioner's tastes. There is, however, another possibility. The additional marginal extensions of the historiated initials may not have been randomly added to some initials and not others: rather, they appear to systematically introduce a visual difference among the initials painted by the 'French'-style illuminator. They distinguish the beginnings of treatises from those of books, the latter being left without or with only the minimal border extensions provided by the first illuminator. While this may conceivably have been a collaboration planned from the start, it seems more likely that it represents a process of tweaking and revising the visual organization of the manuscript.

The rubrics also play an important role in the organizational scheme of the manuscript. Like the illuminators' work, the two rubricators' contributions are not separated by text or quire boundaries but are found across the Aristotelian part (and beyond), and sometimes on the same page. The first rubricator executed almost the entire rubrication of the manuscript, perhaps including the numerous red and blue pen-flourished initials and simple paragraph signs that indicate chapter beginnings and other caesurae in many of the texts. His rubrics are written in a neat gothic book hand, in carefully spaced, regular lines. The second rubricator payed much less attention to the aesthetic quality of his

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See Wimmer 2018a, App. II, 349–366, for an overview of the distribution of historiated and illuminated initials in seventeen manuscripts containing Aristotelian works on natural philosophy from the latter half of the thirteenth and early fourteenth century.

15 Gamper and Marti 1998.

16 Volpera 2018, 45.

writing, which has a less formal appearance and is smudged in some places.[17] While the first rubricator carefully erased pen-flourishes of a neighbouring initial to make space for his incipit note (fol. 2ʳ), the second rubricator frequently wrote across the pen flourishing of chapter initials and, once, his writing overlaps the black outline of a historiated initial (fol. 14ᵛ; Fig. 1).[18] The rubrics written by the second rubricator must therefore have been added at a very late point in the production process, either at the very end or while the other producers were still working on other quires.

It appears that the second rubricator's work was more specialized than his collaborator's. In the entire manuscript, his hand is only found in the rubrics of Aristotelian or pseudo-Aristotelian treatises in the first part of the manuscript and Aristotle's *De inundatione Nili* at the very end of the third.[19] In particular, it is the subsections, books and chapters, where most of his contributions are found. These seem to have caused the first rubricator some difficulties. Problems started on the first pages of *De secretis secretorum*, where there was confusion about the prologues to the treatise. The scribe left blanks for large initials at the very beginning, i.e., the beginning of the translator's, Philipp of Tripoli's, prologue (fol. 1r), and again at the beginning of the prologue purportedly by Aristotle (fol. 1v). On some pages, the instructions that the scribes of the Aristotelian section left for the rubricators are still visible along the lower edges, but no traces of such instructions remain here. The rubricator correctly identified Philipp's prologue in the rubric next to the historiated initial (albeit labelling it as a prologue by bishop Guido of Valencia, who is mentioned in the preface as the commissioner of the translation). He then marked the second section, introduced by a red pen-flourished initial, as 'alter prologus' ('another prologue'). He had to write in the margins as the scribe had evidently not envisaged a rubric here, and therefore left no space for it in the column. A lengthy rubric at the beginning of the preface supposedly by Aristotle was deleted and replaced by

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17 See, for instance, his entry 'capitulum 13um' on fol. 3ᵛ, where the first letter appears smudged and an incorrect chapter number was struck through before adding the correct one. See also the rubric on fol. 17ᵛ (Fig. 2 below).

18 Instances of the second rubricator's writing overlapping pen-flourished initials are numerous; see e.g. fols 4ᵛ, 8ʳ, 8ᵛ. The rubric introducing what is labelled tentatively as Book VI of the *De secretis secretorum* on fol. 14ᵛ visibly overlaps the historiated initial.

19 Gamper and Marti 1998 interpret this as a sign that the first part of the manuscript was rubricated and illuminated last, inferring from the evidence that the second rubricator started his work only when the second and most of the third part had already been rubricated. Volpera 2018, 49, n. 7, rightly cautions that given the evidently complex ways in which the illuminators and rubricators collaborated on the Eisenbibliothek manuscript, this argument may not hold.

the single word 'prologus' (fol. 1ᵛ). The following rubric, which correctly identifies the beginning of Book I of *De secretis secretorum* (fol. 2ʳ), is the last one that the first rubricator added in the treatise. He only took over again for the marking of the prologue and the beginning of *De pomo*. Picking up where the first rubricator left off, the second added chapter numbers in Arabic numerals. Wherever he could, he inserted these in the remaining space of the line that preceded the new chapter, which always starts with a pen-flourished initial in a new paragraph. If this was not possible, he added them in the margins. In the blank spaces next to the initials at the beginning of the individual books, he noted down the end of the previous and the beginning of the next. Here, too, he encountered irregularities, as expressed in the rubric on fol. 14ᵛ (Fig. 1): 'Explicit 5us liber de secretis aristotelis. Incipit 6us liber de secretis aristotilis secundum quosdam quod non credo' – 'Here ends the fifth book of Aristotle's *De secretis [secretorum]*. Here begins the sixth book of Aristotle's *De secretis [secretorum]* according to some, which I do not believe'. No traces of instructions remain in the bas de page. It appears, however, that the scribe (or the one of the manuscript that he consulted) did not believe it, either: the paragraph at the end of Book IV declares the treatise 'completus'. The rubric furthermore, if only implicitly, signals that there is content missing here: Book V does not end here as it is missing.[20] When the second rubricator wrote the rubric, he probably already knew that the book appeared later on in the manuscript, and that he would redirect the reader accordingly.

At the end of the second treatise, *De pomo*, two substantial sections of text that had been omitted from *De pomo* and *De secretis secretorum*, respectively, were inserted (fol. 17ᵛ; Fig. 2). Both rubricators were involved in the task of labelling and assigning them their proper positions. The first amendment on the page is a prologue to *De pomo*. The first rubricator, who had written the rubrics for this treatise, substantially elaborated on the scribe's short note in the *bas de page*, 'Prologus super librum de pomo', extending his rubric outside the allocated space into the *intercolumnium*:[21]

> Incipit quidam prologus super librum aristotelis de pomo et pones istum prologum ad tertium folium retro ubi incipit alter prologus super librum aristotelis de pomo qui sic incipit • cum clausa esset via ad tale signum.

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20 Gamper and Marti 1998 erroneously read the note as the incipit to Book V.
21 The left edge of the page with beginning of the note has been cropped away, leaving '[...]gus super librum de pomo'.

> Here begins a certain prologue to Aristotle's *Liber de pomo*; and you place this prologue on the third leaf above where another prologue on Aristotle's *Liber de pomo* begins, which begins thus: 'Cum clausa esse via', at such a sign.

The manicule that he chose as the cross-reference sign was initially begun next to the space left for the rubric in the script column, where a red line delineates an index finger and thumb. A finished version is placed at the very end of the rubric, immediately after the word 'signum'. The instructions to the reader are precise and accurate, using not one, but three means of codex-navigation: counting three leaves backwards, on fol. 15^v, ones finds a second red manicule in the left margin, next to a pen-flourished initial that marks a section of text beginning with 'Cum clausa esse via'. The second amendment on fol. 17^v is Book V of *De secretis secretorum*. It is introduced by the rubric with the pedicule, quoted in full above. Written by the second rubricator. it also expands on a brief note left by the scribe in the *bas de page*, 'liber 5us': '[...] and you go to such a sign on the fourth leaf above'. Again, the reader is provided with precise instructions about where to find the correct place for the text, which should have started on fol. 14^v. The sign of the foot, in picking up the metaphor of going or walking ('vadis'), playfully refers to the wording of the rubric, to its own function as a cross-reference sign, as well as to the little hand further up on the same page. It is very likely that another workshop member got involved here. Unlike the red manicule, the feet are not drawn in the rubricator's ink, but in brown ink. Furthermore, the neatly and precisely delineated shape of the feet contrasts with the casual writing. The red paragraph mark opposite the little foot on fol. 14^v (Fig. 1) with its slightly irregular outline is more in keeping with the style of the second rubricator's handwriting; perhaps this was his first version of a reference sign.

3 Hands: Manicules and the embodied reader

Despite being such a familiar sight, the manicule has only relatively recently received some well-deserved scholarly attention.[22] The pointing hand, often attached to a wrist, an arm, and occasionally to an entire body, is rich in rhetorical and iconographic references, ranging from an indicating gesture to the rhetor's raised finger that stresses a point, to the allusion of the teacher's spoken word and not least to the reader's own page-turning, line-tracing, and

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[22] Sherman 2008, Chapter 2: 'Towards a History of the Manicule'.

penwielding hand.[23] It is also perhaps unique, as Bill Sherman has proposed, in fitting all three of Peirce's categories for signs: 'it is at once icon, index, and symbol'.[24] In a stylized form, it was relatively easy and quick to draw, while also inviting variation and individualisation.[25]

As the depiction of a body part involved in the manipulation of the book, the manicule alludes to the fact that in the Middle Ages, reading was thought of as an activity that was both physical and intellectual involving, in the terminology of medieval scholarship, both the outer and the inner senses.[26] The monastic contemplative reading practice, the *lectio divina*, demanded the repetitive reading-out-loud of the sacred texts to commit their words to memory, a process referred to as *ruminatio*.[27] To what extent the physical engagement with the book and its contents was transcended in the process of reading was thought to depend on degrees of erudition, discipline, and spiritual yearning, as well as on gender.[28] It is perhaps not surprising that in some medieval European manuscripts, marginal manicules are joined by eyes, adding a reference to the gaze: heads, sometimes human, sometimes animal or fantastical, turn wide-eyed towards the text.[29] The hands and eyes appear to be pictorial equivalents of the numerous marginal written notes that instruct readers to 'nota (bene)', 'take note!', a term which refers both to making a physical mark and to mentally retaining something, and 'ecce', 'look!'.[30] The drawings are, however, visually

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23 Sherman 2008, 24–52. As Sherman puts it, manicules 'have an uncanny ability to conjure up the bodies of dead writers and readers'; Sherman 2008, 29. For a short introduction to the role of the hand as an instrument of communication from a cultural-historical perspective, see e.g. Pompe 2003, with further bibliographical references.

24 Sherman 2008, 51.

25 Sherman 2008, 36, points out that some early modern readers' manicules are as distinctive as their signatures. In some medieval manuscripts, meanwhile, the apparent aim was variation in the repertoire of manicules. This may well have been the result of individual preference, but also perhaps helped readers to more easily distinguish between the various passages they highlighted.

26 Sherman 2008, 47–49. On medieval reading practices, see e.g. Illich 1993 and Saenger 1982.

27 See Illich 1993, 54–55; Carruthers 2005, 165–170, 219–220.

28 On medieval notions about men's and women's reading, see e.g. Solterer 1994.

29 A rich variety of 'pointers' and 'gazers' is found, for instance, in a fourteenth-century manuscript of English origin containing *La lumere as lais*, New York, Pierpont Morgan Library, MS M. 761; see Sandler 2012. Another English manuscript, containing mostly Aristotelian treatises on logic and dated to the early fourteenth century, London, British Library, Royal MS 12.D.II, has numerous marginal drawings, among them many pointing hands and exaggerated gazes.

30 In London, British Library, Royal MS 12.D.II, the googly-eyed monsters and wide-eyed human figures in the margins are often accompanied by a marginal note beginning with 'ecce'.

more striking than written words.[31] Their pictorial quality immediately draws the reader's eye to the place where the noteworthy passages are. Like the 'nota bene' and 'ecce' notes, however, they differ in their function from those marginal annotations – usually written, but sometimes also pictorial[32] – that sum up or comment on the content of a passage. Their function is purely to indicate, not to communicate content themselves. This function makes them a distinct category within the marginal paracontent of a manuscript, and this is, in turn, important for their effective functioning: a reader seeing a manicule in the margin will hardly expect to find a discussion on hands.

The red manicule in the Eisenbibliothek manuscript is not a reader's but a maker's mark, not only because it is drawn in the rubricator's red ink but also because its function is not to emphasise, or make easily retrievable, a section of the content (Fig. 2). Instead, it serves to highlight an editorial change, a correction, and helps the reader understand where the addition should be inserted. Using reference signs to precisely anchor corrections was a well-established practice in thirteenth-century Europe. Manicules are not, however, among the repertoire of symbols that are normally used in this context. Rather, correctors used combinations of simple geometric shapes, letters, and punctuation signs that could easily be varied.[33] Perhaps the rubricator of the Eisenbibliothek manuscript felt that a major correction merited a more sizeable and visually striking reference sign and chose a shape familiar to him; perhaps his eye fell on the correction in the first line of the column, where a corrector had amended the word 'manus', 'hand'. Be this as it may, in its current context, the rubricator's manicule changes (or rather expands) its conventional meaning somewhat. While its counterpart three leaves above indicates the precise point where the additional prologue should have been, the hand that is part of the rubric can also be understood as a reference to the rubric's appeal to the reader's active contribution to setting the jumbled order of the texts to right. The reader's adjusting the order of the text as he reads is thus likened to a manual reshaping of

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31 Marginal 'nota' often form more or less elaborate and ornamental ligatures that are instantly recognisable word-images. Arranged in a way that connects the letters to the much elongated stem of the 't', these nota ligatures also lend themselves to being used as a kind of visual bracket to indicate the length of the highlighted passage (e.g. on fol. 7ᵛ of the Eisenbibliothek manuscript).

32 On 'scribal drawings', see Sandler 2012, with further bibliographic references. For pictorial glosses in manuscripts containing legal texts, see also Fronska 2019; for instances of pictorial glosses in Aristotle manuscripts, see Wimmer 2018a, 134–136 and Figs. 66–68, and 150–151 and Fig. 75.

33 See e .g. an insertion in the margin of fol. 2ʳ in the Eisenbibliothek manuscript.

the manuscript by reordering its building blocks. In an English book of hours from around 1300, this metaphor is given a striking visual form.[34] In the manuscript, entire verses that were initially omitted were added above or below the written area. Little painted 'correction workers' in the margins drag the verses in place.[35] On one page a painted male figure is holding on to a long penwork tendril as if it were a rope with one hand, the long index finger of the other hand pointing at the place where the verse should be inserted (Fig. 3). A second man, seemingly emerging from an initial, is extending his hands, ready to receive the tendril from the first. Here, the first labourer's gestures combine the two actions that the manicules in the Eisenbibliothek manuscript perform and ask the reader to perform, respectively: *indicating* the correct position where a section of text should be *placed*, so as to allow the reader to re-order the elements in his reading process.

4 Feet: Pedicules and the mobile reader

Unlike the reader of the book of hours, the reader of the Eisenbibliothek codex cannot implement the corrections at a glance but has to turn several leaves in order to do so. The rubric of the second major insertion, accordingly, sends the reader on a journey, and the sign chosen to mark the beginning and end of this journey reinforces the prominence of this metaphor.

While feet, unlike hands, are exceedingly rarely used as reader's (or scribe's) marks, the metaphor of the reader's interaction with the book and its contents' being a journey was well-known in the Middle Ages. It is only relatively recently, however, that scholarship has explored the extent to which the codex as a material object lent itself to reinforcing the experience of reading as a perambulation of what is not just a metaphorical literary space but quite concretely a spatially organized material object. As Bruno Reudenbach has shown, the codex with its sequence of two-page openings, in contrast to the scroll, has a strong spatial dimension.[36] The notion of the codex as an articulated space through which the reader moves while progressing through its contents is one

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34 On the manuscript, see <https://www.thedigitalwalters.org/Data/WaltersManuscripts/html/W102/description.html> (accessed on 12 Jan. 2021), including a digital reproduction of the manuscript.

35 On the medieval 'correction workers' in this manuscript, see e.g. Camille 2010, 24, with a reproduction of the second instance of this motif in the manuscript.

36 Reudenbach 2009, 60–61.

that shaped readers' experiences, and the visual organization of codices, throughout the Middle Ages.[37]

In the Getty Apocalypse, made in England in the 1260s, the figure of John, the witness to and narrator of divine revelation, appears on every page (Fig. 4).[38] At times within the frame of the miniature as part of the events, but often outside the frame in the margin as an eager and engaged onlooker, he acts as an intermediary and model for the reader-viewer.[39] In many of the images, he is holding a walking stick that identifies him as a traveller. His experiences that culminate in his vision of the New Jerusalem, and by analogy the reader's experience, are thus characterized as a spiritual pilgrimage.[40] This journey on which John guides the reader is very much presented as a journey that unfolds, page by page, through the codex.

The pedicules in the margins of the Eisenbibliothek manuscript allude to the codex as a space, but unlike in the Getty Apocalypse, the activity of walking is not likened to the process of *reading*. Instead, it refers to the *finding* of a specific section of text, in a specific place in the codex, to which the reader is guided with precise instructions and signposts. This kind of walk in search of a particular place appears to have more in common with medieval (and ultimately antique) conceptions of memory and its retrieval, in particular in the trained memory of a scholar (or rhetor). The efficient retrieval of something previously memorized was 'fantasized as a bodily rush to the appropriate part of one's mental architecture' where it had been deliberately placed and carefully labelled.[41] At a time when the space of the book was expected to be sufficiently clearly organized to allow easy access to its various contents, this metaphor of walking-to-retrieve could be transferred to the physical manipulation of the book as much as to the navigation of its contents.

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37 See e.g. Tumanov 2015 on later medieval devotional reading practices. On the spatial qualities of the double-page opening, see Hamburger 2009; Schneider 2000, 2009; Wimmer 2018b.
38 On the Getty Apocalypse, Los Angeles, J. Paul Getty Museum, MS Ludwig III 1 (83.MC.72), see e.g. Morgan 1988, 98–100, no. 124; Lewis 1992. A digital reproduction of the manuscript is available at <https://www.getty.edu/art/collection/objects/1360/unknown-commentary-by-berengaudus-getty-apocalypse-english-about-1255-1260/> (accessed on 18 Jan. 2020).
39 Lewis 1992, 56–61.
40 See Lewis 1992, 59.
41 Illich 1993, 42. On the medieval art of memory and the important role that spatial structure and organization play in it, see also Carruthers 2005, esp. 43–44, 221, 242–246.

5 A dancing girl and a poison-maiden: Makers' marks and readers' reactions

The witty invention of the foot as an editorial sign may have had yet another reference within the manuscript. A few leaves further along, another pair of feet is treading the margins. It belongs to the tinted drawing of a nude female dancer on the first page of *Physiognomia* (fol. 25ʳ; Fig. 5).[42] She cuts a striking figure, all the more so for being the only pictorial element, besides the line-drawings of the manicules and pedicules, that is not an integral part of a historiated initial or an initial's border extension. Much admired for its naturalism and the dynamic depiction of the dancer's movements, the drawing has lately been convincingly attributed to the first illuminator, who painted the more conventional and schematic figures in the historiated initials.[43] The dancer may therefore already have been in place when the pedicules were drawn.

Attempts at directly relating the dancer to the contents of the treatise that she accompanies have remained very tentative; rather, she is likely not a commentary on or illustration of the text but relates to the figure of a nude man in the historiated initial.[44] In doing so, she, can be considered meta-commentary: she playfully exemplifies the relationship between marginal paracontent and content, not by meaningfully engaging with that content but by drawing attention to how this relationship is given visible form on the page. At the same time, however, her sheer size, her movement and the erotic meaning that dancing, let alone nude female dancers, carry in medieval iconography, easily overshadow the formulaic representation of the man, tiny by comparison, in the initial. In this ostentatious subversion that ultimately does not disrupt but rather emphasizes the order of the page, the dancer plays a role that has been observed for pictorial marginalia in many manuscripts of the time.[45]

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42 For a more detailed discussion of the drawing, see Volpera 2018, 46; Gamper and Marti 1998.

43 Volpera 2018, 46.

44 Gamper and Marti 2018; Volpera 2018, 46–47, agrees with Gamper and Marti's view that the drawing of the female dancer directly refers to the nude man in the initial but suggests that the woman, with her thick tresses, may allude to widely-held views that women's strong hairgrowth was a symptom of their predominantly wet and cold temperament.

45 For instance, Illich emphasizes the disruptive effect of the 'circus of fantasy creatures, often a jungle which threatens to invade and overpower the alphabetic component of the page'; Illich 1993, 110. Michael Camille, in his seminal book on marginal imagery, on the other hand,

While there is little to find in the contents of *Physiognomia* that could constitute a plausible point of reference for the illuminator's striking choice, seductive women were linked to Aristotle by legend and spuriously attributed works. The story of his falling prey to the advances of Alexander the Great's lover, Phyllis, as an *exemplum* of men's folly in the face of beautiful women was well-known and occasionally depicted at the time.[46] Book I of *De secretis secretorum* is the source of another tale about the dangers of women. It contains a chapter, numbered 22 in the Eisenbibliothek manuscript, in which Aristotle warns Alexander not under any circumstances to trust women. He refers to an event in which only his own wisdom and circumspection saved Alexander from an assassination plot by the queen of India involving a 'poison-maiden', a young woman who had been fed venom until her very gaze had become deadly.[47]

Whether originally intended or not, the drawing became a source of inspiration not only for the pedicules but also for a pronounced interest of later users in the topic of women in the Aristotelian part of the manuscript. The dancer scandalized at least one reader. The most offending part of her anatomy was erased, and below her feet, a passage was added in the fourteenth century that describes woman as, *inter alia*, 'man's confusion' and an 'insatiable beast'.[48] It is a variation of a well-known and often-expanded excerpt from another philosopher's, Secundus the Silent's, advice to an emperor. The quote from the *Vita Secundi philosophi* could be used to express both a degree of learning and to reiterate the misogynism that *De secretis secretorum* expresses elsewhere in the manuscript.[49] In the Eisenbibliothek manuscript, further marginal annotations

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has emphasized the ultimately stabilizing, affirmative effect of such transgressions; Camille 2010.

46 A roughly contemporary depiction of the scene in a manuscript of Brunetto Latini's *Livre dou tresor* is found in Carpentras, Bibl. Inguimbertine, MS 269, fol. 108[r]. See Roux 2009, 282, Fig. 27 and Pl. IV; Wimmer 2020, 279–281. For further depictions of Aristotle and Phyllis from the thirteenth and fourteenth centuries, see e. g. Herrmann 1991, and for examples of pictorial marginalia, see Randall 1966, Figs 554–557.

47 According to the critical edition, the passage is in Book I, 21; Steele 1920, 60. On the story of the 'poison-maiden', which does appear to have its origins in India, see Hertz 1905.

48 Gamper and Marti 1998 date the writing to the fourteenth century.

49 'Quid est mulier. Hominis confusio, insatiabilis bestia, continua solicitudo, indeficiens pugna, damnum cottidianum, domus tempestatis, solacii impedimentum'. Gamper and Marti 1998 read 'insanabilis bestia', but 'insatiabilis', favoured also by Volpera 2018, 48, who first identified the annotation as a quotation, seems the more likely transcription. It is also more commonly found in other manuscripts; see Brown 1920, 480, who first pointed out that '[t]he "Mulier" passage is frequently found detached from its context as a bit of monastic wisdom' in manuscripts. This is not to say, however, that the presence of the phrase is an indication of a

in this treatise indicate another reader's particular interest in women's abilities, not least the dangerous ones. Scattered among numerous nota ligatures and two manicules, only a few notes, some ten in total, mention content matter. Some topics seem to have been of particular interest, being mentioned twice: the effects of wine, positive and adverse (fol. 7$^\text{v}$); vomiting (fols 6$^\text{v}$, 7$^\text{v}$); and young women. The first of these two notes on 'puelle' highlights a passage that reports that learning used to be so widespread in Greek society that even a girl could occasionally be highly educated (fol. 4$^\text{r}$).[50] The second note marks the story of the 'poison-maiden' ('exemplum puelle venenose', fol. 4$^\text{v}$). Thus, the marginal dancer becomes part of a marginal discourse spanning parts of the Aristotelian section of the manuscript.

6 Conclusion

In conclusion, the Eisenbibliothek manuscript is non-homogenous not only at a macro-level, consisting of three codicological units that were, to some degree, unified by being rubricated and illuminated in the same workshop. Rather, a closer look at the contributions of the craftsmen at the workshop reveals that even this unifying production layer consists of micro-layers that show a remarkable degree of interaction, corrections, and additions. Some of these contributions and interventions build a verbal and pictorial marginal discourse on the production and the use of books, a discourse that is gradually extended and reinterpreted by the users of the manuscript as they build new connections and cross-references between the book's contents and paracontents.

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monastic context here, all the more so as the instances of antonomasia enumerated here do not include those in Brown's transcriptions that explicitly refer to dangers to men's chastity, such as 'castitatis impedimentum' or 'incontinentis viri naufragium'.

50 Book I,21 in this manuscript but Book I,22 in the critical edition; Steele 1920, 58–59.

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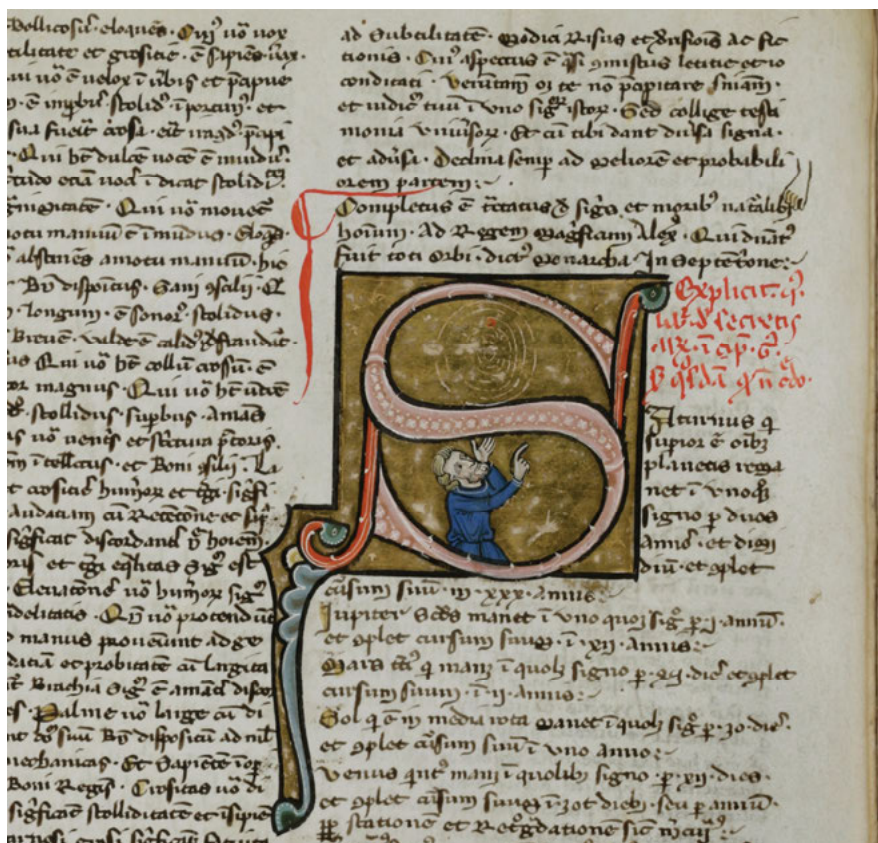
Fig. 1: A foot in the margin of the pseudo-Aristotelian *De secretis secretorum*. Italy (Genoa?), second half of the thirteenth century. Schlatt, Eisenbibliothek, MSS 20, fol. 14ᵛ (<www.e-codices.ch>).

Fig. 2: A manicule and a pedicule helping to allocate substantial *corrigenda* to the pseudo-Aristotelian *De secretis* and *De pomo*. Schlatt, Eisenbibliothek, MSS 20, fol. 17ᵛ (<www.e-codices.ch>).
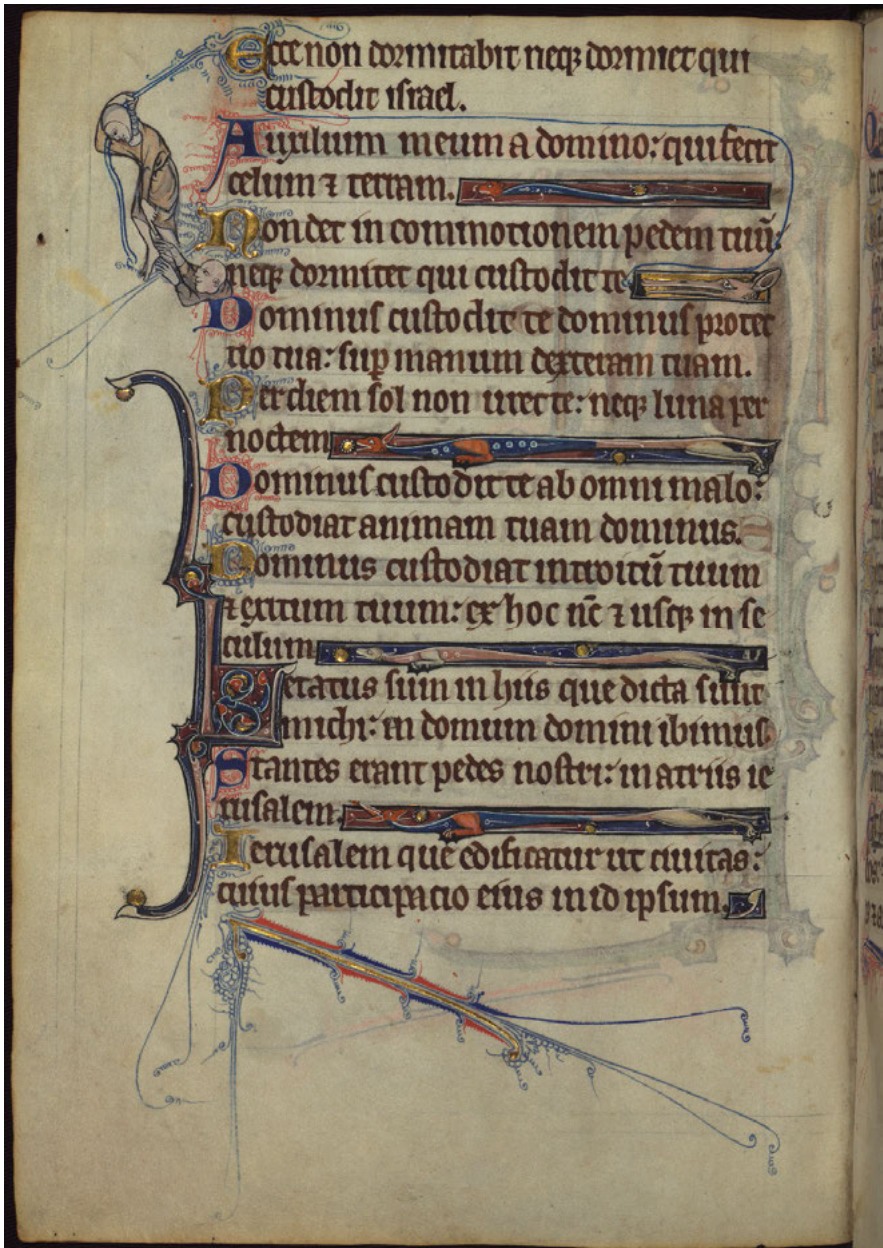
Fig. 3: Marginal labourers in a book of hours. England, *c*. 1300. Baltimore, Walters Art Museum, Walters MS W.102, fol. 39ᵛ. © The Walters Art Museum.
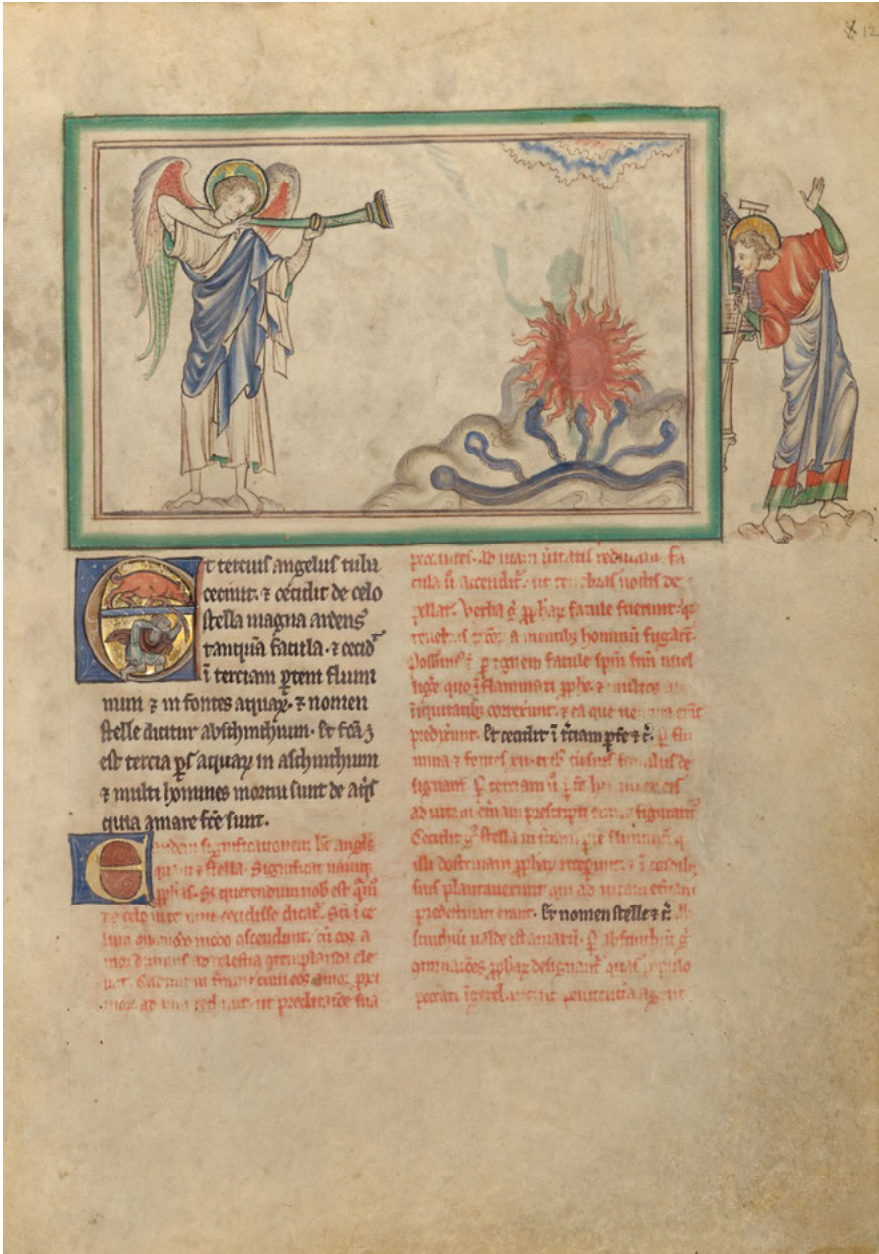
Fig. 4: St John, walking stick in hand, witnessing the blowing of the Third Trumpet. Getty Apocalypse, England, *c.* 1255–1260. Los Angeles, The J. Paul Getty Museum, MS Ludwig III 1, fol. 12ʳ. Digital image courtesy of the Getty's Open Content Program.

Fig. 5: A nude dancer in the margins of the ps.-Aristotelian *Physiognomia*. Schlatt, Eisenbibliothek, MSS 20, fol. 25ʳ (<www.e-codices.ch>).

William G. Boltz

Textual Criticism and Early Chinese Manuscripts

Abstract: Because of the differing kinds of writing systems used, differences in the history of printing and different traditions of identifying individual texts with individual authors, the assumptions and methods of textual criticism when approaching early Chinese texts will be different from those aspects of textual criticism as they are conventionally understood in regard to classical western and early Near Eastern texts. In particular the nature of the Chinese writing system, fundamentally logographic (or morphographic), makes the distinction between graphic variation and lexical variation in a given instance considerably less obvious than typically is the case with texts written in alphabets, abugidas or abjads. Beyond this, recognizing authorial identification of a given early text as a proprietary matter is much less a central feature of the history of a given text in China than it is in the western tradition. For these reasons among others, textual criticism as a scholarly approach to early Chinese texts will necessarily take a form markedly different from its practice in the western scholarly tradition.

The twentieth-century Oxford scholars L. D. Reynolds and N. G. Wilson, after a two-hundred page survey of the history of classical literature in the west from its origins in antiquity to its mature philological study at the end of the eighteenth century, introduce in the sixth and final chapter of their well-known book *Scribes and Scholars, A Guide to the Transmission of Greek and Latin Literature* the subject of textual criticism, by saying

> The foregoing chapters have attempted to give some idea of the ways in which the Greek and Latin classics were handed down through the Middle Ages to the modern world, and to outline some of the more important historical and cultural phenomena which affected the transmission of these texts. *The business of textual criticism is in a sense to reverse this process, to follow back the threads of transmission and try to restore the texts as closely as possible to the form which they originally had.*[1]

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1 Reynolds and Wilson 1991, 207 (italics added).

Though they do not give an explicit or precise definition of textual criticism, their description all the same identifies the central focus of textual criticism as a process for, ideally, restoring the original form of transmitted texts from the evidence of their extant descendants. As a practical matter, the goal is to come as close to the original as possible, while recognizing that sometimes the exact wording or form of the original text might not be recoverable.

The subject of textual criticism understood specifically as a means to recover the authentic, original form of early texts emerged from the tradition of European humanist philology of the fifteenth through seventeenth centuries, what Anthony Grafton calls the 'tradition of scholarship' in the 'age of science'.[2] The expressed goal was to identify and eliminate textual errors and corruption so as to restore a literary text to a form as close to its original as possible. E. J. Kenney, writing in the fifteenth edition of the *Encyclopaedia Britannica*, says '[t]extual criticism is the technique of restoring texts as nearly as possible to their original form'.[3] The eminent Cambridge Latinist of the early twentieth-century, A. E. Housman, in a now classic paper put it more forcefully, saying that '[t]extual criticism is a science, and, since it comprises recension and emendation it is also an art. It is the science of discovering error in a text and the art of removing it'.[4]

In all of these descriptions, textual criticism is said explicitly to consist in a concern with errors in texts and the means for correcting them, the goal being to come as close to the original form of the text as possible. While this may be in some sense the primary goal, it is not the only possible goal. Textual critics recognize, among other aspects of the history of a text, the importance of analyzing a text diachronically according to its transmission or reception history, identifying and understanding the impact of change in texts over time. Whether that approach is taken in order to undo the changes, in the hope of restoring the original form, or to examine how the changes came about and what they mean for the interpretation of the text at particular moments in the course of its transmission history, or with still some other goal in mind depends on the preferences of the textual critic and the nature of the study in question.[5]

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2 Grafton 1991.
3 Kenney 1974b (online edition).
4 Housman 1922; D. C. Greetham has suggested that '[...] today most practicing textual critics would probably insist that art and science are equally mixed in both parts of Housman's equation'. See Greetham 1994, 346.
5 Walsh 2013.

The presumption is that any literary text **T** starts out life in a form we can call **ω**, its original form, the form that it had when it was first written, and that this original form suffers changes in the course of its transmission over time. Changes can be of any kind, e.g., additions, losses, alterations, substitutions; of any size or extent, from single letters to whole passages. They can be the consequence of a wide range of misunderstandings, visual, verbal, aural or interpretive; and they can be inadvertent or intentional. The result of any change is a *textual variant*, that is, a form of the text that differs or *varies* from its predecessor at this one point. Irrespective of the kind of change or its effect on **ω**, western textual critics have generally recognized all changes that impinge on a text in the course of its transmission as *errors*; they are errors in that they do not correctly or accurately reflect the exact wording of the original text, and therefore they are 'wrong'. The cumulative effect of these errors is seen generally as a kind of *corruption* of the original. It is these errors, this corruption, that the scholar through the science and art of textual criticism is expected to identify and remedy. While grounded as solidly in empirical data and objective facts as possible, still the entire enterprise is heavily judgmental and has the aura of a subjective attempt to make 'right' what is perceived as 'wrong'. In the west, the first recognition of the fact that texts inevitably become altered in the course of being copied and transmitted probably can be credited to scholars of the Alexandrian Library (third–second centuries BCE) and their work to bring order to thousands of Greek manuscripts, in particular to Homeric manuscripts.[6]

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6 Classic studies of the earliest known descriptions of what has come to be called 'textual criticism' include Sandys 1903–1908, 105–166, esp. 132–136 on Aristarchus and the Homeric texts, and Pfeiffer 1968, 210–233, esp. 215–216 on the Homeric texts. F. A. Wolf in his *Prolegomena to Homer* (1795) states explicitly his view that the text critical study of Homer 'began with the Alexandrian critics'. (See the English translation, Grafton et al. 1985, 111). In the 'Introduction' to his English translation of Sebastiano Timpanaro's *La genesi del metodo del Lachmann*, Glenn Most draws attention to the important difference between histories of classical studies such as Sandys 1903–1908 and Pfeiffer 1968, which are generally diachronic presentations on the one hand and manuals of textual criticism, which tend to be systematic, synchronic and 'cool and reasoned in tone' on the other. Timpanaro 2005, 15. It is sometime said that Cicero and other later authors (all of whose accounts seem traceable back to Cicero) claim that Peisistratus, the sixth-century BCE so-called 'tyrant of Athens', ordered the 'editing' of the manuscripts of the *Iliad* and the *Odyssey*, and that what we have now of those texts is the result of a kind of very early textual criticism. This claim, when taken at face value, is no longer given much likelihood of being correct. See Davison 1955.

The traditional process for identifying and correcting textual errors falls typically into two stages.[7] The first consists in examining and collating all extant manuscripts, and where pertinent, printed versions, of a given work in order to determine the work's earliest recoverable form. A single copy of a written text is called a *witness*, and the collation and sorting of the extant witnesses into hierarchical groups, a process generally called *recension* (often called by the pure Latin term *recensio*), is an effort to determine how the extant witnesses are related to one another diachronically, that is, which ones have been copied from or influenced by which other ones. The result of the collation is, ideally, a tree diagram that shows the filiation of the extant manuscripts of the work in question and allows one to infer on this basis the form of the underlying exemplar text. Such a tree diagram is called a *stemma codicum*, and this aspect of text study is called *stemmatology*.[8] In the second stage, the textual critic scrutinizes the exemplar text that has been established on the basis of the recension in order to decide what words or passages should in his or her judgment be emended so as to reflect the presumed original as precisely as possible. This is usually called *emendation* (*emendatio*), sometimes called *conjectural emendation* or *divination* (*divinatio*) because these kinds of judgments are invariably subjective, based on the critic's 'sense' of the text's language, structure and content, rather than on any decisive objective data.[9] Restorations based

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7 The classic description of textual criticism as established and practiced in the study of western classical literature is Paul Maas, *Textkritik,* which appeared first in 1927. A second edition was published in 1949 and a third in 1957. An English translation of the second edition by Barbara Flower (d. 1955), with additional notes reflecting the third edition, was published posthumously in 1958 as *Textual Criticism*. Maas gives a very succinct, yet admirably precise account of the procedures and rationale of all aspects of classical textual criticism, with examples taken almost exclusively from Greek.

8 The notion of a *stemma codicum* arose first in early eighteenth-century New Testament exegetic studies, in particular in the work of Johann Albrecht Bengel (1687–1752) who 'imagined that [...] the whole history of the New Testament [manuscript (WGB)] tradition could be summarized in a *tabula genealogica*, [...], what will later come to be called a *stemma codicum*'. (Timpanaro 2005, 65.) Karl Lachmann (1793– 851) is often considered the scholar who established recension as a formally precise, objective and rigorous approach to the study of manuscripts, so much so that the term 'Lachmann's method' has become nearly synonymous with classical recension in general. See Timpanaro 2005.

9 More than anything else, a 'sense' of the text comes from wide reading in contemporaneous literature. The renowned Renaissance scholar Isaac Casaubon said in regard to his text critical commentary on Theophrastus's *Characters*: 'The authors of any period have a special quality that does not fit the writers of another period [...] it is best to explain writers by others of the same period'. See Grafton and Weinberg 2010, 17–18 and *passim*. This aspect of textual criticism is a major part of what A. E. Housman referred to as 'art'. While it is indeed subjective

objectively on empirical evidence and extant data will have been proposed as a part of the first stage, that of recension.

At least four things distinguish the tradition of textual criticism in China from the traditional western practice of textual criticism, all of which have implications for how we understand the procedures and goals of textual criticism *more sinico* and ultimately for how we understand the relation between the producers, transmitters and consumers of early Chinese texts.

(i) First, and in some respects perhaps most important, the recognition of authorial identity and presumption of a single original text, the **ω** of traditional western textual criticism, directly associated with a known author is a far more prevalent and viable presupposition in the classical west than it is in China. Authorial attributions and the presumption of textual integrity for early Chinese texts are increasingly seen to be matters of tradition more than of objective empirical fact.[10] The notion of a single 'original text' identifiable with a single author may not always be the aptest way to see the putative source of the received version of a given early Chinese text.[11] It seems very likely that many pre-imperial

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rather than mechanically objective, it is all the same not simply imaginative guess-work. James Barr in his discussion of biblical textual criticism notes that '[i]f there is no manuscript reading to support [the critic's] conclusions, what he produces will be a conjectural emendation, which he will support by arguing that it makes much better sense. Even a conjectural emendation [...] will point out some kind of relation between the reading conjectured and the text actually found'. Barr 1987, 3. In the Preface to his recent book on textual criticism, Richard Tarrant says '[t]extual criticism deals with relative probability and persuasiveness, not with demonstration, and as a result its conclusions must always be to a degree provisional'. (Tarrant 2016, xii) This is the *divinatio* aspect of textual criticism. It is precisely this that Housman saw as the art of textual criticism, the subjective nature of the 'persuasiveness' of the argument and how that is a gauge of the 'probability' of the conjecture.

10 See, for example, my 'The composite nature of early Chinese texts' (Boltz 2005, 50–78).

11 The question of the 'composite' nature of authorship in pre-modern China has recently been treated at length in a collection of papers dealing with various aspects of authorship in East Asian literature. See Schwermann and Steineck 2014. Virtually all of the contributors to this work who write about China recognize the phenomenon of 'indefinite authorship' in early Chinese texts, down to as late as the early seventeenth century. Schwermann himself shows in some detail that the question of multiple authorship arises even in connection with non-transmitted texts such as bronze inscriptions (Schwermann 2014). He points out that the traditionally predominant view that inscribed bronze vessels were used exclusively for ceremonial purposes and that inscriptions were directed chiefly to the ancestors are conjectures not explicitly supported by the vessels or the inscriptions themselves. Li Feng has shown that inscribed bronze vessels could be used for such quotidian purposes as washing and food preparations (Li

Chinese texts that have been transmitted to the present were not composed all at once as single works, each by an individual author. Many, such as the *Laozi* and the *Zhuangzi,* to name only two of the best known examples, seem, whatever the nature of their original core material, to have evolved over time through a process of accretion of individual passages, sometimes even whole chapters, from disparate, largely unidentifiable, sources.[12] By the same token, the internal structure of a text might undergo rearrangement or suffer loss in the hands of readers and users of the text who for whatever reasons saw fit to revise or alter the text in which they were interested.[13] This kind of revision, known directly from recently discovered manuscripts of early texts, sometimes resulted in a 'version' of a text that differed markedly in content and structure from what would at first appear to be its received form. How such different early

Feng 2011, 271–301, esp. 293–300 and Li Feng 2018, 24–33). Some years earlier, Edward L. Shaughnessy illustrated the composite nature of an extended set of related late Western Zhou bronze inscriptions and the 'multiple author' process involved in preparing and casting them, based on evidence from three of the most important of the twenty-seven inscribed bronze vessels discovered in 2003 in Yangjiacun 楊家村 in Shaanxi province (Shaughnessy 2007). In all of these cases of bronze inscriptions the question of multiple or unknown authorship does not carry the same kind of direct implications for text critical study that it has for transmitted texts because bronze inscriptions are not transmitted texts, but we nevertheless see that the composite nature of the text and the absence of an identifiable single author are already characteristic of the earliest literary works we know.

12 The best popular example of how this aspect of a well-known text can be assessed and incorporated into a study and translation is A. C. Graham's English translation of the Inner Chapters of the *Zhuangzi* (Graham 1986).

13 This kind of complex manuscript situation is not unknown for western texts. The surviving Quarto and Folio witnesses of Shakespeare's *King Lear* 'differed in their texts in so complex a manner that a linear derivation of the Folio from the Quarto could not be posited' (Gabler 2013, 81). A stemmatic approach to determining an 'archetype-original' was unsuccessful because that method presupposes a single original and does not allow for the possibility of what is sometimes called, somewhat oxymoronically, 'multiple originals', that is, differing original versions arising from the author's own hand, and yet the evidence suggests that this is exactly what must have been the case (see Gabler 2013). And, apart from the restriction to 'multiple originals' from a single authorial hand, the *King Lear* situation is closely parallel to the pre-Han situation for many early Chinese texts for which we have 'multiple originals', though not necessarily from a single author's hand, or seen from the reverse perspective, the equally counterintuitive 'no originals'. The chief difference between the multiple-originals situation for *King Lear* and the multiple-original manuscripts situation for numerous early Chinese texts, such as the *Laozi*, is that no one doubts that Shakespeare wrote the text in question, and Shakespeare is a known historical figure, whereas for the *Laozi* and other texts with similar composite backgrounds there is no known author nor is there any reason to think that the multiple originals all came from a single hand.

manuscript versions of the 'same' Chinese text are related to one another and to transmitted, received versions of the text in question, or how they may have arisen one from the other, often can only be explained by recognizing that the differing versions have taken shape through a compositional process that may have drawn on diverse sources, edited in varying ways at different times and assembled in different configurations from version to version.[14] The differences may be extensive enough to bring into question whether what are usually regarded as two versions of the 'same' work can really be called the 'same text' or not. If one version is constituted of significantly different components, or shows a markedly different structural arrangement from another − differences that have arisen presumably as the result of alterations by different (if anonymous) compilers − are these really the same text?[15]

Very little, if any, of an early Chinese text's compositional vagaries are recoverable. The transmitted, received versions of pre-imperial Chinese texts that we have are typically the product of the editorial efforts of both late classical and medieval scholars, typically, but not inevitably, starting with the Han state bibliographer-archivist Liu Xiang 劉向 (77–76 BCE).[16] Identifying what is the core pre-Han material in these texts and what has accrued secondarily is a highly challenging, sometimes impossible, task. It is only from the Han period on, where we know something of the context and nature of text editing, that a text's transmission can be seen to follow a trajectory roughly comparable to what is familiar from the western classical model. Given the eclectic nature of their compilation, the transmission of many pre-imperial Chinese texts does not lend itself readily to the kind of stemmatic representation or codification that can be laid out for western classical texts. The transmission of many early Chinese texts is thus said to be *indeterminate*, in contrast to the western classical tradition, where we can call the typical pattern of textual transmission *determinate*. In determinate cases textual critics know unambiguously whether the manuscripts

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14 Edward L. Shaughnessy has given a good example of this point for a relatively stable text in his *Rewriting Early Chinese Texts* (Shaughnessy 2006), where he discusses in detail the 'Zi yi' 緇衣 ('Black Jacket') text, as transmitted in the *Li ji* 禮記 and as known from two discovered pre-Han manuscripts, one in the Guodian corpus and one in the Shanghai Museum corpus. Shaughnessy avers that the two manuscripts are 'essentially the same text as the *Li ji* chapter' (Shaughnessy 2006, 64). He then proceeds to show how 'rewriting' over time has resulted in a transmitted text that differs in many places significantly in meaning and in overall thrust from the newly extant manuscripts.
15 I have tried to illustrate this point in some detail for the *Laozi*. See my 'Reading early Chinese manuscripts', (Boltz 2007, 477–479 and *passim*) and 'Why so many *Laozi*'s?' (Boltz 2013
16 See Fölster 2016, esp. 121–127.

that they are analyzing and collating do indeed represent the same single text associated with a known author or not and that whatever emendations they propose, however speculative they may be, are intended to be meaningfully representative of a single original.[17] For classical Chinese texts this is not typically the case.

All of this means – among other things – that the oppositional and often judgmental sense of a correct reading associated with the original text of a known author *vs*. an error introduced by a later scribe or editor, known or unknown, is more sharply present in the classical western case than in China.[18] Where a scholar of Greek or Latin texts can generally depend on a familiarity with and sensitivity to a known individual author's stylistic proclivities, grammatical consistency or inconsistencies, etc. as an important part of the means for detecting textual anomalies or 'error', the scholar of classical Chinese texts for his part has no such recourse and traditionally is largely unconcerned with,

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17 The goal of establishing a *stemma codicum* for a classical (or other) western text is, to be sure, an ideal; the reality is that often the complexities of the manuscript evidence do not allow for a clear stemmatic picture. As it is traditionally conceived, the chief drawback to the stemmatological method is that it has no direct way to accommodate lateral influences of one manuscript on another, because they lie outside the diachronic lines of filiation. Mathematicians call this kind of 'vertical' filiation 'partial order'. 'A partial order establishes a relation of *before* and *after* between certain elements, but not between any two of them' (Rovelli 2018, 46–47). Recent stemmatological work, especially with Greek manuscripts, has brought considerable methodological advances to the problem of understanding and codifying the implications and consequences of lateral influences in manuscript families. In the world of Hellenic textual criticism it no longer seems as intractable a problem as it once did. See, for example, Brockmann 1992, Rashed 2001 and Tempesta 2014. I am grateful to Christian Brockmann for bringing this issue in connection with the Greek material to my attention and for providing me with these references.

18 The contrast between the western and the Chinese traditions obtains even for such cases as Virgil's *Aeneid*, the text of which is said to have been preserved on Virgil's death and edited by Varius Rufus on order of the emperor Augustus (see Tarrant 2016, xi–xii.). Though it cannot be known how much of the received text of the *Aeneid* is Virgil's original and how much comes from the editorial pen of Varius, still the text is associated with a known author and a less famous but still known editor, in tandem, which gives it its 'known author' quality, in contrast to the majority of pre-imperial Chinese texts, for which individual authors are not known and even this kind of author-editor collaborative teamwork is largely not in evidence. Dirk Meyer has given a succinct but effective discussion of the phenomenon of unknown authors and the inappropriateness of the term 'editor' as an alternative recourse to a recognized author, whether a name is known or not (Meyer 2012, 20–22).

perhaps even unaware of, such a possibility for most of the pre-imperial, classical textual corpus.[19]

The consequence of this for the practice of textual criticism in the Chinese literary realm is that we must recognize that where, for example, A. E. Housman can properly talk of identifying and correcting an error in a transmitted version of Manilius's *Astronomica*, we can speak in the Chinese case merely of identifying and explaining the semantic import of a textual variant in, e.g. a manuscript passage that matches a part of the transmitted *Laozi*. We may well have no basis other than tradition for identifying one or another of the *Laozi* variants as 'original' or for calling one or another of them an 'error'. Housman can assume a single, original *Astronomica* text (in spite of some uncertainty about the author's actual name or date), and any identifiable deviations from that original he can legitimately call errors. We cannot make a comparable assumption about the *Laozi*, or about many other pre-imperial Chinese texts, not only because we cannot identify any historical author of the text or a single original form of the text relative to which any variation is unambiguously an error, but in many cases also because there likely never was such an individual author or single original text that can objectively be seen as the forerunner of the received text in the first place. To be sure, we may sometimes be able to determine which of two variants is likely to be the 'changed' form and which the 'source' or the 'earlier'. But 'source' or 'earlier' does not necessarily mean 'original'. Or we may be able to identify with some confidence an 'error' in a transmitted version of the text relative to an earlier edited, transmitted version of the same text or even relative to a given manuscript version, but still this is not the same thing as restoring the original.

Pre-Han and early Han manuscripts may reflect not just editorial differences among versions of the same text, but may have been created as textual adjuncts to diverse programs of doctrinal teaching, preaching, persuading or advising, sometimes to rulers of states, other times to individuals of the aristocratic class. They may have been no more than written *ancillae* to oral proselytizing, or perhaps they are reflective of the personal contemplative practices of an individual or private group. We have for the most part no way to know how these manuscripts

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19 In his *Reader* on Greek textual criticism, Robert Renehan says at one point (Section 71), '[t]he reader is well advised to attend to the most minor details of style; his efforts will result in a surer and clearer command of a writer's chief stylistic distinctions' (Renahan 1969, 101). For the reader of a Classical Chinese text the comfortable assumption of a single writer with identifiable 'stylistic distinctions' that apply to the whole work is considerably less safe than it is for his Hellenist counterpart.

were actually used. Depending on the extent to which such manuscripts differ from their source(s), they may constitute not merely different versions of a single original, but may have become genuinely, even if only partially, different texts in structure, content and purpose. Such compilations may well have seen a very limited use, both in time and place, and have been no more than a kind of ephemeral, localized textual residue of a particular doctrinal program about which, except for these written artifacts, we know nothing. It is the possibility of such wide textual latitude that gives rise to the indeterminate nature of the early lines of transmission for at least some of the pre-imperial Chinese manuscripts that we know.[20]

(ii) The second thing that distinguishes the tradition of textual criticism in China from its western counterpart is the respective impact of the invention of printing in China and in the west. Scholars and students of Chinese textual criticism must ask the same question that presses urgently on western classical textual criticism, i.e., to what extent did the advent of printing and of printed editions of texts affect the nature of the works themselves, the status of variant versions and the faithful transmission of the text.[21] In Europe until late in the fifteenth century, classical Greek and Latin texts (and all other texts as well) were transmitted only in manuscript form, whereas in China, by that time, classical texts had been transmitted in printed form for at least six hundred years. To be sure, the printing of fifteenth-century Europe was not the printing of ninth-century China. Chinese printing was xylographic, that is, wood-block printing, while European printing was by contrast typographic, *i.e.*, movable type printing. The wood blocks of xylographic printing are cut from manuscript prototype models and thus retain in many respects the features of manuscripts and in some respects their inherent vulnerabilities. Wood-block printing may be thought of as a kind of 'mechanical means for manuscript replication and reproduction'. All the same, it fixes the form of a text more firmly than manuscripts proper can. Manuscript transmission generally is likelier to result in greater variation

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20 This has most recently been illustrated in Martin Kern's discussion of a poem appearing in the Tsinghua manuscript *Qi Ye* 耆夜, which seems to be related to the *Shijing* ode 'Xi shuai' 蟋蟀 'Cricket' (Mao 119), (Kern 2019, 1–36, esp. 11–17). See also the discussion in Boltz 2013.

21 The question in respect to the advent of printing in Europe has been extensively dealt with, though still not exhaustively answered, by numerous scholars over several generations. Perhaps the fullest treatment is Elizabeth L. Eisenstein's major 1979 work, *The Printing Press as an Agent of Change* (Eisenstein 1979). Eisenstein refers to the invention of printing in Europe as a 'revolution', and to be sure, her work answers many parts of the question, but in doing so inevitably raises further points that call for attention.

among the extant witnesses for a given text than print transmission. Manuscript copies can be highly faithful to their source, and print transmission is not immune to error and corruption, but generally speaking, printing has the salutary effect of fixing the form of a text more durably over a wider area and for a longer period of time than hand-copying does.[22] European scholars, as a consequence, confront a messier and less stable textual situation, richer in manuscripts and poorer in printed texts than do their Sinitic confrères and have come sometimes to characterize transmission and the inevitable variation to which it gives rise as a 'wholly degenerative process through which texts become 'corrupted' and 'contaminated''.[23] In the Chinese tradition from the medieval period on (c. 1000 CE), textual transmission, because it involves largely printed witnesses instead of manuscripts, is likely to have given rise to less textual variation than manuscript transmission did in the west, and is therefore viewed neutrally and in some respects even benignly. What variants arose were generally regarded as little more than the expected consequence of incidental human imperfections or in the worst cases, failings. Chinese philologists recognized, of course, that errors occur, but they never raised the specter of malign forces at work on the innocent text as it makes its way, Ichabod Crane like, along its perilous route through the midnight forests of time in the way that often seems characteristic of the western attitude.[24]

(iii) Third is the different writing systems used in western and Chinese texts. The procedures of canonical textual criticism include the recognition of two kinds of

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22 The form that is fixed by print is not necessarily the ideal or pristine original of the text in question. The easy availability of texts heavily influenced by uncritical and unsystematic conjectures of the humanists of the first half of the second millennium in comparison with those reflecting the more careful, conservative scholarship of the scriptoria often dictated the exemplars on which early European printed texts were based. As a result, what became 'fixed and durable' was often in fact not a particularly good version of the text. '[...] it was nearly always the mongrel texts produced by the activities of the humanist copyists [...] that served as printers' copy [...] the text of which represented a chance mixture of traditional readings with conjectural emendations' (Kenney 1974a, 3–4).

23 Cherniak 1994, 1–13 and *passim*.

24 See Cherniak 1994. The advent of printing introduces the field of bibliography as a crucial part of textual criticism. The benefits, whatever they may be, of having printed texts a half a millennium earlier in China than in Europe are balanced in a sense by the demands of bibliographic analysis and history as an integral part of textual criticism for that same five-hundred year period. The basic work on bibliography in the English textual tradition is McKerrow 1927. For the relation between bibliographical study and the textual criticism of printed works in the western (largely English) tradition, see Bowers 1964.

textual variants, (a) lexical, where the variation reflects a difference in wording and thus in meaning (formally, even when the variation is between synonyms), and (b) (ortho)graphic, where the difference is only in how the same word is written.[25] Identifying a particular instance of textual variation as either lexical or graphic in a western language text is usually straightforward and unambiguous owing to writing systems in which a single graphic element, typically a 'letter', represents the language at a level below that of the word. Words written in alphabets, abjads, abugidas or syllabaries more often than not consist of more than one graph. Single word textual variation typically consists of a difference in only one graph. Thus, the element that varies in a case of textual variation in a text written in one of these scripts is usually only a part of the written word, not the whole written form of the word(s) in question. And this makes the identification of the variant as either lexical or graphic comparatively easy. When we see < CENTRE >, we have no trouble recognizing it as an allowable orthographic variant of < CENTER > (or *vice versa*), and by the same token we recognize at once that the variant pair < WHISPER > : : < WHIMPER > in D. H. Lawrence, *Sons and Lovers* is lexical.[26] When we see < COSA > in a Latin text we need only a moment, or a glance at the *Appendix Probi*, to know that it is a 'vernacular' spelling of classical < CAUSA >, and not a different word.[27]

In Chinese texts by contrast, whether manuscript or printed, it is not quite this clear-cut. A single unit of the Chinese writing system, typically a 'character', represents the language fundamentally at the morphemic or lexical level. For Classical Chinese, roughly speaking, this usually means at the level of the word. And so, because Chinese characters inevitably represent words, any

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25 For texts written in alphabets, abjads or abugidas, *graphic* variation is often said to be a variation in the *shape* of the graph in question and *orthographic* variation is a difference in *spelling* the same word. For Chinese language texts written in the Chinese script this is a distinction without a difference.

26 See Thorpe 1972, 54–55. Long ago, assembling notes about Marco Polo and Yuan dynasty history, I once encountered a printed reference to a paper that, apparently with vague visions of Thomas Mann in my sub-conscious, I referred to as 'Kublai Khan's Magic Mountain', only much later to be told that the correct paper title was 'Kublai Khan's Magic Fountain'.

27 *Sensu stricto* it is of course a different word; it is the third-century vernacular Latin word that had devolved from the Classical Latin word CAUSA. The *Appendix Probi* is a kind of 'prescriptive guide to correct Latin' compiled in the third or early fourth century CE. It lists 227 entries in the form 'X, not Y', where Y is presumably the form that was common or current at the time, regarded as 'wrong', and X is the preferred or 'correct' form. Thus, we find in the *Appendix Probi* < CAUSA NON COSA >. Among other things, this example shows that the vocalic development of Classical Latin AU to later O (cf. Sp. *cosa*, Fr. *chose*) had already occurred by the time of the *Appendix Probi*. See Solodow 2010, 114–120.

instance of character variation is potentially lexical variation. To be sure, it may not always be lexical variation, but unlike textual variation in alphabets, abjads and abugidas, in Chinese that possibility must always be considered at the outset. For example, is the variation X: 說 : : Y: 悅 lexical, in which case it is X: *shuō* 'explain' : : Y: *yuè* 'be pleased', or merely graphic, X: *yuè* 'be pleased' with Kangxi classifier 149 : : Y: *yuè* 'be pleased' with cl. 061?[28] The graphic difference between the characters < 說 > and < 悅 >, *i.e.*, between 言 and 忄 as the left-side component of the character, when both stand for the same word *yuè* 'be pleased', can be thought of as roughly comparable to the spelling difference between English < RIME > and < RHYME > or < PHANTASY > and < FANTASY >. In both the Chinese and the English cases one form is a slightly more conservative way of writing the word in question than the other. Seen in isolation, the character < 說 > is completely ambiguous and cannot be read, except by arbitrarily choosing between the two possibilities *shuō* 'explain' and *yuè* 'be pleased'. This is clearly different from the English examples; nothing about the reading of < RIME > and < RHYME > or of < FANTASY > ~ < PHANTASY > is ambiguous.

Except in a very limited way, such as graffiti, road signs, student exercise books or the like, Chinese characters do not occur in isolation, and so the problem of how to read a character in isolation generally does not arise, and when it does it will likely be marginal. But the lexical ambiguity inherent in the character < 說 > is not limited to deciding how to read it in isolation. Even occurring in

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28 The formulaic expression 'X: 說 : : Y: 悅' is to be understood as 'the character < 說 > in text X corresponding to the character < 悅 > in text Y', where X and Y will in any actual case be identified as specific texts or parts of texts. The formula can be extended to Z or to any number of matching texts that have corresponding characters. Beyond this, the convention adopted here will be to refer to the so-called 'radicals' of Chinese characters as 'classifiers' (abbr. cl.), numbered according to the traditional *Kangxi zidian* 康熙字典 scheme (001-214). As classifiers, these are sometimes now called *taxograms*. In focusing on the structural features and variation of components of traditional characters, particularly as these have evolved historically in the development of the writing system, as opposed to a concern with lexicographical classification, classifiers may also be called 'determinatives', 'significs' or 'semantic components'. Whatever term is used, they are precisely *not* 'radical' in any meaningful sense; they are not, in other words, the 'root' part of the character, but typically secondary or tertiary graphic additions to the core part of the character. For this reason we will avoid calling them by the term 'radical'. In the example here the word *yuè* 'be pleased' can be written with either < 說 > or < 悅 >, *i.e.*, using either cl. 149 (言) or 061 (忄, the combining form of 心), but the word *shuō* 'explain' is never written with cl. 061. This is not an anomalous or capricious variation, but a reflection of the fact that in at least one variety of the late Warring States period writing system(s), before the standardization in the Han period, classifiers 149, 言, suggestive of 'speech' and 061, 心, suggestive of 'mental', 'cognitive' or 'emotional' senses, were often interchangeable in characters used to write words with a noetic or emotive sense. See Park 2016, 180–182.

a clear context, the character <說> may be ambiguous in the same way. Look, for example, at the well-known line from book six of the *Lunyu*, the 'Analects' of Confucius', 子見南子，子路不說 'The Master (= Confucius) paid a visit to Nanzi; Zi Lu (= one of Confucius's primary disciples) was not pleased'. This understanding is straightforward and based entirely on tradition. Nanzi (rendered as 'Nancy' in Lin Yutang's translation) was the wife of Commonlord Ling of the state of Wei and was reputed to have had an immoderate and uninhibited appetite for amorous recreational adventures. Confucius's visit allowed for the possibility that he partook of this delicate diversion with her, and this is what presumably provokes Zi Lu's displeasure (*bú yuè* 不說).[29] But it is possible to understand <不說> as *bù shuō*, thus making the sentence say 'Zi Lu did not explain it', *i.e.*, made no effort to account for it. Only the weight of tradition and commentarial opinion excludes this second possibility.

(iv) Finally, the fourth difference is that between a well-known and linguistically transparent inflectional morphology of most classical Indo-European and Semitic languages and the still hazy and uncertain outlines of whatever morphology the Classical Chinese language once had. Western alphabetic systems register a language's morphology explicitly, allowing for morphological, and thus grammatical, mistakes to be readily noticed. The *Appendix Probi* tells us, for example, < NOBISCUM NON NOSCUM > 'with us' and < VOBISCUM NON VOSCUM > 'with you (pl.)', clearly indicating the difference between a grammatically correct use of CUM 'with' with the ablative case (NOBIS, VOBIS) and a wrong use with the accusative (NOS, VOS). By contrast, the Chinese writing system seems to operate free of any hint of whatever early inflectional morphology may have operated in the language, each character standing as we have said, effectively for a single word. It follows that the writing system cannot by its nature reflect the < NOBISCUM NON NOSCUM > kind of difference, often referred to as 'error', that we see in western texts. Textual variants in Chinese are in principle almost always ambiguous in that by virtue of the writing system they inevitably entail the possibility of valid alternative lexical forms; variants in western language texts,

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29 It is also possible that Nanzi was in fact a member of the same clan lineage as Confucius, in which case the implied dalliance would violate one of the most fundamental constraints in Chinese society, accounting for Zi Lu's displeasure in a way that goes beyond a merely conservative moral rectitude.

written in alphabets, much less so.[30] This inhibits any perception in Chinese texts that variation *per se* might be equal to error, still less to 'corruption'.

The first two of these four differences reflect the characteristics and physical forms of the text itself, the second two reflect the nature of the language and how it is represented in writing. In the aggregate, these four differences between the textual world of the western classics and that of the Chinese call for an understanding of the practice of textual criticism as it pertains to early Chinese texts that is markedly different from the familiar traditional practice as it is recognized in the classical west. There is a distinction in western studies between the kind of canonical textual criticism already described in some detail here, in which recension and the establishment of a reliable *stemma codicum* for transmitted texts are central goals, and that kind of textual criticism concerned with non-transmitted texts, as, for example, epigraphic texts or other kinds of inscriptional material.[31] In the latter case there is typically minimal transmission or possibility of multiple witnesses and thus little question of establishing a stemma of any kind.[32] The text critical approach to this kind of material consists

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30 Note that 'potentially valid alternatives' are judged then on the basis of meaning, at which point some of them may well be eliminated as 'not valid' because they simply do not make sense. The trick is not to decide that a variant 'does not make sense' prematurely, thereby eliminating a possibility that might in fact have merit when looked at carefully or in an expanded context.

31 A. G. Woodhead's introductory book, *The Study of Greek Inscriptions*, for example, does not use the term 'textual criticism' anywhere, in spite of the fact that it lays out all of the textual considerations that underpin the reading and study of these kinds of epigraphic materials. See Woodhead 1981. E. G. Turner, by contrast, in his introduction to the study of Greek papyri, uses the term 'textual criticism' to describe the exegetic study of these materials whether they are manuscripts of Greek literary works, and therefore can be fit into a textual filiation, or are non-literary texts with no transmitted representatives. Turner points out that even though the non-literary papyri are similar to epigraphic, inscriptional texts in being non-transmitted works, the former are likely to be far less self-consciously written than the latter, which by their nature are designed and produced for public display and consumption (Turner 1968, 127).

32 The major exception to this in the west is the large number of inscriptions that are known only from citations or quotations found in medieval manuscripts, the original epigraphic work not having survived. When a particular inscription, no longer extant, is quoted in more than one manuscript, the traditional methods of textual criticism then are required to establish the text of the inscription as accurately as possible. See Buonocore 2015, 21. In China, the situation was somewhat different. Bronze inscriptions not infrequently occur in more than one witness. The same inscription was typically cast once in the body of a bronze vessel and separately in its accompanying lid, producing two witnesses to the text. And it was common for bronzes to be cast in sets of as many as nine or more items, bell chimes for example, often with the same inscription cast in each bell, thus giving multiple witnesses to a particular text. Since each

exclusively in determining what the author, known or unknown, intended to say in the text at hand.[33] In these circumstances, what we might call the philological approach goes beyond the text critical by examining and studying the text as a historical artifact of a particular time and place, something as important for the study of Chinese bronze inscriptions as it is for western epigraphic materials.[34]

When this approach is extended to manuscripts, including manuscripts that may have some relation to transmitted, received texts, it re-directs the focus away from a concern with restoring a putative original to a study of the individual manuscripts themselves and their immediate contexts. This is the approach generally taken toward the study of early Chinese manuscripts. Because of the indeterminate nature of their textual history, the chief goal is to understand the early manuscripts properly seen against the historical and cultural contexts in which they occur rather than to fit them into a stemmatic scheme of transmitted literature attributed to a given author. Not only is the manuscript seen as an artifact of its own time and circumstances, but within a collection of manuscript witnesses for a given text each manuscript represents a certain point on a diachronic and areal textual trajectory. In the aggregate, the manuscripts testify to

casting was done independently of the others, the text of the inscription is amenable to text critical analysis and scrutiny in the same way that any other text is. To be sure, there is no transmission of the witnesses separately one from the other, and thus no stemmatic analysis is involved, but in other respects an early Chinese bronze inscription may well exist in multiple forms and thus call for text critical study. Beyond this, it is becoming increasingly clear that early Chinese bronze inscriptions had in fact a complex manuscript background in their production. This has been convincingly shown by Ondřej Škrabal for Western Zhou bronze inscriptions and is likely to have been the case for bronze inscriptions from later periods as well. See Škrabal 2019. This means that inscriptions can be viewed as 'witnesses of their long-perished drafts or [manuscript (WGB)] master-copies, perhaps not always entirely faithful ones', and this brings the 'art and science' of textual criticism into the field of epigraphy (Škrabal 2019, 275).

33 Maas 1958, 2 calls a text for which there is only a single witness a *codex unicus* and says that in such a case the purpose of *recension* consists in 'describing and deciphering as accurately as possible the single witness'.

34 For the importance of recognizing early Chinese bronze inscriptions not only as documents central to the study of early history (though *sensu stricto* not always primary documents), but as textual features of bronze vessels seen as physical artifacts whose full meaning can only be appreciated in conjunction with an understanding of the ceremonial use of the vessels, see von Falkenhausen 1993, 146 and *passim*. See also Li Feng 2018, 25, pointing out that the importance and use of inscribed bronze vessels went beyond the solely religious and ceremonial and included quotidian social uses also.

a textual fluidity that in many cases is at least as important as the traditional goal of restoring an original. This approach to manuscript study is sometimes contrasted with traditional textual criticism and called 'new philology'.[35] New philology does not preclude looking at questions of filiation and lines of transmission when the manuscripts provide evidence for this, it simply demotes that from center stage to one of many considerations about the individual manuscripts in question. Given the indeterminate nature of their origin, transmission and circulation history, early Chinese manuscripts readily lend themselves to the 'new philology' approach.

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35 'New philology' is a kind of umbrella term for the study of manuscripts (and by extension epigraphic texts) themselves, setting aside a concern with establishing a *stemma codicum* and the goal of restoring an original in favor of seeing a given manuscript as a reflection of a specific context, i.e., a time, a place, a practice and all other aspects that characterize the manuscript culture from which the particular manuscript comes. See Nichols 1990 and Lied and Lundhaug 2017, 1–10. Beyond this straightforward understanding it has become in relation to the study of medieval European texts a matter of some methodological and interpretive controversy. See Kay 1999 for a succinct résumé of this aspect of the topic.

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Giovanni Ciotti

Notes for an Ontological Approach within Manuscript Studies: Object Oriented Ontology and the Pothi Manuscript Culture

Abstract: Defining a specific manuscript culture can be seen as an exercise in ontology. The present article embraces and applies the philosophical framework of object-oriented ontology (triple-O) as developed by the contemporary philosopher Graham Harman in order to appreciate what we can call the 'pothi manuscript culture'. As we acknowledge the existence of such a specific manuscript culture and the fact that it thrived for circa two millennia in South, South-East and Central Asia, we venture into identifying key historical moments and hypothesising possible counterfactual events that shaped it as a social object.

> And as for those social theories that claim to avoid philosophy altogether, they invariably offer mediocre philosophies shrouded in the alibi of neutral empirical fieldwork.
>
> (Harman 2016, 4)

> Wer nichts über die Sache versteht, schreibt über die Methode.
>
> (Gottfried Hermann, see Perilli 2006, 126)

1 On the place of philosophy in manuscript studies

The multifaceted field of manuscript studies combines a great variety of disciplines. Palaeography, codicology, philology, textual criticism, history, media studies, art history, archaeometry, book restoration and conservation, natural and computer sciences, and all the synergies and overlaps thereof contribute to the study of manuscripts, their contents and contexts. Potentially, all of these disciplines also intersect with philosophy, may it simply be for the fact that their practitioners should hopefully be reflecting on the theoretical underpinning and legitimacy of the methods they apply, or because philosophical concerns are essential parts of their discourse. However, to the best of my knowledge, a direct deployment of philosophy to the specific study of manuscript cultures is yet to be overtly explored.

What follows is not more than a timid attempt at making a first step into this untrodden direction. In particular, we will apply one particular philosophical approach to the study of a specific manuscript culture, namely the 'pothi manuscript culture', so that we may be able to explore whether or not it is *a thing* (ontology) and how we can assess it (epistemology). Note that our intention here is not that of investigating what a 'pothi' is or what a 'manuscript culture' is, but that of studying through philosophical considerations a specific manuscript culture, in particular the one that has historically privileged pothis, as a legitimate social object.[1]

If one accepts some controversial – if not simply gross – labelling, among the several ramifications of that rabbit hole that is philosophy, we will plummet down the tunnel of 'continental philosophy', then, at the ensuing junction, further down that of 'speculative realism' and, finally, we will reach the theory commonly known as 'object-oriented ontology' (OOO, read 'triple-O'). Originally championed by a handful of contemporary philosophers, OOO calls for a renewed attention to objects in their own right.

Before delving further into the nitty-gritty of OOO and, in particular, the view articulated by Graham Harman, definitely its most well-known proponent, we must clarify from the start that our intent is not so much that of arguing in favour of the validity of this particular post-postmodernist move. Instead, we intend to experiment with OOO – out of the many available frameworks – and check whether it can help us open new avenues of inquiry in the field of manuscript studies. Harman has in fact already applied OOO to the field of social theory, in particular describing the Dutch East India Company (*Vereenigde Oostindische Compagnie*) and the American Civil War as objects.[2]

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1 It should be made clear right off the bat that the term 'pothi' (*pothī*) is used here as an umbrella term for any manuscript that is made of a stack of folios in landscape format that are prepared for hosting writing and possibly illuminations and which are flipped upward rather than sideward. This term is here preferred to its Sanskrit etymological antecedent *pustaka*, or rather *pustikā*, or to alternative terms in other languages simply for the sake of convenience, since it is widely understood by the community of scholars working on manuscripts from Central, South and South-East Asia.

2 See Harman 2016, 35–42 and Harman 2017, 114–134, respectively.

2 Ontology and epistemology: the case of OOO

In a nutshell, speculative realism is yet another reaction to Kant's 'thing-in-itself' (*Ding an sich*), one which claims that objects do exist outside our perception and that we can in fact say something about them. In Harman's take, objects cannot be directly (scientifically) known, but they can be indirectly (aesthetically) accessed.[3]

In order to understand how Harman can reach his theoretical stand, we first need to appreciate his definition of 'object'. As reiterated in many of his publications, an object is neither the sum of its parts nor that of its effects. In other words, on one side, Harman believes in the idea of emergence, i.e. that an object has properties that cannot be predicted from those of its components (which are in turn also objects!). For example, water has properties that cannot be predicted from those of hydrogen and oxygen when they are not combined. On another side, an object is not exhausted by its effects or actions, since it is also other than what it 'modifies, transforms, perturbs, or creates'.[4] In fact, objects may have a potential that is only at times – or, even, never – expressed, such as the house-builder's ability to build a house even when asleep.[5]

Harman is consistent with the logical consequences of this line of reasoning and calls *object* not only what is tangible, but also what is intangible, such as an event, a thought, a social construction.[6] And since all these are equally objects in the definition posited by OOO, Harman advocates as our philosophical starting point a 'flat ontology', in which all objects are treated on par with one another, with the consequence that also objects that are beyond human thought ought to be investigated.[7] In any case, below we will apply this idea of object to

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3 As it can be easily imagined, Harman's approach has attracted as much support as criticism. This is not the place to review the debate that ensued since OOO was proposed and references to the views opposing Harman's will be kept to the minimum.

4 This quotation is a paraphrase of a passage found in Bruno Latour's 1999 *Pandora's Hope* (p. 122), which Harman quotes rather often. The original passage is given in Harman 2016, 10.

5 This is in fact a reference to Aristotle's *Metaphysics*, see Harman 2017, 50. Approaches, such as OOO's, that 'ask us to personify and caricature objects as autonomous and alive' are clearly controversial and, it can be and has been argued, '[t]o adopt such a philosophy, no questions asked, is fantasy – commodity fetishism in academic form' (Cole 2015, online).

6 Note that Harman has explicitly stated that the existence of social objects is the most difficult to prove (<https://youtu.be/V3KMDy5gvwo, min. 1.26,40>, accessed on 9 April 2021).

7 There are two main presuppositions characterising the approach championed by Harman – and speculative realism in general. First, the shattering of the fetters of 'correlationism', a label coined by the contemporary philosopher Quentin Meillassoux (see Harman 2017, 56–57),

the 'pothi manuscript culture', a social object which thus includes the human component by default. Following Harman's approach, we can already easily argue that our object of choice should not be seen as either the sum of its single manuscripts or reduced to the sum of its effects, such as helping the spread of Buddhism.

As Harman introduces his ontology, the question of epistemology inevitably arises and it is in this respect that we can perhaps better understand the point of his counter-Kantian approach mentioned at the beginning of this section. Rather persuasively, Harman maintains that scientific knowledge, as necessary and useful as it is, is a mere paraphrase of objects. Scientific knowledge, he argues, can either analyse something into its components or explain its functions. Instead, a gnoseological activity that can offer a different kind of knowledge is aesthetics, which has the power of evoking objects rather than analysing them. For example, a painting is more than the sum of its canvas, oil-colours, etc., and it is also not just the scene it represents, as any good art critic could tell us. In other words, scientific knowledge cannot get to objects per se, as they regress, escape from such kind of approach: we will never be able to appreciate the unexpressed potential of an object. However, objects can still be alluded to, evoked.

In this respect, a central role in Harman's theory – and a most crucial aspect for our current exercise – is played by metaphors. Harman's favourite is probably that of Homer's description of the sea as one 'wine-dark sea'.[8] This is an allusion to properties of the sea that are not in plain sight, e.g. its ability to both intoxicate and exhilarate, and which emerge only when the sea is matched up with wine. This indirect, vicarious, evocative way of looking at objects is in fact the core of Harman's aesthetic epistemology.[9]

The question now is how do we move from metaphors as rhetorical means, i.e. our way of representing an encounter between objects, to metaphors as

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which indicates the idea that objects can be accounted for only in terms of human perception. Then, as already mentioned, posing as our philosophical starting point a flat-ontology, i.e. 'an ontology that initially treats all objects in the same way' (Harman 2017, 54), a definition which in turn Harman takes from the work of another contemporary philosopher, Manuel DeLanda.

8 This is the usual English translation of οἶνοψ πόντος (*oînops póntos*), which would more literally translate something like 'wine-faced sea'. However, it cannot be excluded that this was an actually perceived hue and thus that the metaphor would exist only in the English translation and not in the original Greek (cf. Deutscher 2010, 27–32; I would like to thank Aleix Ruiz-Falqués for drawing my attention to this source). Even so, Harman's point would nevertheless hold.

9 A strong criticism to Harman's aesthetic turn can be found in Lemke 2017.

social events, i.e. dynamics of actual encounters between objects? OOO maintains that our proverbial sea does not in fact meet the wine, but its dark quality and that this does not happen only at a fictional, literary level, but in reality, too, whenever objects meet. In other words, an object never meets another object, since objects infinitely regress from perception (nobody and nothing can really know the sea, whether the literal one or the real one, including its non-manifest potential features), but only part of it, i.e. its tangible, manifest qualities ('sensual qualities' in Harman's lingo).[10] Hence, like objects interact vicariously, so vicariously we can access objects.

Here finally comes what in my opinion is Harman's boldest methodological move: objects can be narrated metaphorically. This does not mean, however, that the narrative proceeds through a sequence of more or less convincing comparisons, but that it moves through the account of its metaphorical moments.

In Harman's view, such metaphorical moments are the turning points, the transformative encounters that change an object when it meets another object – or rather its qualities –, but that do not turn it into something new. In Harman's own words these moments are '[...] the key to unlocking a finite number of distinct phases in the life of the same object rather than the creation of a new one'.[11] Particularly inspired by Lynn Margulis' work in the field of biology, Harman calls these metaphorical moments 'symbioses' – hereafter we will stick to this label – and defines them as 'a special type of relation that changes the reality of one of its *relata*, rather than merely resulting in discernible mutual impact'.[12] From such a definition emerges an important characteristic of Harman's symbiosis, i.e. its non-reciprocal nature, since the two meeting objects are not equally affected by their encounter.[13] If we return to Harman's favourite example, 'wine-dark sea' is not the same as 'sea-dark wine': to put it in banal terms, the former is enticing, the latter salty. All symbioses discussed below will exemplify this important non-reciprocal aspect.

A further characterising aspects of Harman's theory is that symbioses that did not take place are equally important, thus leading us into a sort of counterfactual

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10 Harman 2017, 149–157. Note that this is a brutal condensation of the much more sophisticated view on objects and qualities proper to OOO.

11 Harman 2016, 49–50.

12 Harman 2016, 49. As for the equation metaphor ~ symbiosis, in an interview from 2016 Harman rather explicitly stated that '[...] symbiosis is a metaphorical relation rather than a literal one [...]' (<http://badatsports.com/2016/in-the-late-afternoon-of-modernism-an-interview-with-graham-harman/>, accessed on 9 April 2021).

13 Harman 2017, 112.

history.[14] For example, relevant to us is that the pothi form did not become part of the Turco-Persian material culture,[15] a fact that may tell us about the maturity of the pothi manuscript culture at that moment in time, which prevented it from changing further.

As mentioned above, Harman has already offered symbiotic narratives of objects, in particular social objects. Hereafter, we will give it a try with the 'pothi manuscript culture'.

3 OOO and the pothi manuscript culture

One 'pothi manuscript culture' is not defined as such by any of the learned traditions of South, South-East and Central Asia. But this does not make it less of an object in the frame of our current approach. Furthermore, a comprehensive history of the pothi manuscript culture that has extended across the geographical coordinates that we have just mentioned from at least the beginning of the common era well into the twentieth century is yet to be told. Until now, some scholars have opted, for example, for religious labels, such as Buddhist or Jain manuscript cultures,[16] others have instead preferred geographical labels, such as South Asian or South Indian manuscript cultures,[17] or linguistic ones, as in the case of Tamil or Pali manuscript cultures.[18]

In our view, it is likewise possible to argue in favour of the existence of a pothi manuscript culture and our ontological exercise is precisely aimed at appreciating this object, albeit vicariously. We should in fact emphasize that our understanding of what constitutes the pothi manuscript culture is not at all exhausted by the appreciation of the shared form of its artefacts, i.e. the stack of oblong writing surfaces. In the present context, the pothi manuscript culture is in fact more than the sum of its palms and their leaves; Himalayan birch (*Betula utilis*), agarwood tree (*Aquilaria malaccensis*) and their bark; its communities of tree-climbers, scribes, and scholars; its styluses, brushes, inks, and soot; its

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14 Harman 2016, 116–117.

15 We prefer here the term 'form' instead of 'format', in accordance with a suggestion by the late J.P. Gumbert.

16 See, for instance, Berkwitz et al. 2009 and Balbir 2019, *passim*, respectively.

17 See, for instance, Shaw 2009, 127 and Rath 2012, respectively.

18 See, for instance, Sweetman and Ilakkuvan 2012, 19, and Ruiz-Falqués 2014, 30, respectively. One should note that, when it comes to labels such as 'Tibetan', 'Mongolian' or 'Thai', it is often unclear if these are meant to be geographical or linguistic.

several dozens of languages and scripts; its conventions pertaining to writing, layout, and form; its texts, genres, and literary fashions; its courts, schools, monasteries, and temples; etc. Moreover, it would not be exhausted just by its manifest functions, such as enabling textual composition, transmission, and preservation; occupying generations of people working with palms and their products as well as hosts of more or less learned scholars and scribes; spreading Buddhism and Tantrism across Asia; etc.

Following Harman's methodology, before we look for possible symbioses in the history of the pothi manuscript culture, trying to map some of its turning points and missed opportunities, we first need to establish its beginning and end. In fact, as Harman states, '[i]f symbiotic stages are meant to mark discrete phases in the life of one and the same object, they must of course be distinguished from the birth and death of objects'.[19]

4 Beginning

The beginning of a written tradition that made use of pothis is unknown.[20] Nevertheless, it seems plausible to assume that such a culture began in the Indian subcontinent, when the leaves of certain palm trees,[21] which are endemic to the southern part of that region, were first used as writing supports.

The oldest extant palm-leaf manuscripts, however, are not from South Asia but from Central Asia and the so-called 'Greater Gandhāra' (more or less corresponding to East Afghanistan and North Pakistan), where they could survive thanks to the dry climate, albeit mostly in an extremely fragmentary state. The earliest specimens found so far date to *c.* the second/third century CE. Two notable examples that have been dated on the basis of both palaeographical considerations and C-14 analysis are: 1. the Spitzer manuscript dated to the third

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19 Harman 2016, 50.
20 In this respect, see also Baums 2020, 349 n. 17. Reference to the oldest act of writing texts in manuscripts, which we may confidently assume were pothis, can be found in the Sri Lankan chronicle *Dīpavaṃsa* (350 CE), which narrates how due to various calamities the Buddhist monks wrote down their sacred canon during the first century BCE (see Hartmann 2009, 96–97). Although one should not forget that probably oblong wooden tablets may also have been used for writing since time immemorial.
21 See below for more details on the kinds of palm trees employed.

century CE,[22] and 2. the Bamyan fragments of the Schøyen collection dated to the late second to the mid-third century CE.[23] Presumably, they had all been either directly produced in North India or manufactured on leaves imported from that region.

To this one should add that we have earlier oblong metal inscriptions, the shape of which suggests that the pothi form was already well known.[24] One example is the inscription on a gold leaf interred in a reliquary by King Seṇavarma of Oḍi, dated to the first half of the first century CE.[25]

As for South-East Asia, we do not have enough evidence to ascertain whether palm-leaf manuscripts had already existed in hoary times or they came through contacts with South Asia.[26]

But what do we exactly mean when we speak of 'palm-leaf'? This unspecific label is often used in catalogues and secondary literature to indicate the material of the manuscripts in question. However, more than one palm tree is used to obtain leaves that, once treated, can support writing: a fact that has more far-reaching implications that one could at first think. Let us begin by pointing out that two palm trees that are endemic to South and South-East Asia are suitable for the production of manuscripts, namely Talipot (*Corypha umbraculifera*) and Palmyra (*Borassus flabellifer*).[27]

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22 Franco 2004, 29, 32–33 maintains that on the basis of its script and content, the manuscript dates to the second half of the third century CE. As reported by Allon et al. 2006, C-14 places the manuscript within the date range 80–234 CE.

23 The dating is based on the results of carbon testing (Allon et al. 2006) and their combination with linguistic considerations (Salomon 2001 discussed in Salomon 2014, 6).

24 This observation was already made by Sircar 1965, 62.

25 See Baums 2012, 227–233.

26 The first mention of palm-leaf manuscripts from South-East Asia is found in the travel account of the Chinese official Zhou Daguan, who resided in Angkor between 1296 and 1297. He tells us that Cambodian monks used to read from manuscripts made of stacks of palm-leaves, on which they wrote without brush or ink (see Pelliot's 1902 translation; I would like to thank Volker Grabowsky for drawing my attention to this source).

27 *Pace* Hoernle 1901, who hypothesised that the *Borassus flabellifer* is of African origins. This theory persists in the literature, in particular in DNA studies of the Palmyra to explain the limited genetic difference that has been attested in these plants in both South India (George et al. 2016) and Thailand (Pipatchartlearnwong et al. 2017). However, botanical literature has shown that this hypothesis, if not completely disprovable, is certainly highly unlikely, owing to the morphological differences that characterise the Asian *Borassus* species from the African ones (see Bayton 2007 and Bellot et al. 2020). As for the limited DNA variation, this can be explained by the fact that the Asian *Borassi* speciated at a comparatively later stage. I would like to thank Ross P. Bayton for an illuminating email exchange (2 August 2020) on this topic.

Using the leaves of these plants meant that manuscript production was part of a complex system of craftsmanship and commerce. In fact, Palmyra was not just used to produce writing supports, but was an essential good in South and South-East Asia, exploited for all sorts of practical usages: its wood for house and ship building; its fruits for edibles and drinks; its leaves for thatching roofs, manufacturing mats and bags, manuring rice fields; etc.[28]

On the other hand, it is plausible to assume that the leaves of Talipot enjoyed a certain prestige, thanks to their better quality in terms of texture, flexibility, and durability, thus making up for the otherwise limited application of the Talipot palm.[29] Allegedly, Talipot leaves were the only ones used for making pothi manuscripts in North India (and Central Asia) until the beginning of the seventeenth century.[30]

5 End

If the actual beginning of the pothi manuscript culture is beyond our reach due to the lack of material evidence, its end baffles us. The magnitude and complexity of its unfolding through time and space are among the reasons why a comprehensive and satisfactory account of the decline of the pothi manuscript culture is, I would argue, still a *desideratum*.

One could imagine that the introduction of new implements for the production of manuscripts or even the advent of altogether alternative technologies may have triggered its end. However, it is easy to disproof the idea of an abrupt

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28 Ferguson 1888, 13–33 (note that the first edition dates back to 1850) offers a thorough account of the many uses of Palmyra in nineteenth-century Sri Lanka. A brief account concerning Tamil Nadu is found in Markham 1862, 428.

29 Apart from producing manuscripts, leaves of Talipot palms can be used for sheltering and thatching. See, for instance, Blatter 1926, 77–78.

30 Hoernle 1901. The results of Hoernle's survey need to be reassessed in the light of the many more manuscripts available in collections after more than a century from that study. However, if they were to still hold true, a new explanation of the absence of Palmyra leaves in manuscripts from North India (and Central Asia) – an absence that Hoernle thought was due to the late introduction of the Palmyra from Africa – would certainly be a topic worth investigating. For the sake of completeness, one should note that both the Spitzer manuscript and the Bamyan fragments of the Schøyen collection are made of Talipot leaves (see Franco 2004, 21 and Allon et al. 2006, 285, respectively).

technological revolution: simply put, different artefacts just coexist.[31] So it happened that pothis did not disappear when new supports became available, such as bark (e.g. from birch or agarwood) and paper, or the codex form was first met, or when different technologies (xylography and lithography)[32] became available.

Even when printing with movable types arrived to India at the beginning of the sixteenth century with the Christian missionaries,[33] it remained a niche technology until the nineteenth century.[34] It is also remarkable that it did not even immediately obliterate the oblong form, which characterises some of the early prints in Calcutta.[35]

The fact remains that by the early twentieth-century pothi manuscripts as well as printed books in pothi form became rarer and rarer: a whole system of symbolic capital in which pothis played a role had in fact collapsed. The causes are many and their assessment still debated among scholars. We can mention, for example, 1. the loss of prestige on the part of the handwritten artefacts;[36] 2. a more impactful dissemination of the technology and craftsmanship required for printing with movable types;[37] and 3. a new sociology of literate people, most of whom were eventually absorbed into the colonial administrative system and, thus, embraced its new book culture.[38]

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31 A similar observation can be found for example in Diemberger et al. 2016, 6, where the similarities between the Tibetan and European cases are evoked, too.

32 Formigatti 2016, for xylography see also below.

33 Blackburn 2006, 30ff.

34 The same happened in South-East Asia, see Igunma 2013, 632–633.

35 See Rocher and Rocher 2012, 74.

36 Blackburn 2006, 35 maintains that Indians were not interested in print because they did not see any immediate advantage or prestige in the new technology.

37 Blackburn 2006, 35–36.

38 See O'Hanlon et al. 2020. A different narrative about the end of the manuscript culture in South Asia, but which overlaps with that of the end of the pothi manuscript culture, is offered by Pollock 2007, 87–90, who sees in the passage from manuscripts to print a shift from 'script-mercantilism' (epitomised by Formigatti 2016, 112 as 'a typical feature of South Asian manuscript culture, consisting of its enormous productivity and efficiency, which led to the creation of a huge amount of manuscripts') to 'print-capitalism' (described by Pollock 2007, 91 as a the combination of 'the obliteration of oral text performance, the privatization of reading and the hyper-commodification of the book'). Formigatti 2016, 112–115 challenges Pollock's theory on several fronts and proposes a different narrative, according to which a blend of 'paper technology, Buddhism, and a centralized and strong state structure' (*ibidem*: 114) may have played a decisive role in ending the season of manuscripts, albeit concluding that the reason for the slow diffusion of print in all its forms still awaits to be fully appreciated.

Pockets of pothi production as well as contemporary revivals thereof can be found everywhere in Central, South, and South-East Asia.[39] Admittedly, this topic would deserve a broader investigation, but for now I would argue that these phenomena represent just a pale shadow of a culture that has lost its momentum and stamina.

6 Symbioses

We can now turn our attention to what are possible symbiotic moments in the history the pothi manuscript culture. Below I will argue that two symbioses occurred almost at the same time, albeit with distinguishable sets of consequences: on one side, the encounter with Himalayan birch and, on the other, the encounter with Buddhism. A further, yet later, symbiosis is then discussed, namely the encounter with xylography.[40]

6.1 Symbiosis 1: The encounter with Himalayan birch (or paper?)

At an unspecified moment in the early common era, birch-bark pothis must have appeared from the encounter of communities of scribes and scholars that were familiar with both palm-leaf pothis and birch-bark craftsmanship – presumably including that for the production of the birch-bark scrolls of Greater Gandhāra, which contain the earliest recorded Buddhist scriptures and are attested from the first century BCE.[41]

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39 For Tibet, in particular woodblock prints, see Almogi and Wangchuk 2016, 10; for Laos, see Igunma 2013, 631; for Bali, see van der Meij 2017, *passim*.

40 Not being able to access the very beginning of the pothi manuscript culture means we cannot access its initial symbioses either, which in Harman's view are the most characterising (Harman 2016, 118–119). The shift from orality to writing (on this topic in the Buddhist context, see references in De Simini 2016, 7–8), the encounter between materiality and specific literary genres (administrative literature, religious, didactic, etc.), the formation of a class of (professional?) scribes, the elaboration of Indic scripts, etc. are all inaccessible or only very partially accessible events to us, at least in terms that are beyond just those of reasonable assumptions.

41 On the mutual exchange that must have occurred between Buddhist Gandhāran communities familiar with birch-bark and immigrated Indian communities familiar with palm-leaves, see for instance Baums 2020, 358–359. On birch-bark scrolls, see e.g. Allon 2014, Baums 2014, Falk and Strauch 2014, and Salomon 2014.

The oldest extant specimen of birch-bark pothi dates to the fifth century and hails from Central Asia,[42] then we have the collections of birch-bark pothis from Gilgit and Bamyan (Greater Gandhāra), dating from the sixth to eighth century.[43]

We should briefly notice that, to my knowledge, we have three tiny extant fragments of paper manuscripts from Central Asia that date on palaeographical basis to the third/fourth century.[44] Their extremely poor state of conservation seems to prevent an identification of their form, although, I would argue, pothi is a plausible option.[45] Fortunately, however, we do have fragments of manuscripts made of silk, leather, and poplar wood palaeographically datable to *c.* the third century.[46] One could therefore wonder if palm-leaf pothis encountered paper and other materials before birch-bark. I would tentatively argue that, on the basis of geographical considerations, it is more likely that the palm-leaf pothi met Kashmirian birch before paper and other materials apparently used in Central Asia only, along the route from the Indian subcontinent to the oases of the Taklamakan Desert.

Notwithstanding what was the first alternative material, this encounter with a different writing surface constituted a symbiotic event for the pothi manuscript culture: its materiality deeply changed, since manuscripts could now be made with surfaces other than palm-leaves.[47] It would probably be far-fetched to assume that this innovation directly opened the way for other materials to be used as writing surfaces, but we could definitely see it as the moment in which the latent adaptability of the pothi manuscript culture became manifest. We should not therefore be surprised that several other supports have been used through the regions of Central, South and South-East Asia to produce pothis. Apart from those already discussed above, we can also mention the leaves of

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42 This is a copy of the Sanskrit treatise on metrics entitled *Chandoviciti*, discussed in Sander 1991, 137–138.

43 See Melzer 2014, 229 and Braarvig 2014, 158, respectively.

44 All three fragment contain small portions of texts written in Kharoṣṭhī script: one is described in Conrady 1920, 113, 191, pl. 38, no. 36, and two in Hasuike 2004, 95–96, no. 6101 and 6102. Our source is Falk and Strauch 2014, 55, from which we report the date, although it should be noticed that Hasuike 2004, 95–96 proposes the fifth/sixth century as a date for the two fragments he describes.

45 A slightly later paper manuscript that is definitely in the pothi form and datable on a palaeographical basis to the fourth/fifth century is discussed in Hartmann 1988, 88–92.

46 For references, see Sander 1991, 147–148.

47 One could argue that we already have a change in materiality with metal inscriptions, such as those discussed above. However, several features of pothis are missing in inscriptions, such as the ink (whether liquid ink as in North India, or soot as in South India and South-East Asia) and the stack of folios to be turned upward.

gebang palm (*Corypha utan*), which is another palm tree used in Indonesia,[48] bark of agarwood in Assam,[49] various kinds of paper in Central Asia and at later stages in Northern India,[50] and sheets of metal, ivory, etc. as in the case of some particularly luxurious lacquered Kammavacas from Burma.[51]

Remarkably, on the basis of the extant material, what seems to have happened is that some birch-bark manuscripts dispensed with string-holes,[52] contrary to the majority of birch-bark pothis, as well as palm-leaf pothis and the above-mentioned pothis made with paper, silk, leather, and poplar wood.[53] Instead of holes, we find place holders, such as decorations or blank spaces. It is this the moment in which the unbound (or loosely bound) pothi makes its appearance, an innovation which will characterise virtually all subsequent North Indian paper as well as woodblock pothis ever produced.[54]

On the other hand, and here lies the non-reciprocity of our current symbiosis, although the craftsmanship related to birch does change too, since its multipurpose bark-sheets became part of a further new economy, I do not think that this changed much the ecology of the tree, with presumably just a relatively small number of plants directly affected, i.e. those from which bark was extracted. Moreover, we do not know of birch undergoing domestication, i.e. it was not cultivated with the precise aim of providing writing surfaces, contrary for

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48 See Gunawan 2015.

49 See Morey 2015.

50 For a recent assessment of the early history of paper in Central Asia, see Helman-Ważny 2020. For an overview of paper pothis from Dunhuang (datable to *c.* the eight century), which carry texts in both Tibetan and Chinese, the latter written either vertically or horizontally (left to right), see Galambos 2020, 25–27, 143–152. As for paper used for manuscripts in India we are told of a few dating to the eleventh to thirteenth century (Gode 1969, 7), although paper was known in India before, most probably since the seventh century as witnessed by the Chinese pilgrim Yijing during his travel to India and as we know from the analysis of the folios made of 'clay-coated paper' from Gilgit (for a recent account, see Scherrer-Schaub 2016, 154–155). Concerning the latter, we have three fragmentary manuscripts that contain folios made of both birch-bark and this rare material, as for example a copy of the *Saṃghāṭasūtra* (von Hinüber 2014, 91, 104 and Kishore 1963).

51 See e.g. Igunma 2013, 632.

52 For example, we know of the Bakhshālī manuscript, which has no sting-holes, and whose folios are more squared than oblong and thus cannot be readily categorised as a pothi (for a reproduction, see Kaye 1927).

53 As mentioned above, the earliest exemplars of paper manuscripts are too fragmentary, but the paper pothi discussed by Hartmann definitely has holes (Hartmann 1988, 89). For descriptions and reproductions of the silk, leather, and poplar wood pothis, see Stein 1928a, 1024 and Stein 1928b, Plate CXXI, Lüders 1940, 586, and Nakatani 1987, respectively.

54 For a similar observation, see Hoernle 1901, 127–128.

example to Talipot, which may have been cultivated with this purpose, as apparently witnessed in the seventh century by the Chinese pilgrim Xuanzang.[55]

6.2 Symbiosis 2: Encounter with Buddhism

The encounter with Buddhism, in particular its Mahāyāna version, had profound consequences for the pothi manuscript culture. Certainly, one of the most prominent is that pothis acquired sacral and ritualistic functions on top of their presumably practical ones (educational, administrative, etc.). They became objects of veneration, the production and reproduction of which was believed to have positive effects on the rebirth of donors and their families.[56] The same practice was to be later adopted by certain strands of Brahmanism and Jainism, as well.[57]

In the eyes of monks, nuns, and laypeople, manuscripts containing Buddhist texts (*sūtra*s in particular) became tantamount to the Buddha's speech or even his body (inasmuch as they are equated to his relics), thus attaining a holy status.[58] Such a status was accompanied by the development of ritualistic usages of manuscripts, in particular their being installed in *stūpa*s or carried around as amulets.[59]

A further implication of the new status attributed to manuscripts was the development of the practice of *vidyādāna* ('gift of knowledge'): donating manuscripts as well as writing implements became a meritorious act.[60] A sign of the far-reaching implications of this phenomenon is for example that, within the Indian context, even manuscripts containing Vedic texts were written down and donated,[61] despite the fact that the official voice of Brahmanism notoriously abhorred such a practice.[62]

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55 See Hoernle 1901, 124.

56 For references, see De Simini 2016, 2–22.

57 See De Simini 2016 and Cort 1992, respectively.

58 These equations are still debated as far as early Mahāyāna Buddhism is concerned (see references in De Simini 2016, 8–11), but have later become well-established, as in the case of Tibetan Buddhism (Almogi and Wangchuk 2016, 5–7) and Mongolian Buddhism (Wallace 2009, 91).

59 For references, see De Simini 2016, 8–13.

60 De Simini 2016. The label *vidyādāna* is used here for the sake of convenience, although it is not used by all relevant sources.

61 Galewicz 2011.

62 Kane 1941, 348–349.

Concerning the non-reciprocity of the current symbiosis, I would venture to argue that the fact of having its texts transmitted on codices, scrolls, or pothis did not make much of a difference for Buddhism. Those artefacts initially became sacred not for their shape, but for the texts they contained, even though out of habit the oblong shape ended up evoking a reaction of awe and respect in the people engaging with pothis.

6.3 Symbiosis 3: Encounter with xylography

A further symbiosis was triggered by the encounter with xylography, *alias* woodblock print, a technology originally developed in China, at least from the fifth century.[63]

For obvious geographical reasons, such encounter took place first in Central Asia. Camillo A. Formigatti has convincingly argued that the date of a specific woodblock printed pothi, namely item 612 (*Samyuktāgama*) of the *Sanskrithandschriften aus den Turfanfunden*, ranges between 850–1250, i.e. the Uighur occupation of the city of Qočo.[64] However, we have so few extant materials from that area that it is probably easier to focus our attention on the spread of this technology in Tibet from the early fifteenth century onwards.[65]

The Tibetan case can help us find a way out of the debate whether such prints can still be considered manuscripts. Here, I would like to tackle this conundrum by arguing that, even if one wants to argue that individual artefacts cannot be counted as manuscripts, their production and perception can still be recognised as part of the pothi manuscript culture, just one that has changed owing to the encounter with xylography.[66]

Concerning the production aspect, we can mention, for example, the fact that xylography necessitates copyists who produce the manuscript that is then pasted on the woodblock, and thus perpetuates the habitus of handwriting, including its stylistic variations and orthographic mistakes,[67] or that the scribe

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63 Barret 2008, 67.

64 Formigatti 2016, 86, see also *ibid.* 81 n. 11 about the fragments of this specific pothi.

65 For the dating of early Tibetan woodblock prints, see e.g. Diemberger 2016.

66 We thus try to answer differently the question raised by Formigatti 2016, 118: '[...] xylographs and lithographs certainly aren't manuscripts, but should we still equate them to books printed with movable types and printing presses? Maybe it would be better to think of them as something similar to a manuscript and a printed book at the same time, and yet different from both'.

67 Scherrer-Schaub 2016, 166.

of the manuscript can also be one of the craftsmen involved in the carving of woodblock.[68] Also in terms of layout, one can notice that, as in the case of certain birch-bark and paper pothis from North India, a placeholder for the string-hole is maintained also in the prints, further enhancing the idea of continuity with palm-leaf manuscripts.[69] Concerning their perception one can mention that primary sources seem to rarely differentiate between manuscripts and prints,[70] or that both artefacts are still produced in Tibet, since they are attributed an aura unmatched by other media, such as the modern printed book.[71]

As for the non-reciprocal aspect of the symbiosis in question, I would argue that xylographic technology did not really change when it encountered pothis, but that on the other hand the pothi manuscript culture significantly changed, yet without loosing its identity. As in the case of the adoption of birch-bark as a writing surface, xylography did not spread across the whole pothi manuscript culture, but yet revealed the potential of the latter to survive and incorporate technological innovations.

7 A missed symbiosis

We now turn to what seems to me to have been a rather conspicuous case of missed symbiosis, namely the lack of interaction between the pothi manuscript culture and the Turco-Persian culture.

Caveats are in place, as we will see below, we are talking here of the Islamic culture and political power that came to the Indian subcontinent along with the Turkic Islam of Central Asia (twelfth/thirteenth to sixteenth century) and, later on, the Turco-Persian Islam of the Mughals (from the sixteenth century) and not of Islam tout court. In fact, Islam and pothis, in particular palm-leaf ones, did meet, though the encounter never gained a strong momentum. We thus have palm-leaf pothis produced in the Tamil Muslim milieu and a certain Islamic tradition proper to the Sasak community of Lombok (Indonesia).[72]

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68 Two such craftsmen, both active in the sixteenth century, are dPal ldan rgyal po (Ehrhard 2016, 219–220) and Ba dzra dho ja (Vajradhvaja) (Clemente 2017, 387–388).
69 Scherrer-Schaub 2016, 164–165.
70 Sharshon 2016, 238.
71 See Almogi and Wangchuk 2016, 10.
72 More 2004, 36–37 offers a succinct report of the former, whereas aspects of the latter are discussed in van der Meij forthcoming. Note that the same is true in the case of Christian literature in South India. One possible exception could be that of the Bengal pothis containing the

On the other hand, we approach a statistical zero when we look for manuscripts in pothi form that contain Islamic texts belonging to Turco-Persian Islam. Within our approach, this does not mean, though, that the pothi manuscript culture is dormant or dead, but rather that by the time Islam enters the subcontinent from North-west, it has reached a maturity and a self-containedness that do not leave room for any symbiotic pulse.[73] This non-event is particularly noteworthy given the otherwise astounding and variegated forms of Indo-Persian syncretism,[74] and precisely because it is indirectly revealing of the nature of the pothi manuscript culture as an object *à la* OOO.

In contrast, we can observe how the Islamic codex culture is able to interact with local languages and materials. Thus, we see the production of codices containing texts composed in Sanskrit and various (Northern) Indian vernaculars, as well as *guṭakā*s, i.e. codices in landscape form which were used by Hindus, Sikhs, and Jains.[75] Similarly, we have Hindu motives depicted on vertical, codex-like layout, e.g. in the paintings of the Mewar school by the artists Nasir-uddin (sixteenth century) or Sahibdin (seventeenth century),[76] but to the best of my knowledge no Islamic motives painted in the horizontal, pothi-like layout.

8 *Cui prodest*?

We have hopefully shown that Harman's approach may help us find a melody amidst the historiographical noise, in other words an ontology, by both highlighting a certain kind of key moments (symbioses) in the history of the pothi manuscript culture and speculating on missed events – in Harman's own terms: '[p]aradoxically, to show us what any object is in itself requires subtracting from the knowledge we have about it: focusing austerely on its essential features

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deeds of *pīr*s ('sufi masters'), such as the two copies on paper pothi of the *Satya Pīrera Pāṅcāli* recorded by project EAP759 of the Endangered Archive Programme of the British Library (<https://eap.bl.uk/project/EAP759>, accessed on 9 April 2021), namely EAP759/1/4 and EAP759/1/90. However, since *pīr*s are considered to be holy individuals also by the local Vaishnava communities, I would argue that the manuscripts in question are not the result of the Islamic appropriation of the pothi form, but rather of Islam entering the pothi form once it has been absorbed by Hinduism.

73 In Harman's words, an object is mature when '[a]ll that remains is for the object to capitalize on what it has become by feeding on its environment' (Harman 2017, 121).

74 For a recent survey of this multifarious encounter, see Eaton 2019.

75 See Formigatti 2020.

76 Guy and Britschgi 2011, 98–102.

rather than promiscuously on all of them, and playing both counterfactually and poetically with other possible outcomes'.[77]

In this respect, we argue that the angle offered by OOO on manuscript studies is fresh and productive. In particular, it is an approach that has allowed us to engage with a specific manuscript culture, whereas other approaches would have us ask different questions, such as what is *a* manuscript or what is *a* manuscript culture. Thus, we cannot but conclude by expressing the wish that others will further foster the interaction between the field of philosophy and that of manuscript studies, over which – we insist – the wings of Minerva's owl are not going to spread for a long time to come.[78]

Acknowledgements

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77 Harman 2019, 275. In a similar vein, while referring to the fact that printing did not have much of an impact in South Asia for a long time, Sheldon Pollock quotes Fernand Braudel's statement that '"civilisations" are defined as much by what they refuse from others as by what they borrow' (Pollock 2007, 87).

78 'Die Eule der Minerva beginnt erst mit der einbrechenden Dämmerung ihren Flug' (Hegel 1821, xxiv).

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Max Jakob Fölster, Thies Staack

Collation in Early Imperial China: From Administrative Procedure to Philological Tool

Abstract: The origins of 'textual criticism' in China are usually traced back to Liu Xiang 劉向 (79–8 BCE), who is credited with the invention of philological tools, especially 'collation' (*jiaochou* 校讎). However, scholars have also noted that the terms *jiao* 校 and *chou* 讎 occur in earlier sources, especially manuscripts with legal or administrative texts. Surveying evidence on the mentioned collation techniques from received literature and from manuscripts dating to the late third and early second century BCE, this paper lays bare the administrative roots of later philological tools. It argues that Liu Xiang adopted established methods and terminology from the administrative and legal sphere that had been around for at least 200 years.

1 Introduction

Cultures around the world that have produced large text corpora at some point all have developed philological tools to deal with problems such as textual variance and corruption. In the case of the Chinese tradition, the eminent scholar of the Western Han Dynasty (206 BCE – 9 CE), Liu Xiang 劉向 (79–8 BCE) is credited with the invention of such tools. Liu Xiang and his project to assess the imperial manuscript collection during the reign of Emperor Cheng (33–7 BCE) are associated with the practice of 'collation' (*jiaochou* 校讎).

Bamboo and wood manuscripts from early imperial China excavated in increasing numbers since the 1970s provide new evidence on the possible origins of these philological tools. Scholars have duly noted that the terms *chou* and *jiao* appear in some of these manuscripts, especially legal or administrative texts from the Qin Dynasty (221–206 BCE).[1] This seems to suggest that Liu Xiang did not invent the techniques which he carried out his editorial work with but has adopted established methods and terminology from the administrative and legal sphere that had been around for at least 200 years.

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1 Deng Junjie 2012a, 2012b; Fu Rongxian 2007.

To probe the origins of 'textual criticism' in China, this article will survey textual evidence on the collation techniques *jiao* 校 and *chou* 讎 from received literature on Liu Xiang's methods and from manuscripts dating to the late third and early second century BCE. The latter, on the one hand, offer descriptions of these techniques. On the other hand, some manuscripts were subjected to collation, which left visible traces in the form of collation notes and marks. By this investigation, we hope to further our understanding of the terminology and the techniques related to collation and lay bare the administrative roots of later philological tools.

2 Collation as part of Liu Xiang's editorial work

In 26 BCE, Liu Xiang, one of the most eminent scholars of the Western Han period, was commissioned to head a team of scholars in a grand-scale project to assess the imperial manuscript collection. Until his death, Liu Xiang worked on sighting and collating a huge number of manuscripts – not only from the imperial collection proper but also from other sources. This work, carried on by his son Liu Xin 劉歆 (*c.* 50 BCE – 23 CE), resulted in the production of editions of texts found in the imperial collection. We have to assume that most if not all of China's classical literature from pre-imperial and early imperial times as we know it today was decisively shaped by this editorial endeavour. The 'Treatise on Classics and other Texts' (*Yiwenzhi* 藝文志) in the *History of the Han* (*Hanshu* 漢書), which is based on a now-lost catalogue compiled by Liu Xin at the end of the long-term project, gives evidence of the scope of the work once begun by Liu Xiang. It lists over 600 titles divided into six main categories and 38 subcategories.[2] However, through the editorial reports (the so-called *Bielu* 別錄), we get a glimpse of the editorial praxis employed by Liu Xiang and his collaborators. Such a report was written for each work that was collated and edited and then submitted to the throne together with the final edition of the respective work. As with the catalogue of Liu Xin, these reports have only survived in fragments. Out of the more than 600 titles listed in the 'Treatise on Classics and other Texts', for all of which individual reports must have been submitted at some point in the process, there are only nine relatively complete reports extant today.[3]

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2 *Hanshu* 30, 1701–1781.

3 Fölster 2016 offers a detailed study on the collation project. This also includes a full translation of the 'Treatise on Classics and other Texts' and the most comprehensive collection of remaining fragments from the editorial reports to date including English translations.

A term that figures prominently in these reports and that was central for Liu Xiang's editorial work is *jiaochou* 校讎 (also *choujiao* 讎校), which is usually understood in the sense 'to collate' or 'to check by means of comparison'. A fragment from Ying Shao's 應劭 (*c.* 125–204) *Comprehensive Meaning of Customs and Habits* (*Fengsu tongyi* 風俗通義) gives the regularly cited definition for this term:

> 風俗通曰：案劉向別錄：讎校：一人讀書，校其上下得繆誤，為校；一人持本，一人讀書，若怨家相對，[為讎]。[4]

> The *Comprehensive [Meaning] of Customs and Habits* says: According to Liu Xiang's *Bielu*, *choujiao* [means]: If one man reads out a piece of writing, checking the context to find errors, this is *jiao*; if one man holds a copy and another man reads out the piece of writing, opposing one another like enemies, [this is *chou*].

The above is not a quote from one of the editorial reports but rather an explanation of the term from a later work. It shows that only around two hundred years after Liu Xiang, the term's exact meaning was no longer self-evident and needed to be explained. This brief description, rather than offering a proper definition, opens up new questions to the modern reader. In part, this has also to do with the fact that this fragment is transmitted in slightly different versions. However, all versions suggest that *jiao* and *chou* are different activities. While *jiao* refers to the 'checking' of a piece of writing by only one person, *chou* seems to refer to another method of checking in which two persons collaborate and compare two separate pieces of writing – probably containing different witnesses of the same text. From this, it follows that *jiao* is a form of proofreading, and only *chou* refers to collation in the proper sense. It is also the description of the latter which has led to discussion among scholars on how to understand the precise character of the *chou* collation. The main point of discussion boils down to the question of what to make of the difference between a 'copy' (*ben* 本) and a 'piece of writing' (*shu* 書). Does one of them refer to a model (*Vorlage*) or an authoritative version of a text serving as a basis to check another copy of that same text? Or does it refer to two disagreeing textual witnesses, which are then compared in order to arrive at the definitive edition of the text?

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4 *Fengsu tongyi jiaozhu*, 495. The fragment is cited in *Wenxuan* 6:287. The emendation at the very end was made on the basis of two similar citations in works from the Song-period (960–1279). *Taiping yulan* (618:3A, 2906.1): 劉向別錄曰：讎校者：一人持本，一人讀析，若怨家相對，故曰讎也。 *Xixi congyu* (shang:40): 劉向別錄云：讎校書：一人持本，一人讀對若怨家，故曰讎書。

No consensus has been reached on these questions, and the scarce evidential basis has led to contradictory explanations. While some take *ben* to be the model, for others, it is *shu*.[5] In an attempt to overcome the challenge of limited sources, a pottery figurine excavated from the Jin period (265–420 CE) tomb no. 9 at Jinpenling 金盆嶺, Changsha in 1958, has been interpreted to show two men engaged in the *chou* collation (see Fig. 1).[6]

Fig. 1: Pottery figurine from tomb no. 9 at Jinpenling.[7]

Tempting as this interpretation might be, it completely ignores the context of this figurine as a burial object placed in a tomb. A study which takes into account the context within a whole assembly of burial objects concluded that the

5 See Jin Su 2005 for an overview of the various explanations.
6 Deng Junjie (2012b, 265–266). The tomb has been dated to the year 302 CE (Shaughnessy 2006, 'cover art' description). For the excavation report, see Hunan sheng bowuguan 1959.
7 The figure was taken from Hunan sheng bowuguan 2018, 276.

figurine rather shows two deities administering life and death (the Director of Fate and the Director of Records). This motif expresses the hope that the tomb owner may become an 'immortal' (*xian* 仙), representing a common theme in tombs from that period.[8]

A closer look at the terminology used to describe Liu Xiang's collation practice reveals that apart from *jiaochou* or *choujiao,* one most frequently finds *jiao* but never *chou* alone. Indeed, *jiao* refers to the collating of different textual witnesses. See for example the following passage from the 'Treatise on Classics and other Texts':

劉向以中古文易經校施、孟、梁丘經，或脫去「無咎」、「悔亡」，唯費氏經與古文同。[9]

Liu Xiang took the old text *Changes* classic from the inner [palace] to collate the classic's [versions] of Shi, Meng and Liangqiu. They sometimes left out [the formulas] 'no blame' and 'remorse disappears', only Mr. Fei's [version of the] classic was identical to the old text [version].

In addition, the recurrent formula in the editorial reports, which describes the process of collation, also uses *jiao*: 'by collating them [with each other] I eliminated [...] duplicate chapters' (以[相]校除復重[...]篇).[10] This usage of *jiao* contradicts the definition cited above. It has also been argued that *jiao* and *chou* refer to the same technique, the only difference being the involvement of one person rather than two persons.[11] However, this merely reiterates the classic definition cited earlier.

The following section will investigate *jiao* and *chou* in the context of the Qin administration and shed some more light on the possible origins of the collation techniques used by Liu Xiang. It argues that at least during the Qin period, the two terms described clearly distinct processes of institutionalized checking that were also applied to different types of documents.[12]

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8 Jiang Sheng 2011. In a similar vein, Li Huijun 2020 argues that the figurine shows two deities and that its imagery exhibits early Buddhist influence.

9 *Hanshu* 30, 1704.

10 Fölster 2016, 167.

11 Deng Junjie 2012b, 264–265. See also Fu Rongxian 2007, 93.

12 In the following, we will employ the working translations 'to collate' for *chou* and 'to check' for *jiao*.

3 Collation terminology in Qin administration

3.1 *Chou*

3.1.1 Legal prescriptions and reports on *chou*

To date, the earliest occurrences of the term *chou* in the context of collation or checking are found in Qin laws and administrative documents. The following two examples come from a collection of legal excerpts that were excavated from tomb no. 11 at Shuihudi 睡虎地 in 1975:

縣上食者籍及它費大（太）倉，與計偕。都官以計時讎食者籍。　　倉[13]

The prefectures submit the registers of persons who have received food rations as well as [records of] other expenses to the great granary; they go together with the accounts. The metropolitan offices at the time of accounting (i.e., towards the end of the year) collate the registers of persons who have received food rations.　　[Statutes concerning] granaries.

歲讎辟律于御史。　　尉雜[14]

Once a year collate the penal statutes with the Prosecutor.[15]　　Various [statutes concerning the] Commander.

Although these terse stipulations do not offer a detailed description of the *chou* procedure, a few conclusions can still be made. First, *chou* was conducted regularly, apparently once per year. The time of accounting towards the end of the year when each office submitted its 'accounts' (*ji* 計) to the higher authorities seems to have been one of the typical occasions. Second, it was applied to at least two types of documents: 'registers' (*ji* 籍, e.g., of persons receiving food rations)[16]

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13 *Qinlü shiba zhong* 秦律十八種, slip 37. See Shuihudi Qinmu zhujian zhengli xiaozu 1990, 28 (transcription part). Translation based on Hulsewé 1985, 41.
14 *Qinlü shiba zhong* 秦律十八種, slip 199. See Shuihudi Qinmu zhujian zhengli xiaozu 1990, 64 (transcription part). Translation based on Hulsewé 1985, 90.
15 As stated by Hulsewé (1985, 90), the term *yushi* 'Prosecutor' could refer to different officials. It seems likely that it refers either to the *yushi dafu* 御史大夫 'Chief Prosecutor' at the imperial court or the *jian yushi* 監御史 'Inspecting Prosecutors', who were established in each Qin province. On the latter, see You Yifei 2016, 482–491. The English translations of the titles follow Giele 2006, 51–52.
16 That other kinds of registers, such as household and land registers, were likewise subjected to *chou* once per year is suggested by an early Han stipulation in *Ernian lüling* 二年律令, slips 331–333. See Peng Hao et al. 2007, 223; Barbieri-Low and Yates 2015, 798–799.

and (a certain part of) the existing 'statutes' (*lü* 律). Third, offices/officials on different levels of the administration participated in the *chou* process: in the first example, it was conducted by the metropolitan offices – agencies of the central government, which were located in the capital or the provinces and prefectures[17] – in the second by a Prosecutor, either on the provincial level or in the capital.

Two administrative documents excavated from well no. 1 at Liye 里耶, the former seat of the Qin prefecture Qianling 遷陵, provide evidence for the actual application of the *chou* procedure to written law and add a few further details to the picture:

卅一年六月壬午朔庚戌，庫武敢言之：廷書曰令史操律令詣廷讎，署書到、吏起時。有追。・今以庚戌遣佐處讎。敢言之。
七月壬子日中，佐處以來。/端發。　　　　處手。[18]

In the 31st year [of the First Emperor of Qin, i.e., 216 BCE], in the sixth month with the first day *renwu*, on day *gengxu*, [Overseer] Wu of the armoury ventures to report the following: 'A document from the court [of Qianling prefecture] reads: "Order a Scribe to take the statutes and ordinances and present them to the [prefectural] court for collation. Make a note on the time of arrival of this document as well as the time of departure of the official [carrying the statutes and ordinances]. There will be a tracking [if they are not presented in due time]." Now on the day *gengxu* we sent the Assistant Chu to collate [the statutes and ordinances.] End of report.'
In the seventh month, at midday of the day *renzi*, Assistant Chu arrived [with this document at the court of Qianling prefecture]. /Opened by Duan.　　　Handled by Chu.[19]

□年四月□□朔己卯，遷陵守丞敦狐告船官□：令史廥讎律令沅陵，其假船二艘，勿留。[20]

In the [...] year, in the fourth month with the first day [...], on day *jimao*, acting Vice Prefect Dunhu of Qianling prefecture informs [the Overseer of] the boat office [...]: 'Director Scribe Kang is to collate statutes and ordinances at Yuanling. You shall lend him two boats and not delay [his journey].'[21]

From these documents, we can gather that not only statutes but also 'ordinances' (*ling* 令), the second major form of written law, were subjected to *chou*. In addition, the process often seems to have required a subordinate office to transport writings it used or had formerly received – in these cases, copies of statutes and

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17 Barbieri-Low and Yates 2015, 123.
18 Slip 8-173. See Chen Wei 2012, 104.
19 Cf. the translation in Yates 2018, 439.
20 Slip 6-4. See Chen Wei 2012, 19.
21 Cf. the translation in Yates 2018, 440.

ordinances – to a superior office for collation. For the armoury, this was the court of Qianling prefecture. For the prefecture itself, the probable destination was the court of the province in which it was situated or the seat of the province's 'Inspecting Prosecutor' (*jian yushi* 監御史).[22]

In addition to the common interpretation of *chou* as a means of checking, some scholars have argued that, at least for statutes and ordinances, it may have been one of the means by which these texts were normally disseminated throughout the Qin Empire.[23] However, at least from the first of the two Liye documents cited above, it can be gathered that existing copies of statutes and ordinances were actually taken from a local office to the prefectural court to conduct *chou*. Moreover, the word normally used for 'copying' all sorts of texts, including statutes, was *xie* 寫.[24] Still, it seems likely that *chou* included both the checking of the existing manuscripts and – in case changes had been ordered by the central government – updating the existing and/or copying of new laws (see below).

In addition to registers and written law, maps were apparently also subjected to *chou*, which is shown by the following fragmentary document from Liye:[25]

[...]其旁郡縣與椄（接）界者毋下二縣，以□爲審，即令卒史主者操圖詣御史，御史案讎更并，定爲輿地圖。有不讎、非實者，自守以下主者[...][26]

[...] in case the prefectures of neighbouring provinces that have common borders with [the province in question] are not less than two, ascertain [...], thereupon order the Accessory Scribes[27] in charge to take the maps [of their respective province] and present them to the

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22 According to You Yifei (2016, 484 with n. 96), either the seat of the Governor of Dongting 洞庭 province or the seat of its Inspecting Prosecutor may have been situated at Yuanling.

23 Zhou Haifeng (2016, 45–48) proposed that new laws were most commonly sent down from the central government to the provinces and on to the prefectures. To carry on dissemination further down the hierarchy, offices from the 'district' (*xiang* 鄉) level as well as the 'metropolitan offices' (*duguan* 都官) sent persons to copy the laws at the respective prefectures and later made them known in the districts and 'villages/quarters' (*li* 里). On the basis of Liye slip 6–4 (see above), he further argued that some laws were not sent all the way to the prefectures, but had to be copied at the provincial court.

24 On different terms for writing in Qin and Han administration, see Staack 2019.

25 For the suggestion that this is a fragment of an ordinance, see Ye Shan 2013, 103–104.

26 Slip 8-224+8-412+8-1415. See Chen Wei 2012, 118.

27 For this translation of the title and the officials referred to as *zushi* 卒史, see Barbieri-Low and Yates 2015, 1105 n. 20. See also Lau and Lüdke 2012, 190 n. 923. In the present case, the *zushi* probably belong to the 'province' (*jun* 郡) level rather than the capital, because it seems likely that each province had an Accessory Scribe who was responsible for the maps of all its subordinate prefectures.

> Prosecutor, who investigates and collates them, combines them anew and [thereby] fixes[28] a [new] map of the whole [Qin] territory. In case [maps are] not collated or do not correspond with the facts, from the Governors downward all in charge [...][29]

As in one of the stipulations from Shuihudi, where certain statutes have to be presented, it is again a Prosecutor (*yushi*) who is responsible for the *chou* procedure.[30] Although the whole passage is lacking more substantial context, it seems that in this case, the *chou* process works 'bottom-up' rather than 'top-down'. The background of this appears to be a certain change of the borders between two provinces whereupon the Accessory Scribes in charge of the maps are to present the revised maps to the Chief Prosecutor at the capital. He, in turn, probably had to check whether the two provinces had their maps revised in a way that corresponded to each other while also making sure the changes were worked into the map of the whole Qin territory.

3.1.2 Traces of *chou* in manuscripts

Apart from the above regulations and reports that describe or illustrate certain features of the *chou* procedure, Qin manuscripts from the Yuelu Academy collection provide some notable traces of editorial activity that may have been caused by one or several *chou* processes.[31]

The following three titles are each written on separate bamboo slips and seem to refer to different parts or categories of a larger compilation of ordinances:[32]

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28 Note that *ding* 定 or *dingzhu* 定著 also occur in Liu Xiang's editorial reports in the sense of fixing the final text. See Fölster 2016, 186–187.

29 Cf. the translation in Yates 2018, 428.

30 Again, *yushi* 御史 might refer to officials at the province level or to the Chief Prosecutor at the imperial court. See also footnote 15 above. You Yifei (2016, 485–486), interprets *yushi* here as the Inspecting Prosecutor of a province. However, with regard to the fact that more than one province seems to be involved, it appears more likely that the maps were checked by an authority above the province level. Hence, we interpret *yushi* here as referring to the Chief Prosecutor.

31 Some examples were already discussed in Zhou Haifeng 2016, 51–52.

32 All three slips were first published in vol. 4 of the Yuelu Academy manuscripts (Chen Songchang 2015), but actually seem to belong to two bamboo manuscripts the rest of which was published as 'group 1' in vol. 5 (Chen Songchang 2017) and 'group 1' in vol. 6 (Chen Songchang 2020), respectively. Hence, the slips were included in the latter volumes too.

▌廷內史郡二千石官共令　　　·第戊　　·今庚³³

Ordinances provided to³⁴ the 2,000-bushel officials at the court, in the capital area as well as in the provinces.　　　E　*Now G.*

▌廷內史郡二千石官共令　　　·第己　　·今辛³⁵

Ordinances provided to the 2,000-bushel officials at the court, in the capital area as well as in the provinces.　　　F　*Now H.*

▌廷內史郡二千【石】官共令　　·第庚　　·今壬³⁶

Ordinances provided to the 2,000-bushel officials at the court, in the capital area as well as in the provinces.　　　G　*Now I.*

Following the title that describes the compilation of ordinances as a whole, the respective part is referred to by one of the ten 'Heavenly Stems' (*tiangan* 天干) – a fixed sequence of characters that has been represented in the translation by the first ten letters of the Roman alphabet. At the bottom of each of the three slips, there are additional notes in a clearly different hand (set in italics in the transcription and the translation). These notes suggest that the titles of the three parts 'E', 'F' and 'G' were changed to 'G', 'H' and 'I', respectively. The reason for this change is unclear, but one possibility is that two new parts were added before part E, causing parts E, F and G to 'shift down two places' in the sequence of the Heavenly Stems.³⁷

　　　Another hint at editorial activity that may have been part of or initiated by the *chou* procedure is the occurrence of the note *chong* 重 'duplicate'³⁸ at the end of two ordinances:

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33 Chen Songchang 2015, 219 (slip 375) (only upper three fragments); Chen Songchang 2020, 68 (slip 63).

34 On this meaning of *gong* 共 in ordinance titles, see Chen Songchang 2016, 59–61.

35 Chen Songchang 2015, 212 (slip 353); Chen Songchang 2017, 59 (slip 62).

36 Chen Songchang 2015, 224 (slip 390); Chen Songchang 2017, 72 (slip 98).

37 Chen Songchang 2016, 61. This would suggest that – at least in this compilation of ordinances – the arrangement of parts or categories was not chronological but may rather have followed content criteria. It is unclear whether such titles were determined by the central government or on a lower level of the administration. For a similar case of updating, concerning the number of items in a list of funerary goods from tomb no. 3 at Mawangdui, see Chen Songchang 1994, 68. See also Waring 2019, 188–190.

38 Note that Liu Xiang's editorial reports also mention duplicates with the similar term *fuchong* 復重. See Fölster 2016, 165–168.

●封書毋勒其事於署。書以郵行及以縣次傳送者，皆勒書郡名于署。不從令，貲一甲。
　　・卒令丙四　　　*重*[39]

For sealed documents, do not inscribe the matter [the document is concerned with] on the address label. For documents that are forwarded by the courier service or transmitted and delivered according to the order of the prefectures, in every case inscribe the name of the province on the address label. Not to follow this ordinance is fined one shield.
　　Accessory ordinances, C4　　*Duplicate.*

●諸軍人、漕卒及黔首、司寇、隸臣妾有縣官事，不幸死，死【所令縣將】吏刻其郡名槽及署送書可以毋誤失道回留。　　　・卒令丙卅四　　*重*[40]

For soldiers and boatmen as well as black-headed ones, robber guards and bondservants who, while working for the government, die unfortunately, [the office at their place of] death [has the commanding] official [of the prefecture][41] inscribe the name of the [deceased's home] province on the provisional coffin and add a note [with this information] to the accompanying document so that [the transport] can be [conducted] without mistake, losing the way or delay.　　Accessory ordinances, C34　　*Duplicate.*

Comparable to the case of the changed titles of certain parts of a compilation above, the notes 'duplicate' that follow the present ordinances seem to have been written by a different hand than the text of the ordinances proper. This suggests that the original collection of written law, of which these ordinances were a part, must have contained at least one other copy of each of the two ordinances. And indeed, there are slips with identical text among those acquired together with the slips just presented.[42]

It has been suggested – at least for the first example – that the 'duplicate' note was applied by a 'person checking the ordinances by means of comparison' (*jiaochou zhe* 校讎者) and that the two identical copies of the same ordinance were most likely part of the same manuscript. As the two ordinances were written by different hands, an explanation of this phenomenon could be that two scribes collaborated during the production of the manuscript, unaware that

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39 Chen Songchang 2020, 170 (slip 223). Punctuation modified.

40 Chen Songchang 2020, 170 (slips 224–225).

41 This passage could also be translated, 'if [the mentioned persons] die in the prefecture, in which they were ordered [to work for the government], their commanding official [...]' (死所令縣將吏).

42 For a fragment that matches the beginning of 'accessory ordinance C4', see Chen Songchang 2017, 104 (slip 111). For an identical version of 'accessory ordinance C34', see Chen Songchang 2017, 111 (slips 131–132).

some ordinances were being copied by both of them.[43] Although this is a reasonable suggestion and the measurements of the slips as well as the number and position of the traces of former binding strings also do not speak against the possibility that all the slips were once part of the same manuscript, this is at present difficult to prove.[44] Hence, we cannot be sure whether the contents of two separate manuscripts were compared and checked for duplicates or whether someone discovered a duplication while reading through/checking a single manuscript.

The above examples clearly demonstrate two things. First, the constant enactment of new laws during the Qin period and the countless copying processes that were necessary for their distribution to the lower levels of the administration must have caused a significant degree of textual variation as well as loss and also duplication. Second, the *chou* procedure must have been employed to counter-balance this tendency.

Although there are no explicit statements – at least in the material published so far – that some or all of the statutes and ordinances in the Yuelu Academy manuscripts were subjected to a *chou* procedure, there are additional hints. First, some of the manuscripts bear witness to textual emendations. For example, a manuscript titled *Statutes on Absconding* (*Wang lü* 亡律) contains numerous textual changes, many of which appear to be the result of systematic revision through which all occurrences of particular terms or formulations were emended or updated.[45] At least some of these likely go back to changes in administrative terminology following the establishment of the Qin Empire in 221 BCE. Second, many of the Yuelu Academy Qin slips with ordinances show vertical line marks that could have been applied in the process of collation (see Fig. 2).

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43 Zhou Haifeng 2016, 52. In fact, the same might be said of the second example shown here, which is not discussed by Zhou. The ordinance text on both slips with the 'duplicate' note appears to have been written by the same hand, whereas both identical copies were apparently written by another hand.

44 To date, no actual reconstruction of the original manuscripts has been conducted for the slips of either 'group 2' in vol. 5, or 'group 4' in vol. 6 of the Yuelu Academy manuscripts, to which the slips under discussion were assigned by the editorial team.

45 For an overview of these emendations, see Ji Tingting and Zhang Chi 2018, 250–252. We thank Tong Chun Fung 唐俊峰 for pointing out the fact that vol. 6 of the Yuelu Academy manuscripts contains numerous slips with spaces at the beginning or in the middle of the text of ordinances. Rather than lacunae, these spaces may indicate parts of text that were deleted in the course of a *chou* process, when parts no longer valid or needed may have been removed. For examples, see Chen Songchang 2020, 84–85 (slips 111 and 129).

Fig. 2: Possible collation marks at the bottom of slips with Qin ordinances; Chen Songchang 2017, 31.

The above figure shows the bottom part of slips 85–92 (right to left) of 'group 1' in vol. 5 of the Yuelu Academy manuscripts. Marks similar to those on slips 86, 89, and 91 not only can be found on other slips of the same group but also on slips belonging to 'group 3' in vol. 5 as well as on slips from 'group 1' and 'group 4' in vol. 6.[46] It is worth recalling here that the above-mentioned slips with changes of category titles also belong to 'group 1' in vol. 5 or 'group 1' in vol. 6, and the slips with the 'duplicate' notes to 'group 4' in vol. 6. This makes it even more likely that the marks are related to a *chou* procedure.

In fact, very similar marks can be found in 'lists of funerary goods' (*qiance* 遣策) that have been excavated from tombs dating to the first half of the second century BCE, for example, tomb no. 8 at Fenghuangshan 鳳凰山 (see Fig. 3).[47]

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46 For these additional marks, see Chen Songchang 2017, 29–30, 168 (slips 65, 76, 84, and 301); Chen Songchang 2020, 33–34, 159 (slips 36, 42, 47, 53, 58 and 217). The mark on slip 217 looks different than the others, representing a hook-shape rather than a vertical line. The editorial team assumes that both forms are 'collation marks' (*jiaochou fuhao* 校讎符號). See Chen Songchang 2017, 77 n. 78; Chen Songchang 2020, 183 n. 4.

47 On 'checkmarks' in these and other lists of funerary goods, see also Tian Tian 2019.
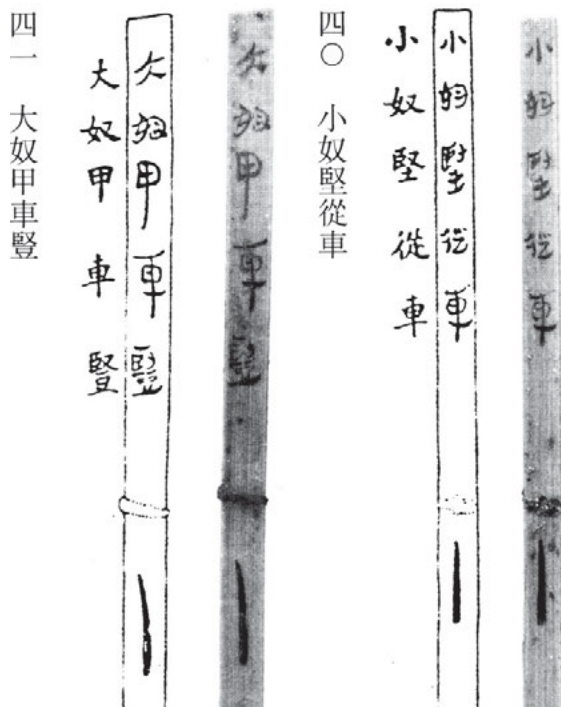
Fig. 3: Possible collation marks in a list of funerary goods from tomb no. 8 at Fenghuangshan; Hubei sheng wenwu kaogu yanjiusuo 2012, 23. Similar marks can also be found on the lists excavated from Fenghuangshan tombs no. 9, 168, and 169, reproductions of which were published in the same volume.

These line marks, which sometimes were applied in the middle of the slips (as in Fig. 3), and sometimes at the very bottom, have been interpreted as 'marks made when verifying the actual funerary goods (based on the list)' (*hedui qiwu zuo de jihao* 核對器物做的記號).[48] An even more intriguing example is the list excavated from tomb no. 3 at Mawangdui 馬王堆, because it contains an explicit mentioning of the *chou* procedure. Although the marks in that list have a different form – they resemble little crosses or short vertical strokes – one slip of the list carries the note 'collated until here/up to this point' (*chou dao ci* 讎到此) (see Fig. 4). The note can be seen below the mark on the rightmost slip and was only recently deciphered.[49]

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48 Hubei sheng wenwu kaogu yanjiusuo 2012, 13.

49 For this discovery, see Jiang Wen 2014.

Fig. 4: Possible collation marks in a list of funerary goods from tomb no. 3 at Mawangdui; Qiu Xigui 2014, 261. It shows slips 34–38 of the list. Note that Jiang Wen 2014 refers to a previous edition, in which the slip with the collation note has the no. 408 rather than the no. 34.

As in the case of the Fenghuangshan lists, the items on them were probably checked against the actual objects rather than a second manuscript.[50]

Besides the Mawangdui funerary list, there is a further non-administrative manuscript from the early Han period that has certainly undergone one or several processes of *chou*. The manuscript titled *Writings on Mathematical Procedures*

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[50] On 'supplementary notations' in the Mawangdui lists and the argument that these reflect communication between ritualists, see Waring 2019, 177–182.

(*Suanshushu* 筭數書) was excavated from tomb no. 247 at Zhangjiashan 張家山, which was sealed around 186 BCE. This manuscript's lower margin contains fourteen instances of 'signatures' by two persons named Wang 王 and Yang 楊. For each of the two, there is one note that, in addition to the name, includes a statement on completed checking (*yi chou* 已讎 'already collated').[51] Furthermore, there are dots in the lower margin and/or the main text, which seem to indicate mistakes and were probably applied in the course of checking.[52] Daniel Morgan and Karine Chemla, who have submitted the manuscript to palaeographic analysis, concluded that the *Writings on Mathematical Procedures* 'was not a personal creation but a group enterprise involving at least three to five people in a considerable back-and-forth of writing, proofreading, and correction'.[53]

To sum up, in Qin times, *chou* probably was an administrative procedure by which two (or more?) versions of a text or map were compared. The main purpose of *chou* apparently was to control the unified form and even distribution of certain, often normative (in the sense of 'prescriptive') texts – especially written law. It seems reasonable that such texts, as well as certain maps and registers which were likewise crucial for the administration of the empire, were subjected to collation. As of now, there are no hints pointing towards control of the material features of the respective manuscripts via *chou*. A certain variability in length of slips and number/position of binding strings – see, for example, the statutes and ordinances from the Yuelu Academy collection – suggests relative freedom with regard to the material features. We can further assume that *chou* does normally not include a comparison between two copies of a text that have the same status, but rather the comparative checking (and correcting or updating, if necessary) of one version against a more authoritative copy that was considered to be correct or up to date. This is also suggested by the fact that *chou* was usually done by a higher authority.

It should also be noted that – at the latest, by the early second century BCE – *chou* was also applied outside the administrative sphere. Evidence of this practice in lists of funerary goods and in mathematical writings that may have been

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51 Morgan and Chemla 2018, 155. That these are not signatures in the sense that they were necessarily written by Wang and Yang themselves is argued in Morgan and Chemla 2018, 162.
52 Morgan and Chemla 2018, 162–164. The yet largely unpublished Qin bamboo manuscript no. 4 in the Peking University collection shows similar marks at the bottom of some slips, on which mathematical texts were recorded. See Beijing daxue chutu wenxian yanjiusuo 2012, 70, Fig. 2; Han Wei and Zou Dahai 2015, 237–239.
53 Morgan and Chemla 2018, 168.

produced in a teacher-disciple setting[54] suggests that it spread to the 'non-official' realm. However, there is no evidence for its application to literary texts at this point.[55]

3.2 *Jiao*

The term *jiao* frequently occurs in Qin legal and administrative texts – in fact much more often than the above-mentioned *chou* – and has been variously translated as 'to check', 'to audit/check by means of comparison', as well as 'to crosscheck'.[56] The Qin period manuscripts that were excavated from tomb no. 11 at Shuihudi in 1975 contained legal prescriptions that provide a glimpse of the context in which *jiao* was conducted.[57] The following stipulation is an illustrative example:

> 計校相繆（謬）殹（也），自二百廿錢以下，誶官嗇夫；過二百廿錢以到二千二百錢，貲一盾；過二千二百錢以上，貲一甲。[58]

> When the accounts and checks [of stock] differ from each other, for 220 cash and less the Overseer of the office is reprimanded; if [the difference/mistake] exceeds 220 cash, up to 2,200 cash, he is fined one shield; if it exceeds 2,200 cash, he is fined one suit of armour.[59]

The above passage already indicates the administrative procedure to which *jiao* is closely tied, namely accounting. The so-called *shangji* 上計 or 'submission of accounts' system, in which once per year all sorts of accounts on state assets had to be submitted from the lowest offices to the prefecture and provincial

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54 Morgan and Chemla 2018.

55 As a sidenote, the occurrence of *chou* in the context of funerary lists – the few manuscripts that were *certainly* produced especially for placement in a tomb – also puts into perspective the argument that traces of *chou* can be a proof of pre-internment use of a manuscript. For this argument, see Zhou Haifeng 2016, 51–52.

56 See Hulsewé 1985, 49 n. 2; Barbieri-Low and Yates 2015, 743, 752 n. 56, 824; and Lau and Staack 2016, 7 n. 32, respectively. The named publications also seem to agree on the fact that *jiao* 校 was sometimes written as *xiao* 效, e.g., in the title *Xiao lü* 效律 'Statutes on Checking'.

57 Most of these can be found in the 'Statutes on Checking'. See the two manuscripts *Qinlü shiba zhong* 秦律十八種, slips 162–178 as well as *Xiao lü* 效律 in Shuihudi Qinmu zhujian zhengli xiaozu 1990, 57–59, 69–76 (transcription part). Cf. the translation in Hulsewé 1985, 78–82, 93–101.

58 *Xiao lü* 效律, slips 56–57. See Shuihudi Qinmu zhujian zhengli xiaozu 1990, 76 (transcription part).

59 Translation based on Hulsewé 1985, 100 as well as Lau and Staack 2016, 180 n. 873.

courts, and eventually up to the imperial court, may be seen as one of the main pillars of Qin (and Han) administration.[60] This way of keeping track of the state income and expenses was crucial for many aspects of everyday administration, for example, the allocation of human (including convict labourers) and material resources (such as weapons, tools, and cash). To prevent corruption, misuse of resources, and other unfavourable influences – at least to a certain degree – accounts (*ji* 計) had to be checked. Both the process of double-checking the results of the previous calculations in the accounts, as well as the particular documents that formed the basis for this checking procedure, were referred to as *jiao*.[61] Ideally, the results of the calculations in the account and those obtained from checking would not 'differ from each other' (*xiang miu* 相繆/謬), which, of course, was not always the case.

Recent research on the Liye administrative documents has cast further light on the complex system of accounting and checking in local administration. It was found that there are at least two categories of accounts that draw on different source documents. On the one hand, there are accounts of the exchange of human resources (e.g., convict labourers), which are compiled on the basis of daily and monthly 'account books' (*bu* 簿/薄), for example, 'account books of convict labourers assigned to work (at a certain office)' (*zuotubu* 作徒簿); on the other hand, there are accounts of the exchange of material resources such as grain or tools, which are compiled on the basis of one part of the 'tripartite tallies' (*sanbianquan* 參辨券) produced for each transaction.[62] Duplicates or parts of these documents – so-called *jiaobu* 校簿 and *jiaoquan* 校券 – were regularly submitted to the prefectural court and served as the basis for the checking (*jiao*) that was actually conducted by different 'bureaus' (*cao* 曹) acting as mediators between the prefectural court and its subordinate offices.[63] This

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60 On the *shangji*-system, see Loewe 2004, 44–46. On accounting during the Qin period, see, for example, Huang Haobo 2016.

61 Sueyasu 2016.

62 Huang Haobo 2016. Zhang Chi (2017, 131–132) has argued that whenever grain, cash, etc. were issued or received by a government office, that office had to prepare a tripartite tally. One part of the tally remained with that office (e.g. the *shaonei* 少內 'treasury' or the *cang* 倉 'granary'), one part with the other party involved in the transaction, and the third part – actually the middle part, or *zhongbianquan* 中辨券 – was submitted to the prefectural court. On tallies and accounting in the Qin period, see also Cao Tianjiang 2020.

63 Lai Ming Chiu and Tong Chun Fung 2016, 141–151. Although Zhang Chi (2017, 131) assumes that the prefectural court used the middle parts of tripartite tallies for accounting (*ji*), it seems more likely that they were used to check (*jiao*) the accounts submitted by the subordinate offices (and which were based on their parts of the tallies), see Cao Tianjiang 2020. If this is the case, then *jiaoquan* can be equated with *zhongbianquan*.

checking was done near the end of the year before the checked accounts were submitted – in a more comprehensive form – to the provincial courts (*jun*) and later the capital.

The basic principle behind *jiao* appears to be that the calculation of 'remaining assets' (*yu* 餘), which is the bottom line of every account (*ji*), is checked by conducting a second *independent* calculation. This independent calculation by the responsible bureaus is based on the mentioned duplicates or parts of documents (in the case of tallies), which the offices regularly forwarded to the prefectural court. Hence, in Qin administration, *jiao* mainly implies a process of calculation conducted by a superior office that was then compared to the result of the original calculation in the accounts of the subordinate offices. Both calculations were made on the basis of the 'same' (in the sense of duplicates/identical copies) source documents, but at separate offices and hence by different individuals.

To sum up, as an administrative procedure *jiao* is closely connected to numbers and calculations insofar as it constitutes a 'parallel accounting', the purpose of which is a crosschecking or double-checking of the 'accounts proper' (*ji*). As such, *jiao* is mostly directed to account books (*bu*) and tallies (*quan*), which constitute the source documents on the basis of which both calculations are made. As the checking is done at a superior office, the result of *jiao* probably outweighs/overrules the numbers submitted in the accounts. Hence, one part of the *jiao* procedure is the comparison of a checked textual witness against an unchecked witness – just as is the case for the *chou* procedure. However, a difference lies in the fact that *jiao* also includes the previous production of this checked textual witness.

4 Conclusions

The findings made on *chou* and *jiao* in the Qin administration may be summarized as follows:

- *Chou* is mostly directed towards texts (or drawings/maps), whereas *jiao* is mostly directed towards numbers;
- *Chou* is conducted for statutes (*lü* 律), ordinances (*ling* 令), registers (*ji* 籍), and maps (*tu* 圖), while *jiao* is conducted for accounts (*ji* 計) on the basis of account books (*bu* 簿) and tallies (*quan* 券);
- Both *chou* and *jiao* are conducted by offices superior to those who copied or drafted the documents to be checked, and both seem to have been conducted regularly, at least once towards the end of the year;

–   *Chou* refers to the comparison of an unchecked textual witness with a checked witness (as well as the correction/updating of the unchecked witness if necessary)[64], while *jiao* probably includes the creation of a checked textual witness with which an unchecked witness is compared (and on the basis of which the latter can be corrected).

Unfortunately, the available evidence does not allow conclusions as to how exactly *chou* and *jiao* were conducted, especially whether one individual worked alone or whether a team of two or more individuals collaborated – meaning that they fulfilled a particular task *together* rather than at the same time but separately. As has been shown at the beginning of this article, this was the main criterion in the 'classic' definition of *chou* in contrast to *jiao*.

Coming back to the question of how the distinction between *jiao* and *chou* in the administrative context may reverberate in Liu Xiang's collation techniques, it is worthwhile to approach the question of the *Vorlage* or model. The available sources do not really tell us how and why Liu Xiang decided upon certain textual witnesses to serve as 'authoritative versions' or 'models'. However, it seems that Liu had a tendency to collate other textual witnesses against witnesses from the imperial collection (*zhongshu* 中書) or witnesses written in 'ancient script' (*guwen* 古文). Apparently, he often considered the latter to be most reliable. It is plausible to assume that Liu Xiang would select a *Vorlage* as the basis for his ensuing work through a process of sighting all available textual witnesses.[65]

With regard to the findings on *jiao* and *chou* as administrative procedures, we would forward the following hypothesis. If *jiao* originally implied the creation or establishment of a reliable textual witness, against which another witness (or even witnesses?) could be checked in a second step, then this word in the context of Liu Xiang's work could refer to a preliminary process in which each textual witness is scrutinized separately – possibly to identify or establish the most suitable *Vorlage*. In an additional step, this working copy could be

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64 Maps might be an exception here, because – especially in the bottom-up process described above – it might not be clear from the beginning which is the 'correct' version in cases of conflict. Rather, *chou* must have started here with an impartial comparison. And only if the course of the borders between administrative units or the like differed in two maps that showed the same area or at least 'overlapped', the person conducting *chou* must have decided on one version. In addition, we have seen that in the case of the Han lists of funerary goods most likely it was not two texts which were compared, but a textual witness compared with the actual objects to which the text refers.

65 Fölster 2016, 161–164.

compared with the other textual witnesses, a process that might suitably be described as *chou*.[66]

However, one of course has to bear in mind that – although this hypothesis would not contradict the classic definition of *jiao* and *chou* referred to at the beginning – the use of *jiao* as a synonym of *chou* in some of the editorial reports would speak against it. Whether this apparent contradiction is caused by textual corruption in our sources, by a change in the meaning of *jiao* and *chou* between the Qin and the late Western Han period, or by yet another reason remains a question to explore.[67]

At least it can be determined that the collation techniques employed by Liu Xiang were not newly invented by him but go back to administrative procedures common by the end of the third century BCE at the latest. This is further corroborated by the matching of other technical terms used to describe the administrative procedures and Liu Xiang's philological work, such as 'to fix [the final text]' (*ding* 定 or *dingzhu* 定著 in the editorial reports) and 'duplicate' (*chong* 重 or *fuchong* 復重 in the editorial reports).[68] Therefore, the present case might be an example where an innovative procedure originally developed in the administrative sphere was gradually adopted in other fields, opening up opportunities for textual scholarship.

Acknowledgements

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66 A similar view has already been expressed by the Qing scholar Zang Lin 臧琳 (1650–1713). See Deng Junjie 2012b, 264. Zang Lin argued that the *chou* procedure – with one person reading out a version of the text, and another checking/correcting a copy visually according to the read-out version – was probably preceded by a visual checking (*jiao*). The reason for this hypothesis is that there are many words that are pronounced the same but written with different characters.
67 Unfortunately, due to reasonable restrictions of length with regard to the contributions in this volume, we had to refrain from diving further into sources from the time between the Qin and the late Western Han period within the scope of this article.
68 It is also noteworthy that in the Qin administration the results of checking (*jiao*) were recorded in *lu* 錄. See Lai Ming Chiu and Tong Chun Fung 2016, 143–145. Liu Xiang's editorial reports are referred to as *Bielu* 別錄.

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Markus Friedrich

Loss and Circumstances: How Early Modern Europe Discovered the 'Material Text'

Abstract: This paper discusses early modern European precedents to contemporary debates about the material dimensions of written artefacts. It demonstrates that materiality was a major concern for producers and users of both print and manuscript written artefacts already in the seventeenth and eighteenth century. Several reasons alerted early modern Europeans to the material features of manuscripts and prints. Against a broader survey of these developments, one particular line of thought is explored more in detail. Starting from two texts by Thomas Bartholin (1670) and Franz Ernst Brückmann (1727), the essay highlights especially how experiences of loss by fire contributed to early modern awareness of the materiality of writing.

1 Two texts, two tales

In the summer of 1670, Hagestedgaard, a country estate on the Danish island of Zealand and about 75 kilometres from Copenhagen, burnt down. It belonged to Thomas Bartholin, a well-known Danish professor of Medicine at Copenhagen University. The fire consumed much of Bartholin's possessions, including a good part of his library. As Bartholin detailed soon after, the 'loss of his labours', namely of his allegedly numerous unpublished manuscripts pained him most about this fire.[1] In the immediate aftermath of the conflagration, he sat down and composed a short 'dissertation' of 114 octavo pages, entitled *de incendio bibliothecae dissertatio*. Starting from this devastating personal experience, Bartholin engaged in a range of broader considerations, rethinking the relationship between knowledge, writing, and materiality.

Two generations later, in 1727, an otherwise little known German scholar by the name of Franz Ernst Brückmann, member of the Imperial Academy *Leopoldina*, wrote a brief text that reflected upon some experiences the author had recently made with the resilience of material texts.[2] A few years earlier, in 1724, he had visited the town of Dobsinà in Hungary, where the local asbestos

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1 Bartholin, *De Bibliothecae Incendio*.

2 Brückmann, *Historia naturalis*; cf. Büttner 2004, esp. 168–177.

mines had sparked his interest. Triggered by his tour of the mining town, Brückmann published a brief natural history of the mineral asbestos, presenting his readers with a survey of what it was and what it could be used for. The 'stone', he explained, was not just inexplicably incombustible. As he had observed himself, this rare mineral could also be turned into paper, transforming the epitome of a fragile medium into one of peculiar resilience. The seemingly contradictory idea of 'incombustible paper', although it did not become an everyday reality, had left the realm of mere fiction.

Brückmann's experiments with asbestos paper provide a valuable counterpoint to Bartholin's lamentation about the vulnerability of manuscripts. Both texts reflect upon a common topic, the materiality, or, more precisely, the physical vulnerability of traditional writing surfaces. They signal that European scholars and practitioners in the early modern period inhabited a world in which paper may have long been without a serious alternative, but also one that considered its material properties to be deeply problematic. Bartholin's contemplations about manuscript destruction and Brückmann's report on asbestos paper illustrate this concern with the materiality of written artefacts, which already originated in the era of parchment, but grew in importance significantly alongside paper's rise in early modern Europe.[3]

2 Early modern Europe's many routes to the 'material text'

The essays by Bartholin and Brückmann were part of a larger trend. Numerous of their contemporaries discussed material aspects of Europe's written artefacts from very different angles. By the seventeenth century at the latest, producers and users of written artefacts alike routinely explored the materiality of writing. The discovery of 'material texts' took early modern Europeans on many circuitous routes[4]: in addition to growing concerns about manuscript destruction at least four further contexts – namely, antiquarian philology (1), bibliophile

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3 Gagné 2017 focusses strongly on the rise of paper as the most important stimulus for intensified considerations of material vulnerability. Without denying that paper – given its fragile nature – proved to be very important, much of the early modern debate reviewed here, in fact, did not distinguish prominently between parchment and paper in terms of vulnerability.
4 'Material texts' are defined as 'all aspects of how texts take material form and circulate in the world' by the influential 'Workshop in the History of Material Texts' at the University of Pennsylvania, see <https://pennmaterialtexts.org/about/> (accessed on 9 Nov. 2020).

curiosity (2), discussions of alternative media systems (3), and practical tools for storing information (4) – contributed to conceptualizing materiality.

2.1 Philology

Renaissance humanism created a growing awareness for the material features of manuscripts. Based on medieval precedents, scholars during the so-called Renaissance re-appropriated the philological zeal of classical antiquity. From work on ancient Latin texts, the humanists quickly moved on to medieval ones. As they had done with classical Latinate literature, they worked hard to contextualize these later texts, scrutinizing them to find hints about their origin, purpose, and provenance. Historicizing texts also soon morphed into a larger project, one of historicizing the cultures that once surrounded and produced them. As humanism evolved into antiquarianism, scholars increasingly situated the textual sources they considered within a broader array of material evidence. This also led to a deeper understanding of written artefacts *as* elements of past material cultures.[5] By the seventeenth century, scholars all over Europe habitually combined the hermeneutic approaches of language and text analysis with a careful investigation into the material features that defined all text-bearing documents. As one eighteenth-century authority noted in a typical statement, handwriting's historical 'variation results partly from the material into which one writes, partly from the shape of individual characters, partly from the style of writing'.[6] The resulting concept of historical 'sources', as it developed from the late Middle Ages onwards and as it is familiar until today, in principle binds together textual and material features of written artefacts.[7]

2.2 Bibliophily

When buyers began to consider collecting manuscripts to be a distinct social activity, material criteria of the text in question often became the guiding prin-

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5 Summaries in Turner 2014, Grafton 2007.
6 Baring, *Clavis diplomatica*, 5–6: '*Atque haec variatio apparet partim ex materia cui inscriptum est, partim ex ipsis Characteribus, partim ex forma scriptionis; quae fundamenta fere totam rem absolvunt in arte discernendi MSta. Ut ita ex materia et Charactere Codicis MSS. Diplomatum ac Chartarum veterum, maxime de illarum antiquitate, nisi aliunde constet, iudicium ferendum est*'. Cf. Haas 2019.
7 E.g. Grell 1993, Wallnig 2019, Joassart 2017, Sawilla 2009, Gierl 2012.

ciples of these collectors' acquisition policies. 'Old' books and manuscripts developed into sought-after objects, even though it was not always immediately clear how the boundaries between 'old' and 'new' were drawn and philologists debated the philological value of 'old' manuscripts.[8] Oldness became a distinctive subset of 'rareness', and most collectors were especially interested in rare written artefacts. In addition to age, other rare material features may have played a role in guiding politics of acquisition: although there is no consensus, if early modern collectors paid particular attention to illuminated manuscripts – often, in fact, early modern catalogues do not even mention such illustrations –, there are also a few signs that at least some collectors *did* occasionally appreciate colourful illuminations.[9] Furthermore, written artefacts attracted particular attention if they boasted 'valuable' material features such as colourful inks or unusual writing surfaces, such as, for instance, asbestos paper.[10] A good example for the latter is Zacharias Konrad Uffenbach, the well-known Frankfurt collector of rare books. In late 1727, he eagerly acquired a few 'little sheets' of asbestos paper directly from Brückmann.[11] Although no unified codicological terminology existed in pre-modern Europe, the abundance of descriptors alluding to features such as material, age or luxury, however vague they may have been, nonetheless clearly shows that scholars and bibliophiles paid increasing attention to such physical aspects.

2.3 Comparing media systems

The materiality of written artefacts also came into sharper focus as observers delved into what could be called 'comparative media studies'. Attention for the mediality and materiality of written artefacts grew as Europeans increasingly realized that there were powerful alternatives to the familiar systems of handwriting on paper (or parchment). They encountered a bewildering variety of alternative writing systems all over America, Africa, and Asia. To come to terms with it, Europeans compared not only different languages and scripts, but also

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8 McKitterick 2018, esp. 45–50; Vanek 2007, 218, 240 and 247 on the ambivalence of philologists.

9 Müller 2020.

10 Gastgeber 2015, 46.

11 Brückmann to Uffenbach, 20 October 1727, Universitätsbibliothek Johan Christian Senckenberg, Frankfurt, *Epistolici Commercii Uffenbachiani*, vol. 14 (1728), no. 29, fol. 54[r–v]. I owe this reference to my doctoral student Jacob Schilling, Gotha, who found and transcribed this piece of evidence.

the material dimension of different writing systems with one another.[12] In addition to *different* writing systems, they furthermore encountered the total *absence* of writing systems as a cultural possibility.[13] Religious controversies among European Christians further alerted observers to questions of mediality, for instance, by triggering new debates about oral versus written forms of transmitting knowledge.[14] The concept of 'tradition' as criticized by Protestant polemicists initially carried strong overtones of 'orality'. As a result, it also gave discussions about oral forms of knowledge transfer a hint of anti-Catholic polemic. By the late eighteenth century, preferences had shifted, however. In an age that rediscovered 'Ossian' and Bardic literature, the (invented) oral culture of the Germanic or Celtic Druids and Bards became fashionable. The immateriality of the spoken word, difficulties of philology and researching it notwithstanding, morphed into a marker of distinction. Taken together, these developments inspired a growing awareness for the unique scriptural, but also for the material and the physical properties of Europe's written artefacts.

Critical examinations of print gave additional strength to this reassessment of Europe's own indigenous practices of writing and their historical developments. The spread of the printing press triggered heated debates about the relative advantages of different medialities. These debates included considerations of materiality right from the beginning.[15] The printing press and its specific mediality itself became a subject of history, and this process of historicization, again, included a discussion of the technology's material aspects. The pan-European debate about Bernard von Mallinckrodt's seminal work *The Birth and Progress of the Art of Printing* serves as a good example. The controversy about this 1639-publication included an in-depth discussion about important technical improvements.[16] In this case, comparative reflections about media systems, again, drew ever more attention to the material dimensions of written artefacts.

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12 See, e.g., Hosne 2014.

13 Zedelmaier 2001.

14 McDowell 2017. Cf. also Lupton 2012.

15 Gagné 2017.

16 Von Mallinckrodt, *De ortu ac progressu artis typographicae*; Mentel, *De vera typographiae origine*; Zeltner, *Correctorum in typographiis*. See also Stoker 2005 and Glomski 2001.

2.4 Scholarly practices

The materiality of handwriting could also become an explicit concern for early modern scholars due to their everyday working routines. From the sixteenth century onwards, the practices of producing texts and the routines of knowledge management became more thoroughly conceptualized. Scholars started to explain and discuss their working habits. These self-reflexive debates about the practices of producing texts and knowledge soon engulfed the material dimension of working with paper. Early modern scholars not only *used* innumerable 'little tools of knowledge' such as paper slips, needle and thread, or notebooks, they also *talked* about them at great length. Instructions on how to materially produce scholarship proliferated, ranging from books that offered the best practices for organizing notebooks to pamphlets about the construction of filing cabinets.[17] Scholars mused about the use of scissors as well as about the application of glue and they debated the minute details of cross-referencing and indexing.[18] In short: early modern intellectuals conceptualized the inherently material ways of text and knowledge production often as vibrantly as they engaged in philosophical debates about epistemology. Beyond being deeply material in practice, scholars also understood and publicly contemplated this materiality of knowledge production to a degree previously unheard of.

3 Taking note of fragility

Against this broader background, this essay sketches in more detail the traumatic experiences of written artefacts' destruction and the impact such loss had on early modern debates about textual materiality. As Bartholin and Brückmann illustrate, the loss of writings, or at least the dangers of loss, were issues of great concern. Since Italian humanists of the fourteenth and fifteenth century had conceptualized the major difference that set their own time apart from antiquity to be the loss of writing, predominantly the loss of ancient texts, discussions about destruction of written artefacts proliferated. Talking about the *absence* of documentation, often in a nostalgic mode, emerged as a defining feature of humanist discourse.[19] The destruction of written artefacts as a theme features even more prominently in early modern archival literature. Authors

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17 E.g. Yeo 2014, Cevolini 2017, Cevolini 2006, Becker and Clark 2001.

18 Friedrich 2018b, Marten and Piepenbring-Thomas 2015, Vogel 2015. See also Smyth 2018.

19 For a modern assessment of lost written artefacts, see Haye 2016.

from the sixteenth, seventeenth, and eighteenth century often described the past as a dark age of archival history. Carelessness and neglect and the loss and destruction that followed shaped the world of archives, at least as early modern observers described it.[20] Libraries fared hardly better, according to early modern writers. Justus Lipsius published a general history of libraries in 1602 that detailed not only the achievements, but highlighted also some of the disasters that characterized the history of libraries.[21] Thomas Bartholin, too, in his short account of his library fire, briefly surveyed previous conflagrations. Bartholin's account covered many of the well-known *lieux de mémoire* such as the burning of the library of Alexandria.[22] Next to the famous, he also included more mundane, familial events such as the fire that diminished his grandfather Thomas Finck's book collection.[23] In doing so, Bartholin's discussion of his personal material losses combined well-established master narratives about the vicissitudes of Europe's long-term cultural development with these more localized descriptions. With ease, it integrated his personal experiences of material vulnerability into broader patterns.

Against this backdrop of omnipresent loss of written artefacts, many early modern writers positioned the printing press as an agent of protection against the destruction of irreplaceable texts. As one typical passage put it:

> Many scholars have lamented that the longer the world exists, the less is known about its earliest times. Before printing arrived for the benefit of the public, it was increasingly difficult to find information about very old times and what happened there. This [sc. printing] allowed handing down from generation to generation so many things that would otherwise have passed into oblivion.[24]

The author in question considered print, and print alone, to be the last resort against 'losses from war, fire, pillaging, and constant moving around'. An argument of numbers supported all assumptions about the power of the printing

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20 Friedrich 2018a, Filippov and Sabaté 2017.

21 Baldi 2013, Walker 1991. Much of the literature was later collected in *De bibliothecis atque archivis virorum clarissimorum libelli et commentationes*.

22 Rieger 2003.

23 Bartholin, *De Bibliothecae Incendio*, tr. O'Malley 1961, 12.

24 'lange und von allen gelehrten so vielfältig beklagte Erfahrnuß, daß je länger die Welt gestanden, desto weniger authentische Kundschafften von uhr-alten Zeiten, und dem, was darin vorgefallen, aufzubringen gewesen, bevor die Druckerey dem gemeinen Weesen zum grösten Nutzen erfunden worden; wodurch nachgehends der grosse Schatz vieler Dingen, so sonsten in der Vergessenheit ewig stecken geblieben wären, der Nachkommenschafft von Hand zu Hand übertragen worden', Burkart 2001, 3.

press to protect texts against physical destruction: once a manuscript was print-ed, so people thought, the text existed in so many copies that its survival became much more likely than before. The destruction of an individual copy would not immediately threaten the survival of a text or idea.

Early modern Europeans considered this argument *not* to be universally true, however. By no means, they well knew, had printing secured the general survival of printed text. On the contrary, many print products were exceedingly rare.[25] Speaking of 'rare' printed books started as early as the late sixteenth century, only a few generations after the new technology had first arrived. By the eighteenth century comprehensive guides to 'rare books' like the one published by Bremen bibliographer Johann Vogt began to appear.[26] Vogt told his readers that numerous forms of rareness existed, but he defined all of them through material features. Some print products were 'rare', he explained, because they had special bindings. Others were hand-coloured, or they had been printed on particularly valuable materials[27] – parchment, high quality rag paper, or experimental materials, such as paper from straw or asbestos.[28] Material refinement, then, made some prints rare.

The most obvious dimension of 'rareness', however, was scarcity through destruction. Often enough, even normal and unrefined prints survived only in very small numbers, as Vogt and his peers noted. So-called *Deductiones* are a case in point. These political or legal position papers circulated among a restricted public, for instance, among courtiers, administrators, and counsellors. Because such texts were produced in small print runs only and they rarely reached the book market, they quickly vanished once they had been used. As Christoph Siegmund von Holzschuher, an expert in this field, lamented in 1778, such products were 'rare', often produced only in 'small numbers', and distributed just 'locally'. In doing so, von Holzschuher single-handedly contradicted the master narrative about the printing press as an agent of textual permanence.[29] Single-leaf prints constituted another genre of such endangered print products: Late seventeenth and early eighteenth century bibliographers agreed that the so-called 'chartas volantes' were quickly 'becoming rare'.[30] Books

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25 McKitterick 2018.

26 Vogt, *Catalogus historico-criticus*.

27 Vogt, *Catalogus historico-criticus*, no pages (*axiomata generalia*). For 'external appearances', see McKitterick 2018, 62–100.

28 Koops, *Historical Account of the Substances* was printed entirely on 'the first useful paper manufactured sole[l]y from straw' (title page). Cf. Calhoun 2020.

29 Holzschuher, *Deductions-Bibliothek von Deutschland*, III–VII.

30 *Lebensbeschreibung Herrn Christoph Jacob Imhofs*, 229.

created by marginal groups, often under clandestine conditions and without the support of firmly institutionalized infrastructures of distribution and marketing, were equally vulnerable. Church historians of the eighteenth century, for instance, lamented the scarcity of sources about early Anabaptist history and constantly commented upon the extraordinary scarcity of their printed tracts and treatises. In 1758, Jakob Wilhelm Feuerlein, a well-connected authority in the field, diagnosed the vulnerability of the Anabaptists' early print products in blunt terms:

> It is so difficult to find these books printed only 200 years ago nowadays, [which begs the question] how rare and, indeed, invisible they will be a century from now? Public libraries and the prefects [in charge] do not pay any attention to small print products, even though they are extremely important.[31]

None of these texts were protected from disappearing simply by being printed. In fact, when they were preserved, this often hinged on active measures of preservation. A growing number of bibliophiles focused their attention on collecting these delicate items not least because they were considered important historical sources. The abovementioned Christoph Siegmund von Holzschuher, for one, put together (and published) a large body of *Deductiones* that he had brought together, arguing that they would provide historians with unrivalled insights into internal administrative protocols. Christoph Jacob Imhoff, a prominent Nuremberg patrician and bibliophile, meanwhile, purposefully collected single leaf prints (in addition to many other books).[32] Other book lovers, including the famous Samuel Pepys, focused on chapbooks, in addition to many other rare items. These cheaply produced collections of vernacular literature for mass consumption initially may have had large print runs, but they often disappeared as quickly as they could be brought to market.[33]

As these examples show, early modern sentiments of vulnerability and loss extended well beyond the sphere of handwritten artefacts. They explicitly included many genres of print products as well. *All* paper-based writing, many authors argued, ran an omnipresent danger of being destroyed. According to

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31 Feuerlein to Krohn, 13 April 1758: 'da nun jetz schon die vor 200 Jahren gedruckte bücher so schwehr zu finden und rar sind, wie rar und fast gar unsichtbahr werden sie nach 100 Jahren werden? Bibliothecae publicae und ihre Praefecti achten die kleinen Piecen für zu geringe, ohnerachtet sie höchste nothwendig, und nach 100 oder 200 Jahren viel rarer sind als die grossen werke, welche man alleine pro Bibliothecis publicis zu suchen pfleget'. Staatsbibliothek Hamburg, Mss Theol. 1208, fols 89ʳ–90ᵛ. For more context, see Friedrich 2020.

32 *Lebensbeschreibung Herrn Christoph Jacob Imhofs.*

33 Wilson 1957. Cf. Loveman 2015, esp. 189–194.

many early modern observers, the ease with which written artefacts could perish was not exclusive to handwriting, but also included printing. As John Gagné has observed, Europe's 'paper sensibility' contained significant amounts of anxiety about loss and buzzed with constant talk about 'degradation and oblivion'.[34] Considerations of physical vulnerability, one could summarize, constituted one of the defining and much-discussed material features of Europe's culture of writing.

4 Fighting against material vulnerability

One way of coping with the material vulnerability of written artefacts consisted in finding practical tools to contain the dangers of destruction and improve artefacts' chances of survival. Archives are one case in point: if anxiety about information overload was one major trigger for Europe's investment in archival infrastructure since the late Middle Ages, then widespread fears of loss and destruction constituted another.[35] All over Europe, an emerging archival mentality combined both perspectives, valuing archives as machines for storage and retrieval *as well as* for the protection of written artefacts. With considerable sophistication, archivists and archive owners devised protective measures for paper and parchment documents that ranged from thoughts about proper ventilation to fireproof roofing or biological pest deterrents.[36]

Librarians, too, paid increasing attention to the physical preservation of individual codices. This attention, for instance, drove protective measures such as the re-binding or strengthening of worn copies. At the Papal Library in Rome, a few sources survived pointing to the existence of planned measures of book-restauration from the late fifteenth century on. By 1607, a 'restaurator' was explicitly ordered to 'maintain [*restaurare*] books by adding pages where they were missing by gluing them' to the remaining sheets. All of this was necessary, because 'Latin and Greek books, due to old age, will be consumed and ruined by time'.[37] For similar reasons, heavily used textbooks in some European schools in

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34 Gagné 2017.

35 Information overload: Blair 2010; Loss: Keller, Roos and Yale 2018, 16.

36 Friedrich 2018a.

37 Bignami Odier and Ruysschaert 1973, 20–21. Mercati 1937, 131–133: 'Poiche li libri così greci come latini per l'antichità si vanno col tempo consumando, et ruinando dal[le] terme, et quasi mancando le carte intiere. Il Restauratore doveva haver cura di accomodarli et restararli

the later seventeenth century were regularly rebound or carefully repaired in an effort to keep them available for future generations of students.[38] In a manuscript manual for librarians from 1748, finally, the Hanoverian scholar Christian Ludwig Scheidt asked his superiors for a range of assistants to help the leading 'bibliothecarius', not least by taking over his extensive restoration duties.[39] Monitoring the material status of books, both handwritten and printed, became a crucial part of librarianship in the early modern period. Fighting against the dangers of destruction by protecting and repairing inherently fragile written artefacts, thus, became a key concern in early modern Europe.

5 (Unsuccessful) searches for a solution: paper made from asbestos?

Brückmann's treatise about asbestos suggested yet another option, namely reducing an artefact's vulnerability by changing its material configuration. Would not paper made from fireproof asbestos solve the problem of material destruction by fire? Brückmann was not alone to suggest this: in late seventeenth and eighteenth century Europe, several scholars experimented with asbestos paper. In 1684, for instance, the English Naturalist Edward Lhuyd sent a brief report to the secretary of the Royal Society, Henry Oldenburg, that described his attempts at creating asbestos paper in Wales.[40] Lhuyd detailed how he 'pounded' the mineral and 'sifted' out non-asbestos particles, before dissolving the resulting powder into water at a local paper mill. With that mixture, he ordered the artisans to 'proceed in their usual method of making paper'. A very similar set of instructions then appeared in 1712 in Johann Hübner's *Curieuses Natur-Kunst-Gewerk und Handlungs-Lexicon*, perhaps directly translating from Lhuyd's English instruction.[41] Experiments like these actually produced a few pages of asbestos paper and Brückmann – seeking a proof in content as well as

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diligentissimamente aggiungendo la Carta dove mancava, incollandola con colla sottilissima fatta con cose appropriate contro le tarme, in modo che appena si conoscessi'.

38 E.g. Ottermann 2018, 251–254.

39 Christian Ludwig Scheidt, *De Officiis Historiographi & Bibliothecarii* [...], in Niedersächsische Landesbibliothek, mss XLII 1931, no pages (§ 12).

40 Lhuyd, 'An Account of a Sort of Paper'.

41 Hübner, *Curieuses Natur-Kunst-Gewerk*, col. 121. Cf. Brückmann, *Memorabilia Leutschoviensia*, 5.

in form – had four copies of his booklet printed on paper of this kind. One of these copies still survives in the Herzog-August-Library in Wolfenbüttel.[42]

These experiments must be placed in their proper context. On the one hand, the late seventeenth and early eighteenth century saw all kinds of experiments with alternative forms of papermaking.[43] This was part of a broader reformist agenda of improving traditional technologies. From a cameralist's perspective, rhetorically focused on ways to elevate the common good of early modern (princely) realms, almost every part of European material culture was ripe for such reform.[44] Moreover, interest in asbestos was not a new development. The material was widely discussed in ancient literature and even practitioners such as Lhuyd or Brückmann started their own publications with an extensive analysis of time-worn literary traditions.[45] Based on these ancient ideas, naturalists had long discussed its potential uses, focusing especially on the possibility of spinning a durable thread from the material.[46]

And yet, the turn to asbestos *paper* was not just a predictable result of generic cultural trends. Lhuyd's or Brückmann's ideas about making *paper* from stone were without earlier precedents, thus reflecting a very contemporary need.[47] Dreams about asbestos *paper* clearly responded to growing early modern concerns about the vulnerable materiality of paper-based written artefacts. Even though no mass production of asbestos paper ever occurred and despite the fact that contemporaries agreed that the experiments conducted by Lhuyd or Brückmann were 'more curious than useful', their search for new technologies for papermaking nevertheless demonstrates the urgency with which early modern Europeans looked for different, more durable writing surfaces.[48]

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42 Kazmeier 1953. The copy in question has the call number HAB: Nf 19. I have not been able to inspect the copy first hand. No other prints on asbestos exist in Munich, Wolfenbüttel, Berlin or Washington DC (Folger), as confirmed by emails from Thorsten Allscher, Volker Bauer, Andreas Wittenberg, and Heather Wolfe in October 2020.

43 See Szalay 2019, Calhoun 2020.

44 On the cameralistic context of asbestos paper (as mentioned in Fürstenau, *Gründliche Anleitung*, 146); see Keller 2017; cf. also Szalay 2019.

45 Bianchi and Bianchi 2015.

46 See, e.g., Ciampini, *De Incombustibili lino*. Cf. Carnevale 2012.

47 Büttner 2004, 174 and 229.

48 Fürstenau, *Gründliche Anleitung*, 146. Cf. Büttner 2004, 233–234. Rumours about mysterious caches of 'incombustible' papers circulated among the curious, see *Sammlung von Natur- und Medicin- wie auch hierzu gehörigen Kunst- und Literatur-Geschichten* 25 (1723), 336.

6 The benefits of conflagration

Although Thomas Bartholin was devastated by his personal loss, on a more general level he also believed that the fragility of paper-based writings had its advantages. Certain forms of subversive texts deserved intentional destruction. Fire, so to say, was not just a danger to civilization; it could also be a valuable tool to maintain orthodoxy and order. Bartholin and many other authors supported in principle the practice of burning dangerous books by state and church authorities.[49] Bartholin mentioned numerous examples of books that had rightfully been destroyed, including Pietro Pomponazzi's infamous 1516 book *De immortalitate animae*, which was accused of proposing a materialistic philosophy since it doubted the immortality of the human soul. Burning heretical and dangerous texts, again, affected printed and handwritten artefacts. While it is true that the public execution of written artefacts most prominently concerned printed materials, at least occasionally investigative procedures against seditious and politically 'dangerous' manuscripts did occur as well.[50] It is well known, for instance, that early modern state authorities at times attempted to control the market for manuscript newsletters.[51] Sometimes, offensive manuscripts ended up burning at the stake, in the same way as and often together with printed books.[52]

On other occasions, authors associated the burning of books with a kind of quality control. The English writer Ben Jonson, whose library burned a few decades before Bartholin's, and who discussed this experience in a poem, equated manuscript destruction with the weeding out of substandard texts. The fire of Vulcan, he insisted, should and could execute the judgments of 'public fame' about a text's quality.[53] Bartholin, too, presented the same thought, although in a slightly different version: the burning of his unfinished manuscripts had evidently proven that they were not worthy of eternal preservation. In addition to protecting state and religion, then, the physical destruction of manuscripts served as a tool of legitimate cultural amnesia. Political and religious censorship, literary criticism, and information management became close neighbours.[54]

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49 Werner 2007, Cressy 2005, Körte 2012, Hirschi and Spoerhase 2013, Partington and Smyth 2014, Smyth 2014.

50 Millstone 2016, 25–26.

51 De Vivo 2007, 84 and 185–187.

52 Millstone 2016, 281.

53 Smyth 2014.

54 Loewenstein 1999, 102.

Despite the famous words by Bartholin's contemporary John Milton that 'he who burns a book soon kills a man', early modern Europeans were thus far from simply equating book burning with barbarism. Rather than lamenting the violent destruction of manuscripts as such, the *indiscriminate* burning of manuscripts and books by fate or a force of nature offended Bartholin and his peers as premature, chaotic, and culturally disastrous. They calibrated their attitudes towards the termination of manuscripts in relation to the manuscripts' (negative) cultural impact.

7 Beyond materiality

As Bartholin would have known, physical destruction did not necessarily mean absolute disappearance of books and ideas. Complete destruction of entire print runs was difficult to achieve and at least isolated copies of persecuted works often survived only to reappear decades later. Even more importantly, there existed a complex dialectic between books, ideas, and memories of both. While the flames may destroy *books*, they cannot easily destroy either the expressed ideas or all memories about the books. In early modern Europe, ideas and texts usually circulated widely before ever reaching print. They had been discussed over dinner, copied by amanuenses, read in social gatherings or mentioned in letters, and, thus, would not necessarily vanish so easily. Due to the rallying cry that could result from destruction, destroyed and persecuted books even had the chance of becoming *lieux de mémoire* that provided a point of departure for future activities. Sometimes, remembering burnt books was a provocative act of resistance. In the early eighteenth century, for instance, Johann Heinrich Heubel, at one time professor of law at the University of Kiel, compiled a 'Bibliothèque de Vulcain'.[55] Heubel's 'library of Vulcan' was a list of more than 160 works that different authorities had condemned to be burnt as heretical. His bibliography of destruction was a (desperate) attempt at counteracting the disappearance of physical books. Early modern Europeans had to acknowledge that material destruction did not necessarily amount to the absolute disappearance of (dangerous and exciting) ideas and texts.

Bartholin believed in the power of memorizing destroyed manuscripts as well, although with less seditious ideas in mind. In a book from 1662, he reconstructed the archive or 'chest' (*Cista*) of the Medical Faculty of Copenhagen

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55 Mulsow 1994.

University, which had been partly destroyed by a fire in 1641.[56] Writing about destroyed books and manuscripts rescued them from total oblivion. Hence, he also provided a list of manuscripts burnt in his library in his *Dissertation*. Broadcasting his lost works, Bartholin claimed, ensured that these now lost books and papers continue to 'live in the mouths of men, they live in my remembrance, they live in the desires of the learned.'[57] The act of physical destruction was tragic, but it might have the potential to grace a work that would remain unwritten with a special aura, giving a non-existent work a lease of life. Written artefacts were material objects, and early modern Europeans were well aware of the implications of textual materiality. Nevertheless, the same authors also appreciated that texts and ideas could not be reduced entirely to this materiality.

8 Conclusion

Brückmann and Bartholin, the intellectual and disciplinary differences between them notwithstanding, illustrate a broader feature of early modern European print and manuscript cultures: an acute concern with the destruction of written artefacts. As much as they might have been looking for improvements, early modern Europeans had to cope with the 'evanescence' (John Gagné) of manuscript and printed written artefacts. Such considerations of textual and cultural loss provided some of the most important incentives for early modern Europeans to reckon with and address the materiality of writing. As these authors illustrate, recent scholarly excitement about textual materiality actually continues a rich, albeit often underappreciated, tradition of European thought and research, tracing back to the Renaissance and beyond.

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56 Bartholin, *Cista medica Hafniensis,* no pages ('ad lectorem medicam'). On the fire, cf. Bruun 2015, 38.
57 Bartholin, *On the Burning of his library*, tr. O'Malley, 20.

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Michael Grünbart

The Letters of Michael Psellos and their Function in Byzantine Epistolary Culture

Abstract: The transmission of Byzantine letters still lacks a new interpretative approach, leaving aside the idea of an archetypus. Michael Psellos' letters (eleventh century) may serve as an example to demonstrate how the process of rhetorical recycling and re-using of letters worked. His letters are preserved in a large number of manuscripts, but none of them contains a complete collection. Similarly to the late-antique epistolographer Libanios, Psellos became a model of letter writing for later generations and parts of his texts have been adapted in new contexts. The Psellian letter collection therefore offers an excellent case-study to analyse how his manuscripts and texts were used again and again in the course of history.

1 Byzantine letters and their transmission

Classical Greek and Byzantine letters are preserved in various arrangements and contexts: their forms of transmission range from single texts to coherent selections or larger collections in manuscripts.[1] Modern editors mostly follow the canonical approach of text editing techniques that try to establish an *archetypus*.[2] Such presentations often create the impression of a definitive and

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[1] Letters from Classical Antiquity and the Byzantine period have to be investigated together, since the earliest manuscripts containing classical Greek letters can be dated to the tenth century (with the exception of classical letters preserved on papyrus). The reconstruction of ancient letter collections is hampered by the strategies and intentions of selection developed by Byzantine scribes and scholars. However, a project at the University of Manchester focuses on 'Ancient letter collections' (see <https://www.alc.manchester.ac.uk/cahae/research/projects/>). An inventory on the (literary) letter production provides the updated version of my *Epistularum Byzantinarum Initia* (2001); it includes all Greek letters (before the fourth century), that are normally handed down together with Byzantine letters, see Grünbart 2020. Byzantine epistolography has been treated systematically in Riehle 2020 (ed.); see the review by Margaret Mullett in *The Byzantine Review* 02.2020.027 <https://doi.org/10.17879/byzrev-2020-3101> (accessed on 15 March 2021). A variety of approaches on how to deal with letters is offered in Mullett 2007.

[2] See Roelli 2020, 112 (archetypus) and 212–214 (stemma codicum), manuals for editions are Maas 1960 (see Thomamüller 2007), West 1973.

complete collection or *corpus epistularum* initiated by a single letter writer;[3] excerpts of letters, omissions of passages and variants in the wording are relegated to the apparatus criticus (and buried there).

In contrast to Byzantine research studies, medieval Latin epistolography gradually took into account such textual variants that lead to a better understanding of transmission, medieval letter writing skills and arrangements of collections.[4]

Letters normally have been written in a certain moment in order to transport and exchange information. Letters appear in various forms, from simple messages on papyrus to precious imperial letters. But they have one thing in common: communication. Even 'fictional' letters imitate that basic human need. Letters also transformed from written exchange into literature step by step; after being selected, copied and kept by a learned audience they started a second life as tokens of learned appreciation and rhetorical refinement. Their existence did not necessarily end on a shelf or in a miscellany manuscript: sometimes they became model letters or were reused with slight modifications. Reuse represents an essential creative element in these texts and therefore letters belong to the most fluid artefacts of Byzantine written culture.[5] That aspect has to be kept in mind when looking at the manuscript tradition of any letter.

In recent years, the composition of collections, the nature of florilegia and their importance in Byzantine learned culture have been discussed.[6] New philology and digital edition techniques put special emphasis on textual variants

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3 Almost no letter exchanges between two persons have been preserved – normally they form loose ends; however, a telling example is the correspondence between the bishop Theodoros of Kyzikos and the emperor Constantine VII (tenth century). Sometimes single letters found their way into 'collections', see the list of letter writers in Grünbart 2020 (e.g. Athanasios Lepentrenos, Kyritzes, Stephanos of Nikomedeia). Cf. also Grünbart 2001 (including the *allelographia* [ἀλληλογραφία = correspondence] between Leon of Synada and Stephanos of Nikomedeia, tenth century); Tinnefeld 2005 (corresponding letters in the corpus of Demetrios Kydones, fourteenth century).
4 See the methodological approach by Ysebaert 2009 and 2010, and Constable 1976 (updated version: Constable 2015). Collections of letters were the subject of several recent publications, see Neil and Allen 2015, De Sogno, Storin and Watts 2019 (dealing with epistolographers' collection[s] and their manuscript tradition).
5 Grünbart 2015. See also Sykutris 1932, the classical study highlighting the potential of Byzantine epistolography.
6 See in general Van Deun and Macé 2011; on florilegia of letters, see Grünbart 2011. On the idea of collection (*sylloge*) see Odorico 1990. According to Riehle 2020, 481, letter collections normally are not marked by terms such as 'collection' (*sylloge*, συλλογή), but in many cases simply as 'letters' (*epistolai*, ἐπιστολαί) in the headings or margins.

and multi-faceted transmission. Scribes are no longer being seen as mechanically copying a text, but as actively 'reworking' and 'recycling' it.[7] Variance forms an inherent characteristic of medieval literature.[8] Each manuscript witness ('Textzeuge') has to be treated as an equally important manifestation of medieval writing, as it also reflects the usage of a text (or parts of texts)[9] in a specific context.[10]

Variants in Byzantine letters may become indicators of remodelling and second-hand usage. As mentioned before such differences wander into the apparatus criticus and so an originally independent document disappears. Digital edition techniques offering sufficient space for simultaneous display of texts put more emphasis on the term 'document' than 'work',[11] a premise that can be perfectly adapted to Byzantine epistolography. Every single letter forms a unique document and it is necessary to consider its context in the manuscript.[12]

In a project dealing with the Byzantine epistolary tradition *in toto*, the ways of arranging collections and organizing letters in a single manuscript will be investigated.[13] It should lead to a better understanding of Byzantine epistolary culture and the place of letter writing in the educational system. All extant material has to be re-examined in order to clarify the function of each text: is a letter just a copy in order to preserve the original or does it form a new version remodelling or 'recycling' a suitable prototype? That leads to further questions:

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7 See Nichols 1990, 8; Cerquiglini 1999. For a discussion of their suggestions see e.g. Gleßgen and Lebsaft 1997, and Trovato 2017 (I have to thank Caroline Macé for these bibliographical additions). See also the recent volume by Roelli (2020) on all aspects dealing with stemmata and issues of transmission.

8 Nichols 1990, 8–9.

9 Examples of recycling parts of letters are found in Grünbart 2003, 38–39; see also Grünbart 2016b (and see below, n. 41).

10 For Byzantine literature see Reinsch 2010; for the importance and peculiarities of punctuation in manuscripts and consequences for editing texts see the volume by Giannouli and Schiffer 2011; Thraede 1970 suggested to print letters according to their colometric structure. On Byzantine epistolography and the implementation of methods of new philology see Riehle 2020.

11 Robinson 2013, 107.

12 That concept is the basis for the ongoing project *Census Epistularum Graecarum*. A database will be set up collecting all available testimonies of letters in manuscripts (up to 1800).

13 Only a few comprehensive investigations of the transmission of collections have been undertaken, see Muratore 2006: that study describes all extant manuscripts including the arrangement of letters. For Psellos' written heritage see the monumental publication by Moore 2005.

How are letters arranged in sections of manuscripts? Did the scribes use numbers? Are there patterns of arrangements of letter texts in collections?[14]

2 Michael Psellos' letters and their afterlife

Problems concerning the genesis of collections and their transmission become obvious in various cases of epistolary corpora. A prominent and intriguing example is the correspondence of Michael Psellos who is one of the most prolific Byzantine letter writers.[15] Psellos' letters are preserved in a considerable number of manuscripts, the history of Psellian letter editions reflecting that scattered transmission. The new extensive edition by Stratis Papaioannou has been expected eagerly.[16] He accompanied his editorial work with a sample of articles. In an instructive contribution he discussed the transmission of Byzantine letters in general (asking both how many manuscripts include letters of a certain letter writer and how many writers are known by just a single manuscript), but put special emphasis on the collections of Michael Psellos.[17]

In his recent edition Stratis Papaioannou presents a compendium of 584 letter-texts being attributed to the scholar and politician (copied in 19 principal manuscripts containing large letter clusters and another 25 manuscripts with individual pieces).[18] The oeuvre of Psellos turned into a classic some decades after his death.[19] This can be proven by 'theoretical' statements of Byzantine grammarians and scholars and by examples of reception or mimesis in the

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14 Wahlgren-Smith 2020 provides useful insights concerning the choice and arrangement of medieval Latin letters.

15 Jeffreys and Lauxtermann 2017. That volume includes a couple of translations and summaries of all letters. Further translations can be found in Kaldellis 2006; Kaldellis and Polemis 2015.

16 Papaioannou 1998 (includes a list of all manuscripts containing letters ascribed to Psellos); the life and rhetoric work of Psellos are studied in Papaioannou 2013 and see also Papaioannou 2017. On Psellos' oeuvre see Bernard 2020. After 20 years, the new edition has been published in the series *Bibliotheca Teubneriana*: Papaioannou 2019; see reviews by Dmitrij Chernoglazov in *The Byzantine Review* 02.2020.005 (doi: 10.17879/byzrev-2020-274) and Anthony Kaldellis in *Bryn Mawr Classical Review* (BMCR 2020.10.64).

17 Papaioannou 2012, 291–295.

18 Papaioannou 2012, 301; Papaioannou 2019, XXXIV–XXXV (485 genuine, 23 doubtful letters, 4 letters written by others, 7 variations, 23 excerpts, 21 most probably or definitely spurious letters and 21 pieces considered 'letters' by Psellos).

19 For Psellos' *Wirkungsgeschichte* see Kriaras 1968, 1176–1179.

oeuvre of certain epistolographers. The grammarian Gregory of Corinth (twelfth century), for example, recommends a couple of authors as models of letter writing: besides the canon of epistolographers flourishing in late antiquity, he advises Michael Psellos.[20] Gregory's statement (echoed by Joseph Rhakendytes) is confirmed by John Tzetzes[21] or by Michael Choniates' praise, who casts Psellos' name together with Cato, Cicero, Arrian and Themistios.[22]

The works of the *hypatos tōn philosophōn* were not only venerated, they were also actively engaged with, as they were both copied and reused. It goes without saying that Psellos' works also left traces outside of epistolography. The anonymous excerpts and adaptations of Psellos' *Omnifaria doctrina* in the famous manuscript Barocci gr. 131 of the Bodleian Library, forms a good example of such active engagement with Psellos' text.[23].

But the focus of this contribution is on letters and a couple of examples may illustrate Psellos' influence. In the epistolographic corpus of the bishop Euthymios Malakes, who belonged to the learned circle of Eustathios of Thessalonica (twelfth century), several letters taken from collections of other letter writers are preserved.[24] Letter four in the same edition can be identified either as an original Psellian or a Pseudo-Psellian composition. Malakes seems to appropriate textual material for his own use.[25] The letter provides a classification in its heading: Δεητική. οἴκτου δεόμενος ('a letter of petition; a person who requires compassion'). Such descriptions may indicate that a text has been kept in order

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20 Komines 1960, 128–129. Briefly mentioned by Bernard 2020, 127.

21 Duffy 1998; Agiotis 2013 (see the reaction by Cullhed 2015).

22 Michael Choniates, ed. Kolovou 2001, 38, 6–12 (no. 28): καὶ σὺ μὲν τὰς τῆς φιλοσοφίας ἐκμετρήσας κλίμακας, οὐδὲ τὰς πολιτευτικὰς θέμιδας περιδεῖν ἐδικαίωσας, ἀποβλέπων, οἶμαι, πρὸς τοὺς Κάτωνας καὶ Κικέρωνας, Ἀρριανούς τε καὶ Θεμιστίους καὶ τοὺς πρὸ μικροῦ Ψελλούς, οἳ τὰ ἄκρα φιλοσοφίας πατήσαντες καὶ τὰς κοσμούσας τὰ ἀνθρώπινα θέμιδας ἐμελέτησαν, οὐκ ἐν τῇ γνώσει μόνῃ τῶν ὄντων τὸ θεοείκελον ὁριζόμενοι, ἀλλὰ καὶ ἐν τῷ τῶν δευτέρων ἐπεστράφθαι καὶ κοσμεῖν ὡς οἷόν τε· 'And you measured out the steps of philosophy, but you did not want to avoid political customs, looking to the Catos, I think, Ciceros, *Arrianoi*, *Themistioi* and almost *Pselloi*, who walked on the heights of philosophy and exercised the regulations adorning human things, who defined the godlike not only in the perception of the being world, but also drew their attention to the (perception) of the second things [i.e. what is behind the visible world] and adorned it as possible' (my translation, italics are mine).

23 Pontikos 1992.

24 Bones 1937. The second letter in Bones's edition is in fact a text by Synesios of Cyrene (fourth century) with some minor changes; nevertheless, the editor included it in the collection.

25 Gautier 1977, 105 n. 13.

to be used again (it turned into a model for a letter of request).[26] It seems that Malakes' version of the letter is in fact a reworked version of the original (written by Psellos). Forms of address, the wording and syntax have been altered, but the common material is striking.[27] Paul Gautier noted the similarity between those two letters, but he refuted Psellos' authorship.[28]

Echoes of Psellian letters can be detected in later collections of ἐπιστολαί as well.[29] A striking example has been uncovered by Robert Volk in a manuscript from Mount Athos (dated to the sixteenth century).[30] The text preserved in manuscript Athos, Dionysiou, 274 (Diktyon 20242), fols 10ᵛ–12ʳ is a compilation of four Psellian letters.[31] The 'author' of that cento-like letter is unknown, but it once again reflects the steady use and re-use of epistolographic 'material'.

3 Imitating Psellos, again

Another example can be found in the rhetorical collections of Michael Choniates (second half of twelfth century). Twenty-one *prooimia* of letters (letter-prologues or first paragraphs) have been published at the end of the edition of his epistles.[32] The most efficient way to find and identify letters is by their beginnings (*archai*, ἀρχαί). Even in Byzantine times the *archai* proved to be a useful tool.[33] The first words of a letter also give an idea of what is to follow: signal words evoke friendship, opposition, consolation etc. The composition of the priamel or preamble belonged to the most sophisticated challenges of an epistolographer.[34] Most of these pieces preserved in a Florentine manuscript,

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26 On classification of letters and manuals of letter writing see the forthcoming study by Chernoglazov 2021.

27 Grünbart 2003, 31–41, 36–37.

28 Gautier 1977, 100.

29 Grünbart 2000, 307–308, the collections of model letters by Athanasios Chatzikes (thirteenth century) includes a Psellian piece.

30 Volk 2002.

31 Papaioannou 2019, epp. 117 (Kurtz and Drexl 1941, no. 31), 269 (Kurtz and Drexl 1941, no. 44) and 274 (Kurtz and Drexl 1941, no. 32) and Littlewood 1985, or. 13 (that piece is a letter according to the inventory of Papaioannou 1998 and the interpretation of Volk 2002).

32 Michael Choniates, ed. Kolovou 2001, 288–291.

33 Letters are normally provided with numbers on the margins of manuscripts reflecting the need of organizing activities by premodern scribes (and sometimes modern cataloguers). See Grünbart 2016c, 45 n. 29.

34 Fatouros 1999.

Biblioteca Laurenziana, Pluteus 59,12 (Diktyon 16463) (thirteenth century), are borrowed from John Chrysostom, but one seems to have its roots in a Psellian original (no notification of the similarity to a predecessor or provenance of the passage has been made in the edition).[35] It is a lengthy text comprising more than the extent of a *prooimion* of a letter. But careful reading shows small differences between the two versions found in Pluteus 59,12 and in Vatican City, BAV, Vat. gr. 712 (Diktyon 67343), while a third manuscript (no. 508 of the Romanian Academy of Sciences in Bucharest [Diktyon 10581] dated to the thirteenth century), not used by the editors Eduard Kurtz and Franz Drexl, reflects a multiplex transmission that needs an explanation.[36] Stratis Papaioannou used the Romanian manuscript in his recent edition. It contains unpublished material, such as the collection of the monk Hierotheos, and has to been taken into consideration.[37] The three documents are presented here in columns (different passages or changes have been underlined):

1. Michael Psellos, *Ep.* 447a, ed. Papaioannou 2020 (= Kurtz and Drexl 1941, no. 2)	2. Michael Choniates, *Epist. Init.*, ed. Kolovou 2001, 289.35–45	3. Michael Psellos, *Ep.* 447b, ed. Papaioannou 2020 = Hierotheos, *Ep.* 106, ed. Grünbart in preparation (= Darrouzès 1972, no. 125)
Ἐδεξάμην εἰς χεῖρας, <u>λαμπρότατε ἢ καὶ ὑπέρλαμπρε</u>, τὴν γλυκεῖαν ἐμοὶ καὶ ποθεινήν σου γραφήν. Ἐδεξάμην, καὶ αὐτὰς ἐνόμισα τὰς Μούσας εἰληφέναι ἢ τὰς Χάριτας δι'αὐτῆς, δι'ὧν αὐτὴν κατεκόσμησας καὶ θαυμασίαν οἶον ἀπειργάσω καὶ ἡδονῆς γέμουσαν.	Ἐδεξάμην εἰς χεῖρας, <u>αὐθέντα μου</u>, τὴν γλυκεῖαν καὶ ἐμοὶ ποθεινοτάτην σου γραφὴν καὶ αὐτὰς ἐνόμισας τὰς Μούσας εἰληφέναι ἢ τὰς Χάριτας, δι' ὧν αὐτὴν κατεκόσμησας καὶ θαυμασίαν οἵαν εἰργάσω καὶ ἡδονῆς γέμουσαν.	Ἐδεξάμην εἰς χεῖρας, <u>λαμπρότατέ μοι αὐθέντα</u>, τὴν γλυκεῖαν καὶ ἐμοὶ ποθεινοτάτην σου γραφὴν καὶ αὐτὰς ἐνόμισα τὰς Μούσας εἰληφέναι ἢ χάριτας, δι' ὧν αὐτὴν κατεκόσμησας καὶ θαυμασίαν οἵαν εἰργάσω καὶ ἡδονῆς γέμουσαν.
Τί γὰρ οὐκ εἶχεν ἐπαγωγὸν καὶ θελκτήριον; μᾶλλον δέ, τίνι τὸν ἀναγινώσκοντα	τί γὰρ οὐκ εἶχεν ἐπαγωγὸν καὶ θελκτήριον, μᾶλλον δὲ τίνι οὐκ ἐφείλκετο τὸν ἀναγινώσκοντα	τί γὰρ οὐκ εἶχεν ἐπαγωγὸν καὶ θελκτήριον; μᾶλλον δὲ τίνι οὐκ ἐφείλκετο τὸν ἀναγινώσκοντα

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35 Michael Choniates, ed. Kolovou 2001, 289, l. 35–45.

36 Kurtz and Drexl 1941.

37 Darrouzès 1972; the Romanian manuscript contains letters of Euthymios Tornikes, Phalaris, Firmus of Caesarea, Constantine VII, Theodore of Cyzicus and Michael Psellos. See Grünbart 2007 and 2016a.

1. Michael Psellos, *Ep.* 447a	2. Michael Choniates, *Epist. Init.*	3. Michael Psellos, *Ep.* 447b
ὥσπερ μάγος τις ἐφελκομένη τοὺς ἀναγινώσκοντας, τοῦτο μὲν τῇ γλυκύτητι τῶν λέξεων, τοῦτο δὲ τῇ συνθήκῃ τῶν συλλαβῶν;	<u>ὥσπερ μαγνῆτις σίδηρον. λειμὼν γὰρ ἦν σχεδὸν ὡραιότατος, παντοίοις ἀγαθοῖς βρίθουσά τε καὶ θάλλουσα, ἄλλοτε ἄλλῳ ἐφελκομένη τὸν ἀναγινώσκοντα.</u> τοῦτο μὲν τῇ γλυκύτητι τῶν λέξεων, τοῦτο δὲ τῇ συνθέσει τῶν συλλαβῶν,	ὥσπερ μαγνῆτις τὸν σίδηρον; λειμὼν γὰρ ἦν ἄντικρυς ὡραιότητος παντοίοις ἀγαθοῖς βρίθουσά τε καὶ θάλλουσα καὶ ἄλλοτε ἄλλου ἐφελκομένη τὸν ἀναγινώσκοντα. τοῦτο μὲν τῇ γλυκύτητι τῶν λέξεων, τοῦτο δὲ τῇ συνθέσει τῶν συλλαβῶν.
Πλέον δὲ μᾶλλον ἔτερπεν, ὅτι τὴν σὴν ὑγείαν εὐηγγελίζετο, ἣν ἐγὼ προτιμοτέραν τοῦ παντὸς τίθεμαι καὶ ἧς προκρι- τικώτερον οὐδὲ τοὺς Κροίσου θησαυροὺς ἐκείνους (οἵτινές ποτε ἦσαν) τίθεμαι.	πλέον δὲ μᾶλλον ἔτερπεν ὅτι τὴν σὴν ὑγείαν εὐηγγελί- ζετο, ἣν ἐγὼ προτιμοτέραν τοῦ παντὸς τίθεμαι καὶ ἧς οὐδὲ τοὺς Κροίσου θησαυροὺς ἐκείνους, οἵτινές ποτε ἦσαν τίθεμαι.	πλέον δὲ μᾶλλον ἔτερπεν, ὅτι τὴν σὴν ὑγείαν εὐηγγελίζετο, ἣν ἐγὼ προτιμοτέραν τοῦ παντὸς τίθεμαι καὶ ἧς προκρι- τώτερον οὐδὲ τοὺς Κροίσου θησαυροὺς ἐκείνους, οἵτινές ποτε ἦσαν, τίθεμαι.
Ἀλλ' ὑγιαίνοις, <u>ὦ θεία καὶ θαυμασία κεφαλή</u>, φωτὸς ὄντως ἀξία καὶ θαύματος. Ὑγιαίνοις καὶ στέλλοις γράμματα, καὶ λαμβάνοις παρ'ἡμῶν τὰ αὐτά· τί γὰρ ἡμῖν ἄλλο τερπνὸν, ἢ σὰς συλλα- βὰς ἀναγινώσκειν καὶ δέχεσθαι καὶ διὰ τῶν αὐτῶν δεξιοῦσθαί σε; ἔρρωσο ἐν μέσῳ πολλῶν πραγμάτων ἀτάραχος καὶ <u>ἀκύμαντος ἅμα περιφυλαττόμενος</u>.	ἀλλ' ὑγιαίνοις καὶ στέλλοις.	ἀλλ' ὑγιαίνοις, <u>ὦ θεία κεφαλὴ</u> φωτὸς ὄντως ἀξία καὶ θαύ- ματος. ὑγιαίνοις καὶ στέλλοις γράμματα καὶ λαμβάνοις παρ' ἡμῶν τὰ αὐτά. τί γὰρ ἡμῖν ἄλλο τερπνὸν ἢ σὰς συλλαβὰς ἀνα- γινώσκειν καὶ δέχεσθαι καὶ διὰ τῶν αὐτῶν δεξιοῦσθαι σε; ἔρρωσο ἐν μέσῳ πολλῶν πραγ- μάτων ἀτάραχος καὶ <u>ἀκίνδυνος ἅμα καὶ ἀπερίτρεπτος</u>.

Translation of text no. 1:

> I received, most magnificent and splendid (person), the delightful and longed for letter of yours in my hands. I received it and I thought to grasp through it the Muses themselves or the Charites, with whom you arranged it and completed it to such a wonderful (piece) full of pleasure. Wasn't it an attractive and enchanting (item), then?
>
> Or even more, by what did it attract the reader as a sorcerer attracts the readers, that is on the one side by the sweetness of its words and on the other by the composition of the syllables? But it offered even more delight, because it announced your health, which I regard as worthier than all things, and I do not regard the treasures of Croesus (whatever they have been) as a larger cause for preference than it (health).
>
> But you may remain in a healthy condition, divine and admirable head, really worthy of light and wonder. You may stay healthy and send letters, and get the same from us. What

other pleasure do we have than reading and receiving your syllables, and to greet you with them? Farewell, (remain) calm and not washed away in the midst of many occupations and at the same time guarded all around. (my translation)

In text no. 2 the form of address has been changed to 'master/Sir'; the epistolographer replaced the seductive sorcerer by 'a magnet that attracts iron' and added the passage 'the meadow was most beautiful, it (the letter) burst with all kinds of goods and flourished, pulling the reader here and there!'

Text no. 3 is closer to the Psellian piece than no. 2; it reduces the forms of address to 'most magnificent' and 'divine head'. At the end the composer replaced the words of no. 1 by similar expressions ('free from danger and immutable').

From this comparison it becomes apparent that Psellos' letter served as an applicable model: it was copied and slightly revised by two epistolographers from the twelfth century (Michael Choniates and Hierotheos); it was re-animated in a rhetorical (learned) setting (Choniates) and in a monastic context (Hierotheos).[38] Psellos' letter was kept as a prototype in the collection of *prooimia* attributed to Michael Choniates (the last paragraph of the 'original' Psellian letter is missing).[39] And it seems that the monk Hierotheos (third quarter of the twelfth century) re-used the Psellian piece with minor alterations. The simplest change in the process of recycling letters and adjusting them can be seen in the replacement of forms of address (λαμπρότατε ἢ καὶ ὑπέρλαμπρε – αὐθέντα μου – λαμπρότατέ μοι αὐθέντα), that reflect nuances of relations between two individuals.[40] Texts 1 and 3 end with different wordings, but the meaning is almost the same, evoking safety.

4 Concluding Remarks

Byzantine epistolary culture was a vivid process of copying, remodelling and adapting predecessors' letters into a new context. Traces of that mimetic and

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38 Commenting on *Ep.* 447a, Papaioannou 2019, LXXIV states: 'we cannot be absolutely certain about their Psellian origins'.

39 Cf. Papaioannou 2019, LXXXVII. Papaioannou classifies the piece in Vat. gr. 712 as *versio prima* (= 447a), the text in Acad. Rum. 508 (= 447b) is labelled *versio altera* [*retractatio*?] *in collectione epistolarum Hierothei monachi*.

40 Grünbart 2005; forms of address indicate closeness, distance, friendship, hierarchy etc.

creative habit can be found in the oeuvre of almost every Byzantine epistolographer, and the finesse and quality of variation was discussed and evaluated even in Byzantine times.[41]

If we treat letters as documents designed for a certain occasion at a certain moment (that can be repeated) and do not search exclusively for the original and first appearance of a message, that process of recycling can be visualized in an impressive manner. The concept of a fixed text ('fester Text') or even an original collection should be reconsidered. The fluidity of such letters' transmission has to be taken into consideration, since it reflects various levels of their (repeated) usage. In addition, it has to be kept in mind that collecting, copying and storing letters led to the creation of florilegia or (in a more technical sense) a stock of rhetorical spare parts. That is the case in Michael Choniates' compilation of letter *prooimia*. The engagement with the epistolographic tradition also reveals the versatility, the erudition, the creativity of Byzantine letter writers, but also their challenging situation to meet the expectations of their learned recipients. Hierotheos' reusing and reworking of the Psellian prototype reflect that procedure. Again, Michael Psellos' letters served as a prominent model, creating such a remarkable process of rhetorical afterlife.

In general, interpreters of Byzantine letters have to take into consideration that imitating rhetorical role models and elaborate tampering with predecessors' texts formed a usual pattern of composition.[42] A systematic re-evaluation of the (fluid) epistolographic transmission may show how alive and malleable letters were.

Acknowledgements

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41 Grünbart 2010, 129–137. The monk Iakobos (twelfth century) reused letters of Basil the Great in a rather simple manner, see Jeffreys 2012. Another platitudinous example of *mimesis* can be found in a document from Cyprus: the scribe used a letter of Eustathios of Thessalonica *in extenso* and added a few lines (Grünbart 2016b).

42 Grünbart 2003. See also Op de Coul 2006 presenting texts imitating Theodore Prodromos (twelfth century).

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Felix Heinzer

Preaching with the Hands: Notes on Cassiodorus' Praise of Handwriting and its Medieval Reception

Abstract: Pre-modern Western book production is first and foremost a matter of manuscript culture. Hence, the role of copyists – and in the early period of this tradition they were mostly monks – is of outstanding importance: no handwritten books without the dedicated work of scribes! In fact, instead of addressing the laborious physical effort of copying, the idealization of scribes tends to focus mostly on religious dimensions. The starting point of this tradition is the emphatic praise of handwriting by the late antique Roman statesman and scholar Cassiodorus, who spiritualizes scribal activity as a form of 'manual' preaching. The article attempts to trace the medieval reception of this seminal concept, particularly popular within the Carthusian tradition, up to Jean Gerson's *De laude scriptorum* of 1423 and the homonymous treatise of the German Benedictine abbot Johannes Trithemius, published in 1492 as a printed book (!).

1 The springboard: Cassiodorus Senator (d. *c.* 585) and his valuation of manuscripts copying

I admit that among those of your tasks which require physical effort that of the scribes, if they write correctly, appeals most to me, for by re-reading the Divine Scriptures (*relegendo Scripturas divinas*) they wholesomely instruct their own mind, but by copying (*scribendo*) the precepts of the Lord they also spread them far and wide.

Happy their design, praiseworthy their zeal, to preach to men with the hand alone, to unleash tongues with the fingers, to give salvation silently to mortals, and to fight against the illicit temptations of the devil with pen and ink. Every word of God written by the Scribe is a wound inflicted on Satan![1]

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1 *Ego tamen fateor votum meum, quod inter vos quaecumque possunt corporeo labore compleri, antiquariorum mihi studia, si tamen veraciter scribant, non immerito forsitan plus placere, quod et mentem suam relegendo Scripturas divinas salutariter instruunt et Domini praecepta scribendo longe lateque disseminant. Felix intentio, laudanda sedulitas, manu hominibus praedicare, digitis*

This stunning praise of the copyists of biblical codices, frequently quoted by scholars dealing with medieval manuscript culture, occurs in Chapter 30 of the first part of the *Institutiones divinarum et saecularium litterarum*, a guide conceived by Cassiodorus Senator (d. *c.* 585) for the organization of intellectual life at Vivarium, founded in the 550s by the author as a unique synthesis of monastery and school on his family estate in Calabria.[2]

Cassiodorus' intellectual attitude is deeply marked by his position at a historical and cultural threshold: 'in Cassiodoro vi è una sintesi di idee pagane e idee cristiane, armonizzate con grande sapienza, ma dissimulate con naturalezza'.[3] In fact, the novelty of the educational program developed by the *Institutiones* may be boiled down to their attempt to amalgamate classical intellectual heritage with Christian theology and spirituality: a momentous alliance, as before long Cassiodorus' opus was to cross the Alps and circulate in the high-ranking institutions of Latin Europe.[4] Nevertheless, at least at first glance, his praise of scribes seems to be fundamentally indebted to what, in the wake of Claudia Rapp's impressive overview, we might term an early Christian awareness of 'Scriptural Holiness',[5] understood as the 'projection' of the dignity and sanctity of the divine Word onto the biblical text, extending even to the materiality of the codices transmitting this message and thus to 'the letters that convey the Word of God'.[6] Cassiodorus' promotion of the copying of biblical books to an act of preaching appears to be a rather specific idea; yet the notion of a particular spiritual benefit for those producing books through the work of their hands in order to disseminate Holy Scripture to the use of other readers can be found equally, if less frequently, in the context of late antique Christianity, as Rapp has been able to show.[7]

An aspect of Cassiodorus' approach that is, however, particularly conspicuous is its strongly bodily note: no less than three times the opening section of

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linguas aperire, salutem mortalibus tacitum dare, et contra diaboli subreptiones illicitas calamo atramentoque pugnare. Tot enim vulnera Satanas accipit, quot antiquarius Domini verba describit (Cassiodorus, *Institutiones* I, 30, 1, ed. Mynors 1937, 75; English translation: Webber Jones 1947, 35 with some minor changes).

2 The bibliography on this unique institution and its famous, if widely dispersed, library is abundant; cf. among others Troncarelli 1998; Schindel 2008, 1–15.

3 Troncarelli 2020, 7.

4 Perhaps with the papal library at the Lateran Palace as an important pivot of this dissemination, cf. Lapidge 2005, 18–20, and Troncarelli 2020, 97–103.

5 Rapp 2007, 194–222.

6 Rapp 2007, 200.

7 Rapp 2007, 209–212.

Institutiones I, 30 brings into play the copyists' fingers holding the pen: the *tres digiti* (1) are celebrated as 'unleashing the tongues' of the future readers,[8] but (2) also boldly associated with the Holy Trinity[9] and (3) with Yahweh's finger carving the Decalogue in the tablets of stone (Ex. 31:18).[10] The act of copying is obviously credited with a strong 'theological' potential: a supercharging that recalls a passage of the *Letter to Melania* by the fourth-century monk Evagrius Ponticus that presents beautiful handwriting as a metaphor for God's creation of the world.[11]

Interestingly enough, in this section of the text we can observe a short but surprising opening toward the classically oriented cultural program that constitutes the second wing of Cassiodorus' treatise. I am referring to the short parenthesis on the potential faults of the monks dealing with the holy text: 'if ever they write correctly' (*si tamen veraciter scribant*).[12] Copying an exacting text such as Holy Scripture demands orthographical skill; both the scribes and the correctors, Cassiodorus insists, should thus study the appropriate textbooks: *orthographos antiquos legant* (I, 30, 2). At first sight, such a recommendation in this context, with its strong theological connotations, might appear rather unexpected and even intriguing. Yet, considering the wording of the chapter's title – *De antiquariis et commemoratione orthographiae*, i.e. 'On scribes and on remembering orthography' – Cassiodorus' insistence on scribal correctness turns out to be a substantial part of his message.

If the *saeculares litterae* are thus assigned a place in the heart of what we might call a theology of copying holy books, this striking prominence demonstrates *in nuce* why the *Institutiones* are considered a seminal document in the history of Western European monasticism. In fact, Cassiodorus' attempt to tie together religion and learning[13] proved to be momentous. Emblematic documents such as Charlemagne's *Epistula de litteris colendis* (arguably going back to Alcuin)[14] reveal that, at least since the so-called Carolingian Renaissance, the antique liberal arts program found fertile ground in the educational curriculum

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8 *Felix intentio* [...] *digitis linguas aperire* (I, 30, 1, see n. 1 above).

9 'By three fingers is written what is said by the virtue of the Holy Trinity': *tribus digitis scribitur quod virtus sanctae trinitatis effatur* (I, 30, 1).

10 'In some way, they [the scribes] seem to emulate what the Lord did when writing his law by operating with his almighty finger': *factum Domini aliquo modo videntur emitari, qui legem suam, omnipotentis digiti operatione conscripsit* (I, 30, 1).

11 Rapp 2007, 215.

12 See n. 1 above.

13 Brunhölzl 1975, 39.

14 Wallach 1951.

of clerical and monastic schools.[15] This process turned out to be instrumental in two senses: (1) for the survival of at least part of the classical intellectual culture beyond the end of the ancient world and (2) for the promotion of the written book – and consequently of book production! – to a place at the heart of pre-modern Christian culture, especially in the context of monastic education. As John Contreni has put it (in reference to the Carolingian situation at houses such as St Gall, Lorsch, or Corbie): 'An active and influential school depended for its vitality on the resources necessary to copy books or to obtain them from other centers'.[16]

Before returning to our topic, on the hunt for traces of the medieval afterlife of Cassiodorus' praise of handwriting, it might be of note to ascertain an earlier source that may have inspired his metaphor of preaching with the hands, namely, John Cassian (*c.* 360–*c.* 435), 'another bilingual monk with extensive eastern experience', recognized by Cassiodorus who was apparently familiar with the former's writings as those of 'a monastic and stylistic soulmate'.[17] In his treatise *De institutis coenobiorum et de octo principalium vitiorum remediis* X, 10, commenting on Saint Paul's claim that he had worked night and day not to be a burden to the members of the community (II Thess. 3:6–10), Cassian coins the phrase *idcirco evangelium praedicans meis manibus* ('preaching the gospel with my hands'), which he puts in the Apostle's mouth,[18] making him appear to some extent a worker-priest *avant la lettre*, i.e., by his self-sustaining way of life. If I am right in this surmise, Cassiodorus might have drawn on this concept, trans-forming and intellectualizing Cassian's phrase into his own formula *manu hominibus praedicare,* while applying it to his monks who were charged with copying biblical texts.

Yet, this view of Saint Paul as a worker is far from eclipsing his authorship of the corpus of pastoral letters that was to form a substantial part of the New Testament canon: in fact, the caption *Sedet hic Scripsit* ('here he is sitting as he was writing') of the full-page miniature in the manuscript Stuttgart, Württem-bergische Landesbibliothek, HB II 54 (*c.* 820–830, probably hailing from St Gall), arguably one of the earliest author portraits of the Apostle in Western manuscript tradition, stages him exemplarily as a scribe (see Fig. 1).

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15 Contreni 1995, 725–747.

16 Contreni 1995, 724.

17 Stewart 1998, 25.

18 Petschenig (ed.) 1888, 183.

2 Twelfth- and thirteenth-century Carthusians as Cassiodorus's heirs?

The earliest evidence of an echo of Cassiodorus' understanding of the monk as a 'manual preacher' which I have been able to find occurs in the first Customs of the Carthusian Order elaborated by Guigo I, the fifth prior of the Grande Chartreuse, in the late 1120s.[19]

If it is the Carthusian book culture of the later Middle Ages and its 'tremendous impact on devotional reading by other religious, and also by lay people'[20] that presently attracts substantial scholarly attention, it is equally obvious (and those specializing in this field insist on this continuity) that these fifteenth-century efforts dedicated to writing, translating, and copying works of devotional literature actually 'fulfill the founders' mandate'.[21] In fact, what Michael Sargent so aptly termed 'the *literary* character of the spirituality of the Carthusian Order'[22] is already fully palpable in Guigo.[23] His astonishingly detailed description of the items a monk needed in his individual cell for the making of codices, contained in Chap. 28 on the standard equipment of the monk's *cella*,[24] is of highly 'technical' interest and probably remains 'the most complete contemporary record of bookmaking supplies available to modern codicologists.'[25] For the present article, however, the reflections on the spiritual aspects of writing books are of even greater interest, and it is here, in fact, that we meet with a Cassiodorian echo:

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19 See the edition of Laporte, Guigues I (1984). For reasons of the precarious availability of library holdings, however, I shall quote Guigo's Latin text from vol. 153 of Migne's Patrologia Latina (PL 153 in what follows here), electronically processed by Philipp Roelli <http://mlat.uzh.ch/MLS/ xanfang.php?tabelle=Guigo_I_prior_Carthusiae_cps2&corpus=2&allow_download=0&lang=0> (accessed on 2 Feb. 2021).
20 Brantley 2007, 47.
21 Patterson 2011, 136.
22 Sargent 1976, 240 (italics mine).
23 For the following, cf. Brantley 2007, 47–50.
24 Chap. 28,2 (PL 153, 693). Remarkably, Guigo mentions the fact that it happens very rarely that utensils for crafts other than book making are needed, 'for, if possible, we train almost everyone we receive in the art of copying' (*omnes enim pene quos suscipimus, si fieri potest, scribere docemus*).
25 Brantley 2007, 48.

> We desire that the books be made with the greatest attention and kept very carefully, like perpetual food for our souls, *so that because we cannot preach the word of God by our mouth, we may do so with our hands.*[26]

A glance at the Latin text makes it obvious that it was exactly Cassiodorus' comment on the vocation of the *antiquarius* at Vivarium that Guigo had in mind:

Cassiodorus	Guigo
Felix intentio, laudanda sedulitas, *manu hominibus praedicare*, digitis linguas aperire, salutem mortalibus tacitum dare, et contra diaboli subreptiones illicitas calamo atramentoque pugnare.	Libros quippe tamquam sempiternum animarum nostrarum cibum cautissime custodiri et studiosissime volumus fieri, ut quia ore non possumus, dei verbum *manibus predicemus*

Can we reconstruct the circumstances that led Guigo to draw on and recontextualize the late antique reference text?

The phrase *manibus praedicare* was quoted and credited to Cassiodorus in a Carthusian Chronicle of around 1260:[27] an argument for supposing an awareness, at least in the thirteenth century, of its Cassiodorian background. But what about Guigo himself? Dennis Martin's hint at the use of the phrase by Guigo's contemporary, Peter the Venerable, turns out to be an important clue:[28] in his Letter 20, the abbot of Cluny celebrates Gilbert, a recluse at Senlis, as a 'silent preacher of the Divine Word whose hand will loudly sound in the ears of many people while his tongue remains silent'.[29] Like Guigo, Peter addresses the activity of a scribe, living in self-chosen seclusion but 'travelling', as it were, in his manuscripts over land and sea (*in codicibus tuis terras ac maria peragrabis*), 'a hermit by profession whose devotion, however, turns him into an Evangelist' (*professio te heremitam, devotio faciet evangelistam*).[30]

The underlying idea is clearly the same as in Guigo's Chapter 28, and again a glance at the Latin (quoted in n. 29) makes the connection appear even more striking: in its bold metaphor of the hand (*manus*) sounding with loud voices (*clamosis vocibus*) and hence transforming the copyist into a *taciturnus praedicator*, Peter's wording very closely approaches that of Guigo's *Dei verbum*

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26 Guigo, Chap. 28:3 (PL 153, 693; English translation: Brantley 2007, 48).
27 Martin 1992, 232, n. 173.
28 Martin 1992, 232.
29 *Sic plane sic verbi divini poteris fieri taciturnus praedicator, et lingua silente, in multorum populorum auribus manus tua clamosis vocibus personabit.* Constable 1967, vol. 1, 38. See also Constable 1996, 213.
30 Constable 1967, vol. 1, 38.

manibus predicemus. Yet the question of exactly how (and at which moment) Cassiodorus comes into play remains uncertain: based on chronology – Constable dates the letter to Gilbert 'probably in the early 1130s'[31] – the hypothesis that Guigo, writing in the late 1120s, may have been inspired by Peter appears rather unlikely. Should we then rather assume that Cassiodorus' notion of the 'preaching copyist' was more widely received among religiously fervent intellectuals of this period?

Still, if almost six centuries later Cassiodorus' *laus scriptorum* surprisingly resurfaces, times and circumstances have decidedly changed, not only with regard to the distinctive timbre of this 'swansong' of ancient civilization by the former Roman statesman,[32] but chiefly for the changing status of written culture: 'Die Schriftlichkeit hatte sich gewandelt; der gleiche Gedanke, vom sechsten in das zwölfte Jahrhundert transponiert, musste einen anderen Sinn erhalten', as Johan Peter Gumbert insists.[33]

While reflecting on this cultural change, several of its aspects should be emphasized:

(1) An important difference is immediately obvious on the level of content: while Cassiodorus' metaphor of the copyists preaching with their hands focused on the *verba Domini*, i.e., on scriptural texts, the production of the Carthusian scribes mainly concerns the field of theology and, in later periods, devotional genres as well as, increasingly, vernacular texts. At the time of Guigo himself, we remain of course in the realm of Latin, but the shift to non-biblical texts is obvious. Again, this tendency is paradigmatically confirmed by Peter the Venerable: in his often-quoted Letter 24 to the prior of the Grande Chartreuse,[34] we find a list of manuscripts, exclusively encompassing patristic writings,[35] which obviously refers to a shipment of books sent with the letter at Guigo's request (*sicut mandastis*, as Peter adds to the first item of the list).

(2) Peter's mention of a textual problem in a Cluniac manuscript,[36] a corruption obviously corresponding to and thus compromising the value of the Carthusian copy, indicates that at least some of the manuscripts brought from Cluny were destined to serve as master copies in the Grande Chartreuse's scriptorium. At the same time, such details attest a mutual familiarity with the

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31 Constable 1992, 320.

32 'Il timbro inconfondibile dell'affascinante canto del cigno della civiltà antica' (Troncarelli 2020, 14).

33 Gumbert 1974, 310.

34 Constable 1967, vol. 1, 44–47.

35 Constable 1967, vol. 1, 46[39] to 47[15]; cf. Brantley 2007, 49–50.

36 Hilary's *Commentarius in Psalmos*, Constable 1967, vol. 1, 47[7–8].

holdings of the other side of this 'intellectual commerce'.[37] Perhaps we might even suppose an exchange of library catalogues provided with indications similar to the famous *Desideratenliste* of the ninth-century catalogue from the Alsatian abbey of Murbach in which important but absent works of a given author are listed by means of rubrics like *adhuc quaerimus*, *adhuc non habemus*, *desideramus* etc.:[38] this system presupposes 'interlibrary loans', most likely within the Cluniac confraternity system as was the case earlier with Murbach and its network.[39]

(3) Equally revealing is the mention of a big codex (*maius volumen*) of the Chartreuse's own library containing a series of epistles of Augustine. Peter asks for this book so that it could be copied in Cluny and aid the restoration of an analogous volume which had been partly destroyed by a bear.[40] Apparently, thus, the exchange works in both directions, and we may even be allowed to assume a continuous to-and-fro of reading and copying material between the two houses. But there is even more, as in Peter's accompanying letter we are met with revealing evidence that such exchanges were not limited to the Chartreuse and Cluny: in the case of Prosper of Aquitaine's anti-Pelagian writing against John Cassian (*De gratia Dei et libero arbitrio*), the abbot informs his Carthusian correspondent that he had sent a messenger to the Cluniac abbey of St-Jean d'Angély near La Rochelle in order to procure from there a copy of this apparently very rare text.[41] Perhaps, in this case, Peter relied upon the mediation of a well-connected figure: the Cluniac prior Henry, a former bishop of Soissons, who also filled the position of abbot at St-Jean (intermittently) from 1104 to 1131.[42] At any rate, Gumbert's view that the Carthusian copyists, far from emulating the wide diffusion of codices which Cassiodorus claims in his eulogy of the Vivarium scribes (*Domini praecepta scribendo longe lateque disseminant*),[43] chiefly worked for their own small community,[44] clearly underestimates

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37 Brantley 2007, 49.

38 Milde 1968, 62–130.

39 For Murbach see Heinzer 2017, 311.

40 The somewhat enigmatic indication that this happened *in obaedientia* must refer to a priory: Peter's Statutes mention the administration of dependencies outside the monastery (*extra claustrum*) as being charged to take care of *alicuius obedientiae* (Constable 1975, 72). Cf. equally the mention of one of the four priories of Marmoutier near Tours, Cluniac since the late tenth century, which is also called *obedientia* (Constable 1996, 60 n. 61).

41 *Ad sanctum Iohannem Angeliacensem in Aquitania misimus*, Constable 1967, vol. 1, 47.

42 On this rather colorful figure, see Constable 2010, 347–348.

43 The topical *longe lateque*, obviously one of Cassiodorus' pet phrases, recurring almost a dozen times in his writings, is purposefully chosen to rhetorically enhance his claim.

the performance of the librarians and copyists under Guigo's leadership. In this period, thanks to its relations to Cluny, the Grand Chartreuse was embedded in a far-flung network reaching even beyond the realm of its own order.

3 Jean Gerson and his *De laude scriptorum* of 1423

The first independent work on scribal practice[45] is a long time coming: *De laude scriptorum doctrinae salubris* ('On Praising the Scribes of Healthy Doctrine')[46] was written in April 1423 by Jean Charlier de Gerson (1363–1429), probably one of the most prolific and popular writers of the fifteenth century. This opuscule, which is structured in twelve rather short articulations, actually represents, as the short preface indicates, a response to a request by a Carthusian (*quaesivit quidam de monachis domus Carthusiae*),[47] arguably a monk of the Grande Chartreuse,[48] on the issue of the permissibility of copying manuscripts on feast days. Taking this rather scrupulous question[49] as a stepping-stone, Gerson turns before long to a more general perspective. Of course, books – and just to recall, at that time they were all still handwritten books – would not exist without the dedicated work of those copying them. Gerson underlines this point in the preface: *qualiter habebuntur [scripturae] si non scribantur?* he asks rhetorically. Still, if he expresses appreciation for the (good) scribe, the gist of the treatise is actually a matter more and more common among authors in this period, namely, anxiety about whether their intellectual production was faithfully reproduced

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44 'Glaubte Cassiodor noch, an die weite Verbreitung der geschriebenen Exemplare erinnern zu müssen oder zu dürfen, so arbeitete der Kartäuser-Schreiber in erster Linie für die kleine Gemeinschaft, der er selbst angehörte', Gumbert 1974, 310.

45 Hobbins 2009, 2 and 166.

46 The phrase *doctrinae salubris* seems to be part of the original title, as the manuscript evidence suggests; see Hobbins 2009, 227 –228 (n. 10 of p. 2).

47 For Gerson's regular practice of such activities as a consultant, especially replying to inquiries on behalf of Cartusians, see the short mention in Glorieux 1961, 136.

48 This date of inquiry and answer perfectly fits the situation of Gerson's retirement in Lyon from the end of 1419 up to his death in July 1429: a period marked by frequent corresponding with the (relatively) close-by Grande Chartreuse (Glorieux 1961, with more details); this surmise is well-matched by the indication of the questioner's provenance as a monk of the *domus Carthusia*.

49 On the typical tinge of religious anxiety that marks a good deal of the questions posed to Gerson, often dealing with details of Carthusian daily routine, see again Glorieux 1961, 144.

by the *scriptores quasi mechanici et manuales librorum* (as Gerson, again in his preface, calls them). Indeed, the real concern, 'just beneath the surface of this entire work', is in fact 'authorship itself'[50] including the ability of authors 'to control the reception of a text.'[51]

However, now re-focusing our attention on the *topos* of the copyists' preaching with their hands, the preface of the treatise leaves no doubt about Gerson's familiarity with this tradition, as he states that 'a good copyist busy with books of healthy doctrine ... may indeed be said to be preaching. In fact, while his tongue is silent, *his hand is preaching*, and sometimes even in a more fruitful way in that Scripture thereby reaches a wider audience than a transitory sermon.'[52]

Less clear is the question of the source of this awareness. While we cannot *a priori* exclude the possibility that he drew directly on Cassiodorus, I am rather inclined to consider that Gerson was indebted to the Carthusian tradition, given his obvious familiarity with this context. The wording itself unfortunately does not help us to solve the riddle.

At the end of the short introduction, the idea of the preaching scribe is taken up again. Gerson introduces the twelfth *consideratio* of his text with three hexameters, each of them consisting of four cue-like elements, thus acting as a succinct (and easily remembered) poetic abstract of what follows:[53]

> [I] *Praedicat* atque [II] studet scriptor, [III] largitur et [IV] orat
> [V] Affligitur, [VI] sal dat, [VII] fontem [VII] lucemque futuris,
> [IX] Ecclesiam ditat, [X] armat, [XI] custodit, [XII] honorat.

Remarkably enough, the Windesheim Canon regular Gabriel Biel (1420–1495), in his programmatic *Tractatus de communi vita clericorum*, written to urge the semi-religious Brethren of Common Life in Germany to take the direction of a regular (Augustinian) form of life,[54] quotes the three emblematic verses in his chapter on the *labor scribendi*.[55] The borrowing per se is not all that surprising, given Gerson's popularity among the partisans of the 'Devotio Moderna'; in fact

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50 Hobbins 2009, 72.

51 Hobbins 2009, 167.

52 *Scriptor idoneus et frequens librorum doctrinae salubris* […] *praedicare dici potest. Certe si lingua silet manus praedicat et fructuosius aliquando quanto scriptura venit ad plures uberior quam transiens sermo*, ed. Glorieux 1973, 424. – See also the statement by Peter the Venerable, quoted above, p. 952, n. 29.

53 The twelve cues appear again as captions at the beginning of every *consideratio*.

54 Van Geest 2017, 123–125.

55 Faix 1999, 64–65, 82, 363 (edition of the text).

Biel refers to Gerson in other contexts as well.[56] Nonetheless, Biel's borrowing of the notion of 'manual' preaching in a lovely way confirms Gerson's own assessment of the far-reaching agency of *scriptura*.

4 In guise of a conclusion: Johannes Trithemius' printed praise of scribes if 1492

It seems natural to let the medieval career of Cassiodorus's dictum come to its end with Johannes Trithemius, abbot of Sponheim, who composed his own *Praise of Scribes* in 1492, a little less than a century after Jean Gerson.[57] This short lapse of time, however, spans a momentous media change: after 1450 in Europe, thanks to Gutenberg's innovation, making a book can mean two technically and economically rather different manufacturing processes. This shift had far-reaching consequences for the *scriptor* and his status. It is therefore of note that Trithemius published his treatise in commendation of the art of hand-copying in the new way, having it printed by Peter Friedberg in 1494 at Mainz, the emblematic place of Gutenberg's seminal achievement.[58]

This is not the place for an in-depth discussion of either the universal aspects of this epochal change or of what Noel Brann termed the consequent 'monastic dilemma' standing behind Trithemius' choice. I should, however, join Brann in emphasizing that the Sponheim abbot, far from being 'a reactionary in the face of the printing revolution', was actually one of its 'most vigorous advocates'.[59] Trithemius argues for the value of the book as such, be it handwritten or printed, as a key agent in what he deems the heritage of monastic erudition; viewed from this perspective, there is no contradiction in Trithemius' dissemination of a work in praise of manuscript copying, by means of printing. His intention is actually twofold: while idealizing the work of monastic manuscript copying, he aims (1) to return to its pristine state 'the glorious idea of *vera eruditio monastica*'[60] with regard to both learning and sanctity as a signature quality of the Order's 'golden centuries', which he consistently evokes and augurs; and

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56 Faix 1999, 62–63.

57 Arnold 1973.

58 For a panorama of the ideological exaltation of this medio-historical innovation, celebrated by fifteenth- and sixteenth-century 'progressivists' as an achievement most dramatically underscoring 'the advancement of modernity over antiquity', see Brann 1979, 164 (n. 1).

59 Brann 1979, 151.

60 Brann 1979, 163.

(2) to emphasize this activity as the most appropriate form of the *labor manuum,* requested and elevated to a noble status by the Benedictine rule as an integral part of the monks' daily life.

If Trithemius differs fundamentally from Gerson in so far as he had the option to make use of the new technology of book publishing, the concept of his *opusculum* as an independent work on the topic clearly emulates the latter's, including its programmatic title: *De laude scriptorum*. But there is obviously more: Trithemius does not shy away from lifting material from his model.[61] On the very first side of the prologue (a IIIr)[62] the statement about the necessity of copyists for the existence of texts (*absque scriptoribus non potest scriptura diu salve consistere*) is clearly indebted to Gerson's *qualiter habebuntur [scripturae] si non scribantur*[63] and the ensuing celebration of the wholesome effects of the scribe's ministry begins by drawing verbatim on the beginning of the third of Gerson's emblematic verses (also quoted by Gabriel Biel, as we have seen): *Unde ipse <u>ecclesia ditat</u>*. And as if that were not enough, the entire package, quoted above (p. 956), reappears at the end of Trithemius' Chapter V: *Quidam* – Gerson is not named – *sic cecinit: Praedicat* [...] – [...] *honorat!*[64]

Perhaps even more worthy of note is that the starting point of the chain we are observing here itself resurfaces. In fact, Trithemius remarkably returns to Cassiodorus here, mentioning him in Chap. IV:

(1) as the figurehead of a catalogue of abbots, all of them Benedictines (evidently with the exception of Cassiodorus himself) celebrated for their fervent engagement with the copying of ancient works and their solicitude for the libraries of their monastic houses;[65]

(2) immediately thereafter, this time connecting him with Peter Damian,[66] as a pair of authors who published *singulares ac preclaros tractatus de hac industria* (i.e. about the meritorious work of scribes).[67]

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61 Wakelin 2014, 25.

62 I refer to the digitized copy of the Mainz print of 1494 (GW 47538), now housed in Munich, Bayerische Staatsbibliothek <https://daten.digitale-sammlungen.de/0003/bsb00037424/images/index.html?fip=193.174.98.30&id=00037424&seite=1> (accessed on 2 Feb. 2021).

63 See above, p. 955.

64 GW 47538, a VIII^v .

65 *Cassiodorum, Bedam, Alcuinum, Rabanum, Reginonem* [Regino of Prüm], ibid., a VI^v .

66 Trithemius may have in mind strophe 8 (*Scriptores recta linea / Veraces scribant litteras* etc.) of a poem (Carmen 8) whose attribution to Peter Damian is now considered rather doubtful: Giordano Lokrantz (ed.) 1964, 145.

67 GW 47538, a VII^r .

Other passages of *De laude scriptorum* reveal an even closer (and more explicit) familiarity with Cassiodorus and his key text of *Institutiones* I, 30. In Chap. VI of Trithemius' treatise, the phrase *Monachi autem scribendo libros divinos … cum sermone praedicare non valeant, manu et calamo voluntatem domini longe futuris annunciant*[68] obviously draws on the passage from Cassiodorus quoted at the beginning of this article: this applies to the qualification of the divine books (*libros divinos*) as well as to the pair *manu et calamo*, as neither the specification of copying biblical books nor the mention of the reed pen are found in either Guigo or Gerson, and must therefore go back to Cassiodorus' discussion of *scripturas divinos* and his celebration of the scribes' fight against Satan *calamo atramentoque*.[69] Moreover, in his Chap. VIII (*De orthographia*), Trithemius brings back into play an aspect particularly cherished by his sixth-century role model: the concern for textual correctness, so prominently placed, as we remember, in the title of Cassiodorus' chapter: *De antiquariis et commemoratione orthographiae*.

Things are coming full circle here – an impression given weight and corroborated by a final observation on an element that we found in Cassiodorus but have not again come across in this *parcours* until now: the scribes' fingers. Trithemius, again in his Chap. VI, comes back to that theme, while alluding to a monk 'in one of our cloisters', exceptionally zealous as a copyist, whose three writing fingers with which he had written so many volumes (*quibus tot volumina scipserat*), after many years (*post multos annos*) when his grave was opened, were still preserved (*integri et incorrupti*) while the rest of his corpse had entirely disintegrated down to the bones. As the author comments, it was a miraculous attestation of the holiness of this office before God Almighty (*quam sanctum hoc officium, apud omnipotentem deum iudicetur*).[70] This very bodily projection of the copyist's saintly achievement onto his hand or, more precisely and more pointedly, onto his fingers, proves to be another tribute to the late antique reference, even though the tribute's 'materializing' approach might seem to be in conflict with Cassiodorus' analogical and highly spiritual interpretation of the effort of the human scribe's *tres digiti* to multiply the *caelestia verba* on the parchment as an 'embodiment' of the message uttered by the Trinitarian God.

Hence, at the end of this survey we should yield the floor for the final say to those who are the real protagonists of this paper: the copyists themselves. The attempt to spiritualize manual production of texts and books by Cassiodorus and his medieval followers has a haunting counterpart in the guise of a well-

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68 GW 47538, b Iʳ.

69 See above n. 2.

70 GW 47538, b Iᵛ.

known colophon, attested in many variants from as early as the seventh or eighth century:

> *Tres digiti scribunt et totum corpus laborat*.[71]
> Three fingers write, but the entire body strives.

If this phrase equally evokes the triplicity of the scribe's writing fingers, as a call from the 'shop floor' – unobstructed by idealizing superstructures as it was in Cassiodorus's association of the scribal act with the Holy Trinity's self-communication – it rather sternly reminds us that copying of manuscripts was first and foremost painstaking and laborious travail.

Acknowledgements

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[71] Schaller and Könsgen 1977, nos 16451 and 16452.

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Fig. 1: Saint Paul as a scribe; Stuttgart, Württembergische Landesbibliothek, HB II 54, fol. 25ʳ; early ninth-century, probably hailing from Saint Gall. © Württembergische Landesbibliothek in Stuttgart.

David Holm

Where did the Ngạn People Come From? Ritual Manuscripts among the Ngạn in Northern Vietnam

Abstract: The Ngạn people are a small local population of Tai-language speakers in the eastern districts of Cao Bằng province in northernmost Vietnam. They are reportedly descendants of bodyguards hired by the Mạc royal court during the seventeenth century. It is the aim of this paper to investigate where they came from, using Vietnamese and Chinese ethnological studies, on-site fieldwork, and textual analysis. My preliminary conclusion is that the original homeland of the Ngạn was in the Youjiang River valley in central-western Guangxi. Numerous strands of information point to a strong connection with the native chieftaincy of Tianzhou, while the lyrics of traditional songs sung by the Ngạn point to the region of the former chieftaincy of Si'en, just to the east of Tianzhou.

1 Introduction

The present paper is the product of two related research projects. The aim of the first is to produce critical annotated editions of traditional manuscripts in Zhuang and related Tai-Kadai languages from Guangxi and contiguous provinces in the southern part of China.[1]

The aim of the second project is to consolidate our survey of traditional Zhuang manuscripts, extending it further to the southwestern part of Guangxi and across the border into Vietnam. In Vietnam, our potential range includes all of the north-eastern and northern provinces in which Tai speakers and Chinese-style character scripts are found. Basically, this means all the territory to the north of the Red River valley, though Tai groups and character scripts are also found in scattered locations well to the south. A key focus here has been to document separately the languages and vernacular scripts of the Tày and the various Nùng groups. The Tày are mostly residents of very long standing in this region, to all intents and purposes indigenous, while the Nùng are relatively recent migrants from China.

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1 Holm and Meng (forthcoming).

The Nùng are mostly speakers of Southern Zhuang dialects from the south-western part of Guangxi or eastern Yunnan, and in Vietnam the various sub-groups are often referred to by their places of origin in China. Thus the Nùng An come from Long'an 隆安 county in west-central Guangxi, the Nùng Chau come from Longzhou 龍州 in the far southwest, and the Nùng Fanh Sling come from the former chieftaincy of Wancheng 萬承 in present-day Tiandeng 天等 county. The languages they speak are distinct from each other, even if there is often a certain degree of mutual intelligibility.[2] Their vernacular scripts are also different from each other, and different also from the Tày vernacular script.

One of the provinces in which I conducted my earliest fieldwork in Vietnam was Cao Bằng 高平, a mountainous province more or less directly north of Hanoi, just south of the border with China. This is an area which until quite recently had an overwhelming majority population of Tai speakers, both Tày and Nùng, but also some other groups. One of the most intriguing of these other groups was a group called the Ngạn, who are now officially classified by the Vietnamese government as a 'local sub-group' of the more populous Tày. The classification itself was anomalous, and perhaps a sign that the Ngạn would be worth investigating.

The Ngạn were said to be descendants of a group of mercenary soldiers who were hired as bodyguards for the Mạc 莫 royal court during the time when the Mạc dynasty had its seat of government in Cao Bằng, during the 16th and 17th centuries. The men were said to be sturdily built, and good at hunting and the martial arts. Their settlements were distributed along the main roads along which the Mạc royal retinue travelled from its citadel in present-day Hòa An district through the mountains to the east. The Ngạn were first mentioned in a report dated 1908 by the French commandant of the 2nd Military District (Cao Bằng), Major Leblond, and were reported to be a brave people renowned for their marksmanship, who lived along the packhorse route between the provincial seat of Cao Bằng and Quảng Uyên to the east.[3] The Ngạn population was relatively small. In Vietnam there are a number of different accounts of where the Ngạn people came from. The one most often cited is that they came from Guizhou province in China.[4]

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2 A similar mixture of Southern Zhuang speakers from various localities is found on the other side of the border, in the counties just to the north. For details see Holm 2010. An extensive wordlist of several of these speech forms is given on pp. 41–58.

3 Hoàng Văn Ma 2009, 318.

4 Ty văn hóa Cao Bằng 1963, 46–47, quoted in Hoàng Văn Ma 2009, 320–321. The above source was a draft history of Cao Bằng province compiled by the provincial Cultural Department in the 1960s.

At any rate I included the Ngạn in my research plan, along with visits to Nùng An and Tày villages in the same general area. My visits were preliminary visits to selected village communities, with the aim of recording basic vocabularies from a range of different speakers, both male and female, but were also more specifically targeted at religious practitioners with ritual texts, with the aim of recording recitations of ritual texts by their traditional owners (the priests), and conducting follow-up investigations on the meaning of words, phrases, and longer chunks of text. For the Ngạn, I visited a village community in Phi Hải commune in Quảng Uyên district, some 40 kilometres to the east of the Cao Bằng provincial city. A preliminary visit was made in February 2015, and a follow-up visit took place in August of the same year.

2 Mogong and their rituals

It was during the second stay that I visited the home of Mr. Hòang, a mogong priest, and recorded his recitation of a ritual to call back the vital spirits of a sick person.

Before going into a detailed description of the ritual itself, a couple points need clarification. Mogong 麼公 is the name in Chinese (Zhuang *bouxmo*) for male ritual practitioners who conduct Tai-style text-based rituals, with texts written in a vernacular script recited in the local language. Mogong are found not only among the Zhuang, Bouyei, and other Tai-speaking groups in China, but also very widely across mainland Southeast Asia.[5] Similar practitioners (*mo*) are also found among the Dai in Sipsong Panna in southernmost Yunnan, but there their ritual texts are written in an Indic script. Mogong rituals may be small-scale, conducted by single priests for individual households, or may be larger-scale rituals conducted on behalf of communities, or in former times on behalf of the chiefly lineage and the welfare of the domain. The core of these rituals is the recitation of a sacred text, rather than sacred dances, mudrās, and other ritual manipulations ('methods') as practiced by Buddhist and Daoist priests.

A very common type of mogong ritual was the recalling of vital spirits ('souls') that had gone astray. Among the Tày at least, there were held to be twelve such vital spirits (*khwan*). Throughout much of the far south of China, but also in Thailand and Laos, there was a view that the vital energies of human

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5 See Holm 2017, 173–189.

beings, animals, and even plant crops could easily leave their bodies and take flight, leading to loss of energy, illness or even death. There was a range of rituals performed by mogong to address this: there were texts for the recall of the souls of rice, buffaloes, chickens and ducks, fish, and also human beings. The function of such rituals was to locate the lost souls, bring them back, and re-install them in the body.[6] It is worth noting that mogong in Guangxi recite their ritual texts based on a version that they learnt by heart, orally and usually at an early age, rather than on the basis of a literal reading of the text. This phenomenon is commonly referred to as 'performative literacy'. It turns out that Mr. Hòang's recitation also was based on a similar mechanism.[7] Apart from liturgical manuscripts, recited during the conduct of rituals, Mr Hòang had other manuscripts in his possession. Among these was a family register handed down in Mr Hòang's family (Fig. 1). This was a Chinese-style *jiapu* 家譜, written in Chinese. This stated clearly that the family came from a village in Tianzhou (Fig. 2).

Fig. 1: Cover of Mr Hòang's family register.

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6 See Holm 2004.

7 What this means is that such texts alone, abstracted from their original social and performative context or taken from their traditional owners, cannot be used as a guide to their use in society and culture, or even their meaning on the lexical level.
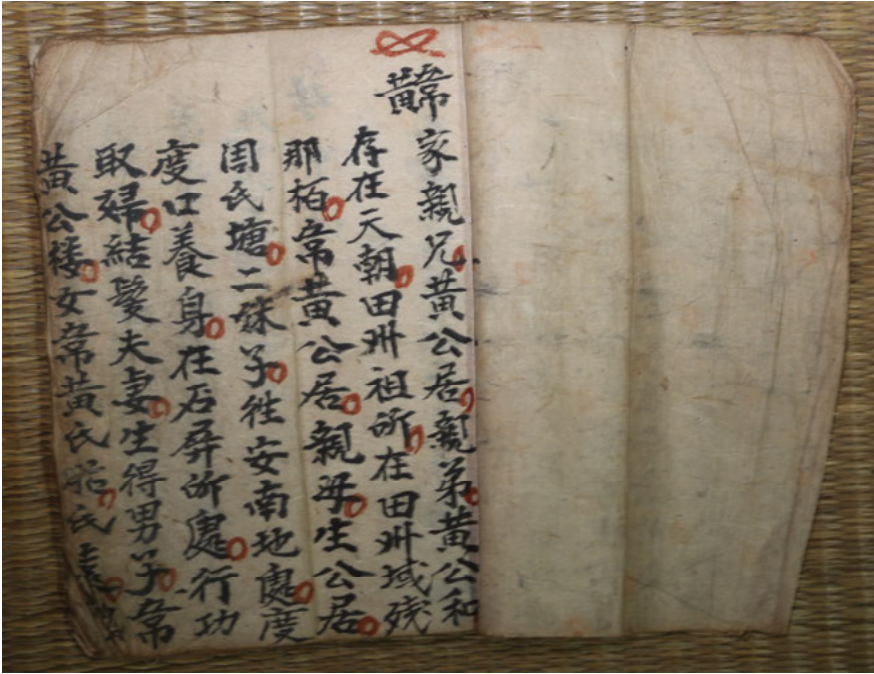
Fig. 2: First page of Mr Hòang's family register, showing reference to Tianzhou 田州 (second line).

3 The recitation

The recitation was conducted by Mr Hòang in the main room of his house, a traditional house made of wooden planking and bamboo with the living quarters elevated above ground level. The main room was also where the family's ancestral altar was located. A small square table was set up facing the ancestral altar, and offerings of flowers, a bowl containing uncooked glutinous rice, and various ritual paraphernalia – a small hand bell and a wooden 'thunder block' of the kind used by Daoist priests – were placed there in readiness. The words of the ritual are held to be the words of the ancestors, and here at least people held to the belief that the words of the ritual could not be recited outside their ritual context without incurring displeasure and punishment from the ancestors and other spirits. Performance of the ritual would also require a gift of money, placed inside an envelope and put on the altar table along with the other offerings.

Mr Hòang opened the ritual proceedings by banging the thunder block on the offerings table and ringing the small hand-bell, said to be done in order to attract the attention of the spirits, and usher them down into the ritual space. He then began his recitation of the text, which took the form of a chant, unaccompanied by any musical instruments. During this recitation, he sat cross-legged in front of the altar table, with the ritual manuscript in front of him, turning the pages at more or less the right time (Fig. 3). After the recitation, there was a short procedural segment, during which the returning vital spirits of the sick person were cemented in place. I was then allowed to photograph the manuscript, and conduct a short follow-up interview with Mr Hòang.

Fig. 3: Mr Hòang prepares for the recitation.

The manuscript Mr Hòang used for the ritual recitation was a small thread-bound volume, measuring roughly 11 cm each side, with character text written in columns Chinese-style from right to left (Fig. 4). In the same volume there were other sections containing ritual texts, Chinese-style astrological tables, and illustrations of human bodies and faces. There was not enough time to ask Mr Hòang about any of these matters.
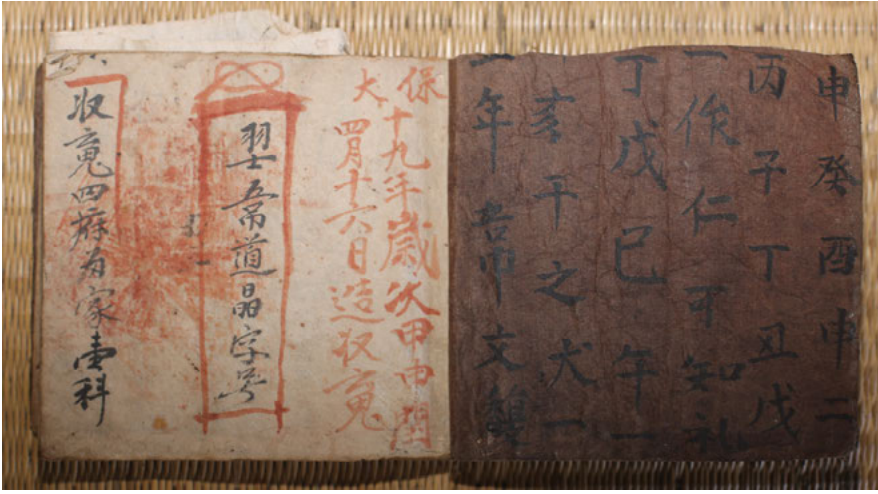
Fig. 4: Title page of Mr Hòang's ritual manuscript.

4 The ritual text

After a preliminary analysis of both the manuscript itself and Mr Hòang's recitation, there are a number of unanswered questions, both at the lexical level (the meaning of individual words) and at the broader ethnographic level. At 244 lines, this ritual segment is relatively short. Still, preparation of an interlinear version of the text allows us to make a preliminary analysis.

First, and at the most obvious level, the formulaic lines at the beginning of the text did indeed conform to the pattern found in mogong texts from the Tianzhou region in west-central Guangxi. What follows are the first four lines of Mr Hòang's text:[8]

三	盖	三	皇	住	1
ɫaːm¹	kaːi⁵	ɫaːm¹	vaːŋ²	ɕɯː⁵	*3a:1*
three	world	three	king	establish	

The Three Realms were established by the Three Kings,

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8 In the second line, giving the pronunciation transcribed in IPA, I give tone categories (numbers 1–8) for each word, but no tone flags. The recitation was chanted, rather than spoken. Actual tone values will have to be ascertained during follow-up investigations in the field.

四	盖	四	皇	造	2
ti:⁵	ka:i⁵	ti:⁵	va:ŋ²	lɐɯ:⁴	
four	world	four	king	create	

The Four Realms were created by the Four Kings.

皇	造	立	造	連	3
va:ŋ²	ɕa:u⁴	lɐpᵐ⁷	ɕa:u⁴	liɛn²	*3a:2*
king	create	darkness	create	light	

The Kings made the darkness and made the light,

皇	造	天	造	地	4
va:ŋ²	ɕa:u⁴	tiɛn¹	ɕa:u⁴	ti:⁶	
king	create	heaven	create	earth	

The Kings made Heaven and made the Earth.

If we compare these opening lines with the opening lines of the Hanvueng ritual text from southern Bama county, north of Tianzhou, we find:

三	盖	三	王	至。	1
ɬa:m˨	ka:i˦	ɬa:m˨	βuən˨	ɕi:˦	
sam	gaiq	sam	vuengz	ciq	
three	world	three	king	establish	

The Three Realms were established by the Three Kings,

四	盖	四	王	造。	2
ɬʲi:˦	ka:i˦	ɬʲi:˦	βuən˨	ɕa:u˧˩	
seiq	gaiq	seiq	vuengz	caux	
four	world	four	king	create	

The Four Realms were created by the Four Kings.

王	造	立	造	連。	3
βuən˨	ɕa:u˧˩	lɐp˧	ɕa:u˧˩	li:ᵊn˨	
vuengz	caux	laep	caux	lienz	
king	create	darkness	create	light	

The Kings made the darkness and made the light,

王	造	天	造	地。	4
βuən˨	ɕa:u˧˩	tiɛn˨	ɕa:u˧˩	ti:˨	
vuengz	caux	dien	caux	deih	
king	create	heaven	create	earth	

The Kings made Heaven and made the Earth.

Apart from some minor differences in written representation and pronunciation, the lines are identical. These lines opening the ritual mark the transition from mundane speech to sacred speech. They are cosmogonic in nature: they provide a succinct account of the beginnings of the world which human beings inhabit.

The Three Kings and Four Kings are variously identified: in the Tianzhou area, the Three Kings are identified with Heaven, Earth and the Underworld, and the Four Kings with the spirit owners of the sky, earth, mountains, and waters.[9] Local differences in interpretation are doubtless found.[10] These lines, even if written in different ways, remain essentially 'the same'. In fact, though, the characters in the Ngạn text are almost exactly the same as those in a mogong text from Yufeng 玉鳳 parish in northern Tianyang county.[11] In some texts the formula is reduced to a single couplet. The way in which the first couplet is written is very similar in all cases. The only differences are that in some manuscripts 王 *wáng* 'king' is written instead of 皇 *huáng* 'emperor', and 置 *zhì* 'to establish' or 始 *shǐ* 'to begin' is written instead of 至 *zhì* 'to arrive' at the end of the first line.[12] This is further confirmation that the Ngạn text is part of the same tradition.

Fig. 5: First page of Mr Hòang's ritual text.

9 For full discussion see Holm 2004, 69–70.

10 See Holm 2004, Original Notes on Text 1, 64–65.

11 See the photograph of the first page of MS 4 in Plate 38, Holm 2004. The only difference is the character 至 *zhì* 'to arrive' rather than 住 *zhù* 'to dwell' at the end of the first line. The characters 王 *wáng* 'king' and 皇 *huáng* 'emperor' are both pronounced the same in Zhuang, as *vuengz*, and are regarded as interchangeable.

12 This includes manuscripts MS 1 and MS 3–7. Places of origin in present-day Tianyang, Bama and Bose counties are shown on Map 2 on p. 9 in Holm 2004. For further examples see ibid. Plates 40–42 and 49. The lines would be recited in the same way in any case, regardless of slightly different ways of writing them.

Mr Hòang's text for recalling vital spirits goes on to narrate the creation of families, springs (water sources), fish, and so on. Other mogong texts go on to narrate the origins of other entities, depending on the focus of the ritual.[13] In the case of the Hanvueng text, which is recited at rituals to quell intractable family quarrels, the text goes on to tell of the origins of the Demons of Enmity.[14]

This particular formulaic opening in mogong texts is found in texts from the area of Tianzhou, on the northern bank of the Youjiang River.[15] It is not found elsewhere – further to the north, even nearby in Donglan 東蘭, and so far has not been found either in other parts of Guangxi, eastern Yunnan, or Guizhou.[16]

5 The Ngạn script

Overall, the vernacular script used in this manuscript is of the same pattern as the scripts from the Tianzhou area, and is quite different from the vernacular script of the Tày. Clear differences can also be seen between the Ngạn script and Nùng scripts. A quick overview can be obtained by looking at the Appendix, which lists the most common graphic representations of the 60 common words used in our survey of the traditional Zhuang character scripts (Table 2). In the table, Bama (BM) represents the Tianzhou scripts, the Cao Bằng marriage songs (CBMS) represent Tày, and Cao Bằng Nùng (CBN) represents an example of a Nùng Giang script.

In this short ritual text only 48 out of the 60 common words are found, but that still allows us to draw up a preliminary profile. In the case of two morphemes, we have two graphs that are equally common, so that makes a total of 50 exemplars altogether. We can compare the graphic renderings of these common words in the Ngạn manuscript with those found in Guangxi, Guizhou, Yunnan, and northern Vietnam. Full information about the overall distribution of each of the graphs in the survey is found in the relevant sections of Part 2 in

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13 See the examples in Texts 1–12 in Holm 2004.

14 Holm and Meng 2015, 51–53 (English translation), 91–99 (interlinear text), and 286–295 (textual and ethnographic notes) (lines 13–76 respectively).

15 See especially the twelve mogong ritual texts included in Holm 2004.

16 Our survey of Zhuang and Bouyei manuscripts from 45 locations included mogong texts from all these areas. For discussion see Holm 2013. I say 'so far' because our survey was far from exhaustive, and there may well be other pockets of similar mogong manuscripts in other localities.

Holm 2013. Overall, we can classify the graphs in the Ngạn text in the following categories:[17]

A. The same graph or a graph in the same semantic-phonetic series is dominant in Tianzhou:

> 32 examples (2, 4, 5, 7, 11, 12, 13, 14, 17, 18a, 21, 24, 26, 28, 29, 31, 32, 33, 34, 36, 38, 39, 40, 44, 50, 51, 52, 55, 57, 58, 59, 60)

B. A different graph or graphic series is dominant in Tianzhou, but the Ngạn graph is also found:

> 11 examples (18b, 22, 30, 33b, 35, 37, 42, 43, 53, 54, 56)

C. The graph is not found in Tianzhou but found elsewhere in the Zhuang-Bouyei area:

> 4 examples (15, 46, 47, 49)

D. Local innovations:

> 4 examples (6, 23, 40, 48)

E. Borrowings from the Tày vernacular script:

> 1 definite example (3), and two possible examples (37, 53)

Taking the first two categories together gives us a total of 43 graphs out of 50, or 86% commonality between the Ngạn script and that of Tianzhou. This is a relatively high percentage, given that the migration of the Ngạn people is said to have taken place in the 16th and 17th centuries. Manuscripts from within the Tianzhou area in any case evince a degree of commonality of 87.5% at the highest but an average more like 79%.[18] By comparison, the degree of commonality in the Tày vernacular script over a much wider area – several Vietnamese provinces – is somewhat higher.[19]

The Tianzhou system itself exhibits only a low level of correlation with manuscripts from Guizhou.[20] For the Ngạn script, the percentages of commonality with Guizhou manuscripts are even lower.[21] Low percentages like this are an indication of separate origins of script varieties and subsequent lack of social interaction at the local level. While the number of Guizhou manuscripts surveyed thus far is on the low side, and this evidence could be deemed insufficient, nevertheless it

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17 The numbers below correspond to the items listed in the Appendix (Table 2).

18 For discussion see Holm 2013, 746–748 and Map 61.1.

19 On which see Holm 2020, 202–203.

20 The percentages are 15.1% for Zhenning, 15.2% for Ceheng, and 27.3% for Libo. See Holm 2013, Map 61.1.

21 The percentages are 6.7% for Zhenning, 3.6% for Ceheng, and 23.4% for Libo. These calculations are based on the number of possible matches with the relevant entries in Holm 2013, 814–825 (Appendix 3, 'The Most Common Representations of Common Words').

appears as if there is no evidence here of any connection between the Ngạn and a hypothetical Guizhou homeland, as suggested by Vietnamese sources.

The question of borrowings from the Tày script is made somewhat more complicated by the fact that the Tày script has quite a few characters in common with the Zhuang script of the Xijiang 西江 (West River) area in central Guangxi, including Tianzhou. Overall, the Tày script has around 30% in common with Zhuang scripts north of the border, along with around 70% in a more recent stratum dating from around the 17th century that is quite different from the Zhuang scripts.[22] The Tày script of Lạng Sơn has more of these graphs in common with Zhuang than the Tày vernacular script of Cao Bằng. In the analysis here, I have identified one clear case of borrowing from the Tày script into the Ngạn script in our list of 60 common words. Other graphs Zhuang and Ngạn have in common with Tày are:

16 examples (2, 5, 7, 12, 14, 17, 31, 33b, 37, 40, 44, 51, 53, 54, 57, 58)

Whether or not any of these other graphs are seen locally as Tày borrowings is a matter for further investigation. At any rate, it should not be surprising that the Ngạn have borrowed graphic usages from the Tày, living in an environment in which Tày is the lingua franca. Social interaction and text borrowing over decades and centuries would naturally result in texts which show the traces of these interactions.

Table 1: Discussion of specific examples.[23]

	Zhuang	Ngạn	commentary
2	*aeu*	歐	dominant in Tianzhou, Mashan and Wuming, but also found over a wide area from Liuzhou in the east to Napo in the SW, and in eastern Yunnan (EY) and Cao Bằng; found in Libo in Guizhou but not further north (for map see Holm 2013, 100).
3	*bae*	悲	borrowed from Tày. Found in the graphic systems of the marriage songs of Cao Bằng and Lạng Sơn, and also Tianbao in SW Guangxi. Not found elsewhere in Guangxi or Guizhou (map 3.1 in Holm 2013, 110). The graph here has been simplified by removal of 去 *qù* 'to go' on the right-hand side. The graphs 麩 and 趄, both graphs common in Tày manuscripts, are also found in the Ngạn text, though in smaller numbers.

22 See Holm 2020, 203–205.
23 NE = north-eastern Guangxi; EC = east-central Guangxi; CN = central-northern Guangxi.

	Zhuang	Ngạn	commentary
4	*baenz*	分	graphic series dominant in Tianzhou, with distribution similar to (2) *aeu*. Most common graph in Tianzhou is 貧 *pín* 'poor', but 分 *fēn* 'to divide' is also found. Found east as far as Guiping in eastern Guangxi (map 4.1 in Holm 2013, 124). 貧 is also found in the Ngạn manuscript.
5	*bak*	百	graphic series found in Tianzhou, Mashan, and other areas (map 5.1 in Holm 2013, 134). 咟, with a MOUTH radical, is the dominant graph in the areas covered by the Tianzhou and Si'en chieftaincies and in other Cen domains; here the Ngạn graph represents a simplification.
6	*bi*	铍	*Pí* 皮 'skin' is not found elsewhere as a phonetic component. See map 6.1 in Holm 2013, 146. The graph here is likely to be a local innovation.
7	*boux*	甫	most common graph in Tianzhou, Wuming, Libo, Tianlin, and Cao Bằng Tày (map 7.1 in Holm 2013, 154).
11	*daeuj*	斗	most common graph everywhere (map 11.1 in Holm 2013, 202).
12	*dawz*	提	found in 31 locations including Tianzhou (map 12.1 in Holm 2013, 210)
13	*de*	他	found in 26 locations including Tianzhou, the NE, and EC Guangxi (map 13.1 in Holm 2013, 222)
14	*dox*	度	found in the Tianzhou area, Mashan, and east as far as Guiping (map 14.1 in Holm 2013, 230)
15	*duz*	度	found in Huanjiang in the north and Xichou in eastern Yunnan; Tianzhou mostly has 啚 *tú* (map 15.1 in Holm 2013, 240)
17	*faex*	楳	10 locations, including Tianzhou, the north, the SW, and northern Vietnam; represents the pronunciation mai[4] (map 17.1 in Holm 2013, 264).
18a	*gaiq*	盖	dominant in the Tianzhou area, found in 11 locations (map 18.1 in Holm 2013, 276)
18b		鶏	found in Tiandong, Mashan, and Pingguo.
21	*gou*	古	common along with 故 *gù* in Tianzhou, also in north (map 21.1 in Holm 2013, 304)
22	*guh*	國	found in 8 locations including Tianzhou, Guiping, and Tianlin; dominant graph in Tianzhou is 郭 *guō* (map 22.1 in Holm 2013, 312)
23	*gwn*	訢	斤 *jīn* not found elsewhere as a phonetic component (map 23.1 in Holm 2013, 326). This is likely to be a local innovation.
24	*gwnz*	志	found in 11 locations, especially Tianzhou but also east as far as Laibin (map 21.1 in Holm 2013, 304)
26	*haemh*	舍	series based on 含 *hán*, widespread and dominant in Tianzhou (map 26.1 in Holm 2013, 356)
28	*haeuj*	口	found in 19 locations, widespread in EC and Guiping as well as Tianzhou (map 28.1 p. 373)
29	*haeux*	糇	found in 13 locations, mainly in Tianzhou but also Mashan, Shanglin and central north (map 29.1 in Holm 2013, 383)

	Zhuang	Ngạn	commentary
30	*hauq*	呀	series found in Tiandong, Tianyang song, Mashan, and the north; series based on 毛 *máo* is dominant in Tianzhou (map 30.1 in Holm 2013, 394)
31	*hawj*	許	found in 20 locations, in Tianzhou but also EC, CN, eastern Yunnan and northern Vietnam (map 31.1 in Holm 2013, 402)
32	*hwnj*	恳	widespread, and dominant in Tianzhou; series has 15 variant graphs (map 31.1 in Holm 2013, 402)
33a	*lai*	賴	widespread, series with 9 variants in 11 locations including Tianzhou (map 32.1 in Holm 2013, 426)
33b		来	found in 11 locations including 3 in Tianzhou
34	*laj*	忑	found in 12 locations, dominant in Tianzhou (map 34.1 in Holm 2013, 436)
35	*lawz*	吕	series is found in 3 locations: Mashan, Funing and Guiping; in Tianzhou 黎 *lí* is dominant (map 35.1 in Holm 2013, 446)
36	*lwg*	力	Series dominant in Tianzhou, also found in Mashan, EC, CN, and Guiping (map 36.1 in Holm 2013, 464)
37	*ma*	麻	series found in 17 locations, including Tianzhou; in Tianzhou 馬 *mǎ* is dominant (map 37.1 in Holm 2013, 472). The graph 庅 is a vernacular variant of 麻 *má*, particularly common in Vietnam.
38	*mbouj*	不	found in 28 locations including Tianzhou, and as far east as Guiping (map 38.1 in Holm 2013, 480)
39	*mbwn*	閌	series dominant in Tianzhou, with 12 graphic variants in 19 locations (map 39.1 in Holm 2013, 494)
40	*miz*	貝	series dominant in Tianzhou, and widespread elsewhere (map 40.1 in Holm 2013, 504). The Ngạn graph 貝 represents a form of 眉 *méi* with a COWRY radical replacing the normal EYE radical. The two are graphically similar. This seems to be a local innovation.
42	*naeuz*	丑	found in Bose as well as Napo in the SW, and Yishan and Luocheng in the NE (map 42.1 in Holm 2013, 524). The actual basis of the phonetic borrowing is 扭 *niǔ* 'to twist', 紐 *niǔ* 'knot', or another graph in the same graphic series.
43	*ndaej*	得	a semantic borrowing found in 14 locations, including Tianzhou; in Tianzhou 礼 *lǐ* is mostly dominant (map 43.1 in Holm 2013, 536)
44	*ndang*	劧	variant of 躺, a common Zhuang graph for *ndang* found in 20 locations; dominant in Tianzhou but also in Mashan, Wuming, CN, SW and northern Vietnam (map 44.1 in Holm 2013, 546)
46	*ndei*	黎	found in the SW and in Cao Bằng Nùng; 利 *lì* dominant in Tianzhou (map 46.1 in Holm 2013, 568)
47	*ndeu*	刁	found in 4 locations in eastern Guangxi (map 47.1 in Holm 2013, 580)
48	*ndwen*	胆	not found elsewhere; the dominant form in Tianzhou is 胙, with 年 *nián* as the phonetic element (map 48.1 in Holm 2013, 592). The 且 *qiě* element on the right-hand side may be a graphic substitution for 旦 *dàn*; the

	Zhuang	Ngạn	commentary
			graphs 吞 *tūn* and 胦 are found for *ndwen* in Tianzhou and Funing in eastern Yunnan.
49	*neix*	女	found in Tianlin and Bose (northwestern locations); dominant in Tianzhou is 你 *nǐ*, found in 26 locations (map 49.1 in Holm 2013, 604)
50	*ngoenz*	昙	most common form, found in 13 locations and dominant in Tianzhou (map 50.1 in Holm 2013, 614)
51	*ok*	屋	most common form, found in 14 locations and dominant in Tianzhou (map 51.1 in Holm 2013, 624)
52	*ra*	�	various forms of 羅 *luó* are dominant in Tianzhou but also east as far as Guiping (map 52.1 in Holm 2013, 634). 罖 is a vernacular simplification of 羅 *luó* common in texts throughout Guangxi and northern Vietnam.
53	*raemx*	淰	most common form, found in 17 locations; 淋 *lín* series is more dominant in Tianzhou (map 53.1 in Holm 2013, 646)
54	*raen*	吞	6 variants found in 14 locations; 吞 found in the EC: Laibin, Shanglin, Xincheng, Mashan, and Guiping; 忻 *xīn* dominant in Tianzhou (map 54.1 in Holm 2013, 656)
55	*ranz*	薻	vernacular variant of 蘭 *lán*; series dominant in Tianzhou and most common graphic series; character subject to various radical simplifications (map 55.1 in Holm 2013, 668; see also pp. 672–673). The 'diacritical marks' on either side of the central graphic elements are a cursive ('grass hand') rendering of 门 *mén* 'doorway'.[24]
56	*roengz*	阬	most common series, found in 24+ locations with 17 graphic variants; 隆 *lóng* dominant in Tianzhou (map 56.1 in Holm 2013, 682); the Ngạn graph 阬 is a vernacular variant of 陇 *lǒng*.
57	*rox*	鲁	most common representation, dominant in Tianzhou and also EC, Guiping, Napo, and northern Vietnam (Lạng Sơn Tày) (map 57.1 in Holm 2013, 694)
58	*vaiz*	�套	dominant in Tianzhou, though in varying simplified graphic forms (explained in Holm 2013, 713–715); this variant found in 8 locations, represents a radically simplified form of 懷 *huái* (map 51.1 in Holm 2013, 710).
59	*vunz*	伝	found in 23 locations and dominant in Tianzhou (map 59.1 in Holm 2013, 718)
60	*youq*	紃	series dominant in Tianzhou, as well as Mashan, Laibin and the SW (map 60.1 in Holm 2013, 728); this variant of 纫 (幼) with the SILK radical on the left is also found in manuscripts from Tianzhou.[25]

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24 For similar examples see Furutani 2001, 717.

25 See Liang Tingwang 2009 for the *Chang Tangwang* 唱唐王, a novel in verse from Sitangzhen 四塘鎮 in Bose.

Analysis of the Ngạn material in comparison with texts from Bose, Tianyang, Bama and Tiandong allows us to identify the following graphs as borrowings from the Tày script: (3) *bae*, and possibly also (37) *ma*, and (53) *raemx*. The borrowing indicates a certain level of interaction with the wider society within which the Ngạn found themselves. This could be a result of text borrowing or text stealing from local mogong, or broader exposure to the Tày script. All the other graphs except for one or two are well attested in the Zhuang scripts of the Youjiang area. The one or two exceptions are likely to be local innovations.

Traditional manuscripts from the Youjiang area also show signs of readings based not on the local spoken dialect or lingua franca, but on dialects from both northern Guangxi or the Bouyei areas and from the southern Central Tai areas. I have shown that such traces can be linked with past historical events and with patterns of mobility and migration.[26] Local people including the priest may have forgotten such connections, or not recognise the lexical items or pronunciations as exotic, but their recitations and the way the manuscript text is written bears the traces of them.

For this reason, it is not surprising to find traces of script borrowing and possibly also forms of adaptation in Ngạn manuscripts in Vietnam.

6 Conclusions

(a) The recitation of the text indicates that the language of the Ngạn shows very clear characteristics of the Youjiang sub-dialect of Northern Zhuang, including affricated initial consonants (e.g. $t\wp eu^3$ rather than $kj\wp eu^3$ for 'head'), tone values very close to those found in the Youjiang River area, and basic spoken vocabulary close to that of Northern Zhuang in the same area, with some admixture of Tày borrowings;

(b) both the format of the text-based mogong recitation and the details of the vernacular script itself show a clear linkage with the mogong recitations from Tianzhou, again with some admixture of Tày borrowings in both ritual vocabulary and graphic usage;

(c) the family register of the Hòang family states specifically that their ancestor came from Tianzhou.

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26 Holm 2015, 1–32.

The mogong manuscript discussed here is in basically the same format as the mogong manuscripts we have analysed in previous publications.[27] All these ritual texts begin with the same formulaic introduction, and are written and performed in five-syllable lines of verse exhibiting canonical parallelism. Poetics and parallelism of this kind are a general feature of Zhuang ritual texts and song texts across a very wide area, but thus far the same formulaic opening has been found only in mogong texts from the area of Tianyang, Bama, Bose, and Tiandong counties, in the former area governed by the Tianzhou chieftaincy. Mogong texts from the southern parishes of Donglan county, just to the north, lack this formulaic opening and show quite a different style; this area was a part of Donglan, a different native chiefly domain, during the pre-modern period.

On the other hand, there are close parallels with the Ngạn brigands' song lyrics and the song culture of present-day Pingguo and Tiandong counties further east along the Youjiang River, to the east of Tianzhou. It is possible of course that the Ngạn people came from a number of different localities within the Youjiang River region. By analogy, there are reportedly four different sub-groups of the Nùng An people in Quảng Uyên district east of Cao Bằng,[28] so this may also possibly be the situation with the Ngạn.

The historical context of the arrival of the Ngạn people, or at least the contingent who served as a force of elite troops guarding the Mạc royal court, is in need of further clarification. The Mạc had their capital in Cao Bằng for a period of over 70 years, from 1601 to 1677.[29] The overall military history of this period, and the general pattern of administration at the court and in the territories under their control, is reasonably well-documented, as is their policy of fostering education and holding relatively frequent imperial examinations and recruiting successful graduates into their service,[30] but more specific detail about military organisation is needed. It may be also that further fieldwork in the area will turn up local documents, including family registers, that might shed light on these matters.

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27 Holm 2004, Holm and Meng 2015.

28 David Holm, fieldwork, Quảng Uyên district, February and August 2015.

29 See especially *Lịch sử Tỉnh Cao Bằng* 2009, 274–287 (Chapter IV Part III 'Nhà Mạc ở Cao Bằng').

30 On which see Niu Kaijun 2000, 46.

Acknowledgements

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Appendix:
Common Words in Ngạn, Zhuang, Tày and Nùng

Manuscript codes:

BM	manuscript from Yandong 燕洞 parish in Bama county (Holm 2013, 801)
CBNg	manuscript from Phi Hải commune, Quảng Uyên district, Cao Bằng
CBMS	Cao Bằng marriage songs (Holm 2013, 812)
CBN	Cao Bằng Nùng mogong manuscript, Trà Lĩnh district, Cao Bằng (Holm 2013, 812)

Notes:
- Two characters listed indicates that they were found in equal numbers.
- A hyphen (-) indicates that no example of the word was found in the requisite manuscript.
- Ngạn transcription is taken from Hoàng Thị Quỳnh Nha 2003, 15–40.

Table 2: Common Words in Ngạn, Zhuang, Tày and Nùng.

	Zhuang	gloss	Ngạn	Tày	BM	CBNg	CBMS	CBN
1	aen (ʔan¹)	clf. for objects	ẳn	ăn	恩	-	唉	个
2	aeu (ʔau¹)	to take	ẩu	au	歐	歐	幼	歐
3	bae (pai¹)	to go	pẩy	pây	批	悲	惷	鉋
4	baenz (pan²)	to accomplish	pằn	pần	貧	分	边	貧
5	bak (ʔbaːk⁷)	mouth	pác	pác	咶	百	咶	咶
6	bi (piː¹)	year	pỉ	pi	脾	敉	赶	年
7	boux (pou⁴)	clf. for people	pù	pú	甫	甫	希	希
8	cam (ɕaːm¹)	to ask	sam	sam	嘇	-	咁	尋
9	coenz (ɕɵn²)	clf., sentence	sòn	cằm	唵	-	吟	-
10	daengz (teŋ²)	to arrive	tằng	thâng	滕	-	泪	銮
11	daeuj (teu³)	to come	táu	-	斗	斗	-	斜
12	dawz (tɯ²)	to take in hand	cẩm	thư, cằm	提	提	書拎	提
13	de (teː¹)	he, she, it	tẻ	mìn	他	他	佂	-
14	dox (toː⁴)	each other	tò	căn	度	度	根	同
15	duz (tuː²)	clf. animals	tua	tua	匘	度	湏	-
16	dwk (tɯk⁷)	to hit	tức	tức	得	-	-	打
17	faex (fai⁴)	tree	mày	mạy	㭲	樸	樸	㭲
18	gaiq (kaːi⁵)	clf.; this, that	cái	cái	盖	盖鷄	-	-
19	gangj (kaːŋ³)	to speak	cáng	cảng	講	-	唪	-
20	gonq (koːn⁵)	before	cốn	cón	貫	-	羣	官
21	gou (kou¹)	I, me	củ	ngò	故	古	-	-
22	guh (kuː⁶)	to do	cuộc	hất	郭	國	昅	乞
23	gwn (kɯn¹)	to eat	cửn	kin	㞕	飭	喋	咘
24	gwnz (kɯn²)	above, on	cừn	nưa	雫	志	妄	妄
25	gyaeuj (kjeu³)	head	cháu	hua	九	-	-	-
26	haemh (hem⁶)	evening	hăm	khằm	晗	舍	-	-
27	haet (het⁷)	morning	hắt	nâư	昅	-	-	-
28	haeuj (hau³)	to enter	háu	khảu	口	口	叺	-
29	haeux (hau⁴)	rice	hảu	khẩu	糎	糎	粓	㮰
30	hauq (haːu⁵)	speech	háo	kháo	㗾	呀	-	-
31	hawj (hɯ³)	to give	hấư	hẩư	許	許	許	許
32	hwnj (hɯn³)	to ascend	hứn	khỉn	恨	悬	息	肯
33	lai (laːi¹)	much, many	lải	lai	賴	賴来	来	-
34	laj (laː³)	below	lá	tẩư	逻	忑	罜	-

	Zhuang	gloss	Ngạn	Tày	BM	CBNg	CBMS	CBN
35	*lawz* (leɯ²)	which	lẩư	rầư	黎	呂	芦	-
36	*lwg* (lɯk⁸)	child	lực	lực	力	力	矤	矤
37	*ma* (ma:¹)	to come back	mà	mà	獁	麻	麻	庲
38	*mbouj* (ʔbou³)	not	bo, bô	bấu	不	不	保	否
39	*mbwn* (ʔbɯn¹)	heaven, sky	bửn	bân	霄	闵	蚨	奔
40	*miz* (mi:²)	to have	mì	mì	眉	員	眉	眉
41	*mwngz* (mɯŋ²)	you	mừng	mầư	明	-	-	-
42	*naeuz* (neu²)	to say	nàu	cạ	嘈	丑	吖	-
43	*ndaej* (ʔdei³)	to get	đày	đáy	礼	得	帝	礼
44	*ndang* (ʔda:ŋ¹)	body	đảng	đang	躺	甹	身	躺
45	*ndaw* (ʔdɯ¹)	inside	đẩư	đâư	内	-	夙	伊
46	*ndei* (ʔdei¹)	good	đỉ	đây	俐	黎	低	黎
47	*ndeu* (ʔde:u¹)	one	đêu	đeo	吊	刁	刀	-
48	*ndwen* (ʔdɯ:ᵊn¹)	month	đưởn	bươn	-	胆	臂	月
49	*neix* (nei⁴)	this	nì	nẩy	你	女	乃	-
50	*ngoenz* (ŋɵn²)	day	ngòn	hoẳn	昗	昗	疸	旻
51	*ok* (ʔo:k⁷)	to emerge	ôóc	oóc	屋	屋	沃	屋
52	*ra* (ɣa:¹)	to look for	lả, rả	xa	羅	罘	車	架
53	*raemx* (ɣem⁴)	water	lầm	nặm	淰	淰	淰	淰
54	*raen* (ɣen¹)	to see	hẳn	hăn	忻	吞	瞅	暆
55	*ranz* (ɣa:n²)	house	làn	rườn	蘭	纛	斿	椺
56	*roengz* (ɣɵŋ²)	to descend	lòng	lồng	隆	阣	荓	嶐
57	*rox* (ɣo:⁴)	to know	lò	rụ, chắc	魯	鲁	戓昼	鲁
58	*vaiz* (va:i²)	water buffalo	[vài]	hoài	懷	恔	牷	怀 猿
59	*vunz* (vʌn²)	person	hùn	cần	伝	伝	伜	佣
60	*youq* (ʔjou⁵)	to be at	dú	giú	幼	纫	幽	幽

Oliver Huck

(Re-)Writing Jazz: The Manuscripts of John Coltrane's *A Love Supreme*

Abstract: Jazz is generally viewed as the opposite of a musical genre fixed in a score, thus assuming that manuscripts do not play an important role in jazz history. After an overview of manuscripts in early jazz emphasizing the importance for obtaining copyright, the autograph manuscripts of John Coltrane's *A Love Supreme* are examined. By comparing the different takes of the recording session and a concert registration to these manuscripts and the liner notes of the album, the role of manuscripts in performances is questioned. For the fourth part of *A Love Supreme* it is most likely that in the recording session – in contrast to the concert in Antibes – Coltrane had a manuscript of the so-called poem or prayer in front of him, but this cannot have been any of the extant ones.

Because of its reliance on improvisation, jazz is generally viewed as the opposite of a musical genre fixed in a score. To the best of my knowledge, there is no history of jazz in which any manuscript plays an important role. There are several reasons for this: First, it is variety in the actual performance – due to jazz's emphasis on improvisation – and not the score that is considered as the art of jazz. Second, recordings are traces of musicians as originators of jazz and these recordings are regarded as originals; autograph music manuscripts are only appreciated as devotional objects. Third, notated music, either printed or in manuscript form, is considered only an aid for teaching, learning, analysing (transcriptions of recordings, so-called descriptive notation), or preparing a performance (scores, master rhythm parts, lead sheets, and parts, all types of so-called prescriptive notation).[1] Writing jazz history, therefore, is writing the history of albums and recorded concerts documenting the state of the art in performed jazz. However, there are also valid reasons for Robert Witmer's rejection of this view as the 'common misconception that jazz is an unwritten music'.[2]

From the perspective of jazz as unwritten music, which must be revisited on the grounds of both ontology and methodology, John Coltrane's major contribu-

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1 See Witmer and Finaly 2002, 168: 'prescriptive notation for performance; descriptive notation for the teaching and learning of jazz; and descriptive notation for transcription and analysis'.
2 Witmer and Finaly 2002, 168.

tion to the history of jazz is the release of his album *A Love Supreme* in 1965, the year that has been considered 'the most revolutionary year in music'.[3] The importance of this album has been highlighted by dozens of jazz historians, but almost none of them mentions the existence of an autograph manuscript of *A Love Supreme*.[4] Since it came to light in 2004,[5] one page of this manuscript in particular has become iconic, is now in the public domain,[6] and has even been recently reproduced on the cover of a printed commercial music notebook.[7] But this manuscript has not been studied in detail,[8] it has only been adored as a monument, proof of Coltrane's genius as a composer writing jazz.

1 Acknowledgement: Manuscripts in jazz and in jazz studies

The paradigm of a musical work represented in a score – the conception of music as a written opus, embedded in Western European culture since the early modern period and exported to the United States of America – went unchanged by the emergence of jazz. Beyond the question of how independently jazz developed in terms of its musical structure and performance practice, there is a legal framework which defines rules for obtaining copyright to a work of music. Performance and recording did not replace the score in jazz for one very simple reason: the only way to obtain copyright for a piece of music is the legal deposit of a notated score in the U.S. Copyright Office in Washington, DC.

As David Chevan has pointed out, copyright can be obtained only for a melody and its text, not a chord progression.[9] Therefore, most of the early copyright deposits of unpublished jazz music 'consisted of a lead sheet containing only

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3 See Jackson 2015.

4 See, for example, Parker 2012, 35: 'there was never a score' – five years after the publication of reproductions of fols I and II of the music manuscript in Kahn 2007, 125–127. Two pages of the prayer manuscript were first reproduced in Jones 2011, 91–92.

5 See Ratcliff 2005.

6 The document is available at <https://de.wikipedia.org/wiki/Datei:A_Love_Supreme.jpg> (accessed on 1 March 2020).

7 See the *Cahier de Musique*, Les Éditions du Soleil Rouge, 2020, ISBN-13: 979-8614801847.

8 See Kahn 2020, xvii, who, in the introduction to this new edition – in contrast to Kahn 2002 – mentions the manuscripts and even reproduces some pages (xxi), but does not draw conclusions from the manuscript evidence.

9 See Chevan 1997, 240.

the melody'.[10] Chevan distinguishes between three types of manuscripts: single line melodies (lead sheets), single line melodies with text underlaid (lead sheets with text), and fully realised (but unorchestrated) scores (piano scores).[11] In his case study of the copyright deposits of Louis Armstrong,[12] concentrating on sixteen manuscripts in four different hands, Chevan identifies the first three hands as those of Armstrong himself, his wife Lillian Hardin Armstrong, and Paul Barbarin. The fourth hand has not yet been identified.[13] When comparing the dates of the copyright deposit and the recording, Chevan distinguishes between prescriptive and descriptive manuscripts and assumes that the latter are transcriptions of the recorded music.[14]

When comparing the keys of the manuscripts and the recordings, Chevan singles out some pieces that, in the manuscripts, are notated a whole tone above sounding pitch on the recordings, concluding from that difference that 'it might be possible that these manuscripts were initially used as performance sketches or even as parts' for B♭ trumpet.[15] What Chevan does not do is interrelate all this information and consider the material evidence of the manuscripts.

The only piano score in the collection studied by Chevan is *Don't Forget to Mess Around*, likewise the only manuscript in the hand of Paul Barbarin, listed as a co-author.[16] Evidence for the descriptive character of the manuscripts in this collection can be found in all the manuscripts written by hand D, all submitted after their respective recordings. Moreover, the latter are the only manuscripts that add basic harmonic indications to the melody.[17] All manuscripts written by the composer himself and his wife are lead sheets, only a few of which contain lyrics. In most of the manuscripts, the melody is notated a whole tone higher than it sounds on the recordings. Because there is no evidence that those manuscripts handed in for copyright after the recording differ from the others, I consider all of Armstrong's copyright deposits to have originally been parts and therefore

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10 Chevan 1997, 246. He provides a list of 85 composers and their copyright deposits in Appendix F, 490–520.

11 See Chevan 1997, 247–248.

12 See also Chevan 2001/2002.

13 See Chevan 1997, 273–274.

14 See Chevan 1997, 266.

15 Chevan 1997, 272.

16 See the reproduction in Chevan 1997, 474–475.

17 *Heah Me Talkin' to Ya'*, *Muggles*, and *Knockin' a Jug*, see Chevan 1997, 274 and the reproductions on 480, 483, and 482.

prescriptive manuscripts.[18] In the case of the unrecorded *Papa What You Are Trying To Do To Me*, one can assume the same. The copyright deposit of *Yes! I'm in the Barrel* is missing[19] and I doubt the recording refers to the same version as that notated as *I Am in the Barrel, Who Don't Like it?*. Those songs, co-authored by Armstrong and Hardin, have not been notated as trumpet parts; *Coal Cart Blues* is at the voice's sounding pitch and in the case of *When You Leave Me Alone*, which was not recorded, one can assume the same. The only exceptions are *Gully Low Blues* and *Gut Bucket Blues*. For the first one, the manuscript is notated a minor third higher than it sounds on the recording and was submitted for copyright only after the recording was made. Chevan speculates that it is either a descriptive manuscript or that the composer (identified by Chevan as Armstrong) 'based this manuscript more on how the piece was being played at the time of copyright in late November of 1927 than on its recorded performance'.[20] Chevan considers the lead sheet of the latter a descriptive manuscript;[21] it is in the same key as the recording. More significant than variants between the lead sheet and the recording is the fact that *Gut Bucket Blues* is the only one of Armstrong's copyright deposits written on music paper, identifying, at the bottom, Clarence Williams Music Publishing Co. as the copyright holder.[22] One can extrapolate from this that the company commissioned this manuscript for copyright deposit.

Apart from Chevan's general study of notated music in early jazz,[23] only a few case studies focus on manuscripts in jazz, for example, on manuscripts of Duke Ellington,[24] Fats Waller,[25] Charlie Parker,[26] and those used for Miles Davis's

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18 This includes *Weather Bird Rag* (Armstrong's first composition that was recorded as well as copyrighted; see Chevan 1997, 293), a manuscript considered by Chevan 1997, 282, as descriptive. In my view, the designation of the second ending with a fermata (reproduced in Chevan 1997, 486) invalidates this hypothesis.

19 See Chevan 1997, 264.

20 Chevan 1997, 291.

21 See Chevan 1997, 282.

22 See the reproduction in Chevan 1997, 479.

23 Chevan 1997. On the musical literacy of early jazz musicians see also Chevan 2001/2002.

24 See van de Leur 2017, 157–176.

25 Machlin 1994 gives an inventory of Waller's manuscripts in the Institute of Jazz Studies, Rutgers University, Newark, NJ, including a few reproductions. Apart from some parts for *Spreadin' Rhythm Around* the manuscripts are vocal scores, piano scores, piano scores with only the melodic line leaving the second stave empty, and sketches in Waller's hand.

26 See Martin 2018.

nonet.[27] Most of these manuscripts codify music for larger ensembles and will not be considered here in detail. Ellington, however, is a good example of the difference between the narrative of jazz as an oral practice and the common use of written artefacts. The composer and bandleader publicly stated that he did not care about his manuscripts, claiming that he gave them away and 'people wrap[ed] their lunches in them'.[28] In reality, however, he has kept most of his manuscripts, which constitute today 4.7 cubic metres of material, in 470 archival boxes, housed in Archives Center, National Museum of American History (Smithsonian Institution).[29] Walter van de Leur gives as an example a description of the manuscript of *I Never Felt this Way Before*.[30] It is a compressed (or condensed) score that served as the model for the copyists who were writing out parts for the members of Ellington's big band. Neither the vocal part nor the rhythm section are included in this score which, moreover, is in concert notation and lacks any indications of articulation or dynamics. All these details were added later in the rehearsals, where the parts were edited; van de Leur calls this 'bandstand editing'[31]. Ellington notated the basic structure of the arrangement and there are examples in which he reworked the original compressed scores for later performances by revising the manuscripts (e.g. adding parts for his growing ensemble).[32]

In the case of Parker, both manuscripts for copyright deposit, now in the Library of Congress, and individual parts[33] thought to have been used in a recording session have survived. Out of 90 copyright deposits only four manuscripts are from Parker's own hand.[34] Henry Martin assumes that the individual trumpet parts of *Swedish Schnapps* and *Back Home Blues*[35] were used in the recording session on 8 August 1951. He points out that there are no corrections and assumes on that basis that the parts might have been recopied from earlier

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27 For a discussion see Sultanof 2011, where he writes that, apart from *Deception*, for which 'a two-stave piano manuscript that is a condensed score including all of the instrumental parts from bars 1 through 59' survives (Sultanof 2011, 210) only parts are extant; no reproductions are provided.

28 Van de Leur 2017, 174–175.

29 See van de Leur 2017, 164.

30 See van de Leur 2017, 168.

31 Van de Leur 2017, 173.

32 See van de Leur 2017, 173.

33 Institute of Jazz Studies, Rutgers University, Newark, NJ.

34 See Martin 2018, 1.6.

35 Institute of Jazz Studies, Rutgers University, Newark, NJ. See Martin 2018, note 6.

manuscripts.[36] However, in contrast to Armstrong, there is a significant difference between manuscripts that served as parts and those that were prepared to serve as copyright deposits (the reproduction of *Bill's Bounce* given identifies it as a master rhythm part).

When it comes to a systematic survey of the jazz manuscript culture, apart from scores and parts similar to Western European art music,[37] more specific types of manuscripts to be mentioned are lead sheets and master rhythm parts. Both provide all the musicians engaged in a performance with the same musical information – as in a score – from which every musician extracts and/or adds what is needed to play his/her part. In general, none of these manuscripts provide an outline of the 'overall form, structure, and organization of the performance' regarding the 'order, number, and length of choruses and improvised solos.'[38] But this is exactly the intent of Coltrane's manuscript for *A Love Supreme*.

2 Resolution: The manuscripts of *A Love Supreme*

What today is kept in the Archives Center, National Museum of American History (Smithsonian Institution), in Washington, DC, as manuscripts of *A Love Supreme* is a folder containing three music folios and four text folios, which I will refer to as the music manuscript (with folio numbers) and the prayer manuscript (with page numbers).[39] All the folios – perhaps with the exception of fol. III which may have been written between the recording sessions and the album's release – must have been written before 9 December 1964, but there is no internal evidence to suggest that they had been completed in 'early September 1964,' as Ashley Kahn claims.[40] Only the story of Coltrane coming down the stairs in their home 'like Moses coming down from the mountain' after finishing the composition, as told by Coltrane's wife Alice,[41] suggests this dating. The sole

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36 See Martin 2018, 1.5.

37 See, for example, van de Leur 2017, 166: 'Ellington not only *could* work as his European classical colleagues, he most often *did*'.

38 Witmer and Finaly 2002, 169.

39 The manuscript can be viewed at <https://sova.si.edu/record/NMAH.AC.0903?s=0&n=10&t =C&q=coltrane&i=0> (accessed on 29 Feb. 2020), the collection is numbered AC.0903. Reproductions are given in the booklet for the so-called 'super deluxe CD edition' Coltrane 2015, 9–14.

40 See Kahn 2020, xvii.

41 Alice Coltrane, interviewed by Branford Marsalis 2004, as reported by Whyton 2013, 26.

internal evidence for dating is a note on fol. II^v, 'buy reeds in S. F'. The Coltrane quartet played in the San Francisco Jazz Workshop on 6–18 October 1964,[42] therefore we can reasonably assume that this note was written prior to 6 October 1964.

2.1 Music manuscript

Coltrane used commercial staff paper, Passantino Number 9, with eighteen printed staves and eight printed barlines only on the recto (the verso is blank), paper designed for big band arrangements. The use of this kind of paper is a mission statement qualifying *A Love Supreme* as a 'composition', as the entry of the title in the respective printed rubric in the upper left corner on fol. I^r states. The use of such paper for sketching a composition is unusual. Even more unusual is that, in comparison to the amount of text, the number of notes written on the staves is fairly small. Coltrane entered the page number in the upper right corner, but 'I' is both the first and the only numbered page; the entire work fits on one page (I consider the verso and the two additional folios paratexts).

The format and number of staves show Coltrane's ambitions in creating a composition for a group larger than the line-up of his contemporaneous so-called classic quartet (including McCoy Tyner, Jimmy Garrison, and Elvin Jones). On the top of fol. I^r he indicated the designated instrumentation of the piece, the 'horns'[43] including 'tenor saxophone | one other horn' and the 'rythymn [sic] section' comprised of 'piano | trap drum | 2 bass | 2 conga | 1 tymbal'. Obviously, this is not the scoring of his classic quartet which recorded *A Love Supreme*, but is closer to the line-up used in the recording session on 10 December 1964 in which Archie Shepp (tenor saxophone) and Art Davis (bass) joined the quartet – but this session was not included in the album.

A significant difference between Coltrane's indications in the manuscript and both recording sessions is the Afro-Cuban percussion. Neither congas nor a timbale were used but – in addition to the drum set[44] (trap drum) – gong and timpani. Coltrane only began including additional percussion players in 1965.[45]

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42 As discussed by Porter, DeVito, Wild, Fujioka, and Schmaler 2008, 308.

43 The transcriptions from Coltrane's manuscripts given here ignore Coltrane's use of capital letters almost throughout.

44 For the use of the various instruments in Part I see Porter 1985, 607.

45 On this see Kahn 2020, 255–284. In Coltrane's last live recording, at the Olatunji African Cultural Center in Harlem, NYC, 23 April 1967, the lineup included Algie Dewitt playing a bata drum; see Whyton 2013, 92–93, where a photo from the session is included.

The entire manuscript contains only four short passages in musical notation, none of which use clefs to indicate the absolute pitches:

(1) the 'horn opening,' providing only unrhythmicized pitches to be read in treble clef with transposition for tenor saxophone. The series of notes (b₅, b₄, e₅, f♯₅, b₄, e₅, b₅, b₄, e₅, f♯₅), with their harmonies indicated by the chord symbol 'E♮', is not so much a melodic theme – the opening Coltrane played in the recording[46] uses the same pitches, but in different order – but an evocation of the pitch set of one of the quartet's favourite tunes, *My Favorite Things*;[47]

(2) the 'primary rythmymic [sic] motif' (quaver, bar line, crotchet, two quavers, crotchet rest, quaver rest, etc.);

(3) the 'bass + piano' riff (the so-called *A Love Supreme* motif), according to the final work to be read in treble clef; and

(4) the 'voices concert key' for the *A Love Supreme* motif according to the final work to be read in treble-clef, transposed for tenor saxophone.

Other indications for the ensemble are written out. For example, at the end of the piece, Coltrane indicates 'attempt to reach transcendent level with orchestra', 'rising harmonies to a level of blissful stability at end', 'all paths lead to God', and 'last chord to sound like the final chord of Alabama'. In the album, this final directive has been achieved by adding an overdub.[48]

In addition to the musical notation, the manuscript offers a map of the process and formal structure of *A Love Supreme*. In the recorded album there are four parts, numbered I to IV, the first including 'voices chanting motif in E♭mi "A Love Supreme" two male' and 'motif played in all keys together', the second in 'blues form', and the last as a 'musical recitation of prayer [marginal note] <entitled "A Love Supreme">by horn in Cmi'. But there are significant differences between the tonal plan here and in the recorded album.[49] Part I, which (after the introduction in E minor) is in F minor on the recording, was originally intended – according to the manuscript – to be in E♭ minor. Part II, recorded in

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46 See the transcription in Coltrane *c*. 2000.

47 See Whyton 2013, 17. This is not the place to discuss the reason for alluding to Richard Rogers' and Oscar Hammerstein's *My Favorite Things*, which Coltrane had recorded in 1960 on the album of the same name, but I would suggest that the unconventional postulant Maria, protagonist of the musical *The Sound of Music* from which this song has been taken, is a mirror of Coltrane's own spirituality, despite the different religious traditions from which Maria von Trapp and Coltrane came.

48 See Kahn 2020, 188–190 and the undubbed version on Coltrane 2015, disc 2, track 5.

49 On the album's tonal plan see Porter 1985, 605.

E♭ minor, was originally intended to be in B♭ minor. The same holds true for the sequence of solos. At the end of Part II, the manuscript contains the indication 'bass move into solo', with which the third part should begin. On the recording, however, there is no bass solo at the end of Part II and Part III begins with a drum solo.

In contrast to the first folio, the second folio's recto is almost exclusively devoted to music. The connection with *A Love Supreme* is not indicated in the rubric 'composition' in the upper left, but by the title written in the middle of the page, perhaps added after the music was notated. I consider it a page of sketches elaborating two of the sections from fol. I^r. Picking up the *A Love Supreme* motif also found on fol. I^r, the repetition of this motif is notated not at the same pitch but a third lower, offering a starting point for the indication 'move in all keys' (fol. I^r) here specified as 'move in all 12 keys'. But the aim of repeating the motif a minor third lower is not to indicate tonal progression, it is to show the motif's treatment as a two-part canon between the 'tenor [saxophone]' and an 'other instrument'. Surprisingly, this idea of a strictly imitative treatment of the motif was not realised in the extant takes of the second recording session,[50] nor has it been mentioned in any analysis of *A Love Supreme*. In addition to the treatment of the motif, Coltrane indicated the 'rhythm' of Part I and its key: 'start + end in E♭ concert minor'. Furthermore, what has been indicated on fol. I^r as 'horn melody' in Part II, without any indication of what this melody might be, is described here as 'melody tenor'. It is the entire theme to the eight-bar blues form, repeated multiple times on the recording, written here with two different endings (the second indicated as 'II').

What connects fols I and II is not so much the content of the rectos, but that of the versos. The first line of text on fol. II^v is the beginning of the poem 'A Love Supreme' published in the album's liner notes; the text on fol. I^v is its conclusion.

The third folio contains neither parts of the musical composition nor of the poem. It is, rather, a first draft of Coltrane's introductory text for the album's liner notes, beginning on fol. III^v (used in portrait format) and continuing on the lower half of fol. III^r (now used in landscape format). This folio had been used before – the music and the chord symbols written in the upper half of fol. III^r have nothing to do with *A Love Supreme* – and was recycled for drafting the liner notes. This manuscript did not serve as a master copy for publication of the liner notes in the album, but is only a first draft. To give just one example: the title of the introduction in the liner notes is 'dear listener'; however, in the manuscript, the opening salutation is 'dear reader'.

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50 As evidence I refer the reader to the six takes in the CD-set Coltrane 2015, disc 2, tracks 6–11.

2.2 Prayer manuscript

There is one more manuscript to consider, consisting of four folios (written not on staff paper, but on single side blank notebook paper), that contains a copy of the poem. It shows variants compared to both the first draft of the poem in the music manuscript and the printed version in the album's liner notes. The first page is numbered on the top; the only other numbered page is page 3. This page was written with a different pen (one with black ink instead of blue) and it therefore seems to have been inserted only after the other three pages were completed, suggesting that the entire section from 'God loves | May I be acceptable in thy sight' to 'To whom all praise is due. Praise God' may be a later addition.

I am not certain that the word 'poem' is an accurate classification of Coltrane's text. In the liner notes for the album, the fourth part of the music is called 'psalm' by Coltrane,[51] a title that is in keeping with the poem's structure as a series of religious verses, but, from a purely literary point of view, I prefer to label it a 'prayer', as Coltrane himself does on fol. Iʳ of the music manuscript. In the introductory portion of the liner notes (as well as on fol. Iʳ), he hints that the final part of the recording is based on the prayer: 'The last part is a musical narration of the theme, "A LOVE SUPREME" which is written in the context'.[52] This is not the first time that Coltrane modelled his instrumental music on texts.[53] Coltrane might have copied the final version – and also a pre-final version lacking page 3 – of the prayer from the first draft on fols Iᵛ and IIᵛ of the music manuscript. Although these drafts look more like a series of random jottings (see, for example, fol. IIᵛ, which includes a drawing and the 'buy reeds in S. F.' memo) than aligned text, they have been copied in exactly the same sequence as the one found in the music manuscript. Taking this into account raises the question of the source from which Coltrane copied the passages missing on fols Iᵛ and IIᵛ. One possible explanation is that there was one more folio, now absent, originally placed between fols I and II. This folio might have resembled the other three and contained on its verso the text passages (except, perhaps, those on page 3 of the prayer manuscript) missing between those on fols IIᵛ (ending with 'It is merciful. Thank you God') and Iᵛ (beginning with 'I've seen God + I've seen

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51 See the liner notes of the album in Coltrane 2015.

52 John Coltrane: Dear Listener, liner notes to the album, quoted after Coltrane 2015.

53 Coltrane stated that *Wise One*, *Lonnie's Lament*, and *The Drum Thing* are also based on poems; see Michel Delorme and Claude Lenissois, 'Je ne peux pas aller plus loin', in *Jazz Hot*, September 1965, quoted in Kahn 2020, 117.

~~devils~~ ungodly'). What may have been written on its recto – if anything – is unclear. It might have been sketches similar to those on fol. II^r for one of the other Parts of *A Love Supreme*.

3 Pursuance: Tracing music manuscripts in performances

Tony Whyton has pointed out that there are two competing narratives concerning the making of *A Love Supreme*; the narrative of a John Coltrane composition, in which the complete work was pre-determined prior to the recording sessions, versus the narrative of improvisation in which the classic quartet collectively gave birth to *A Love Supreme* in the recording session.[54] The construction of a binary opposition of composition versus improvisation, shared by both narratives, is by no means appropriate for jazz in the 1960s.[55] What is of interest here is the question if and how music manuscripts may have been used in the three performances of *A Love Supreme*; the recording sessions on 9 and 10 December 1964 and the only live performance of the entire work on 26 July 1965.[56]

There is no photographic documentation of the recording session on 9 December 1964. Evidence for the question of the presence of manuscripts in the studio comes from an interview conducted by Ashley Kahn with pianist McCoy Tyner, but Tyner's statements do not align with the extant manuscripts. On the one hand, he states that the whole session was 'an on-the-spot improvisation, honestly approached music',[57] and that the instructions for Elvin Jones and Jimmy Garrison had been given orally.[58] But a possible explanation for the different keys occurring in Part I in the manuscript (E♭ minor) and the recording (F minor) is that the bassline Tyner had to play in the first part had been presented to Garrison with the help of a manuscript. In this manuscript, the *A Love Supreme* motif would have been transposed for tenor saxophone and notated in treble clef (as seen on fol. I^r of the music manuscript – not at the

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[54] See Whyton 2013, 21–28.

[55] See Whyton 2013, 39–40.

[56] McCoy Tyner reports – in an interview with Ashley Kahn – that the quartet 'had played some of the music in the clubs before we recorded it', Kahn 2020, 139. There is a bootleg recording of the third part made by Frank Tiberi on 18 September 1964, in Pep's Musical Bar in Philadelphia; see Kahn 2020, 157–158.

[57] Kahn 2020, 138.

[58] See Kahn 2020, 138.

beginning of Part I but only later – so presumably not this manuscript). Garrison would have read and played it in exactly the key in which it had been notated if one does not take into account the transposition resulting when played by a tenor saxophone – in F minor, and the other musicians would have taken up this key. On the other hand, Tyner himself claims that when Coltrane provided him with a manuscript, 'He'd write down the symbols to a set of very basic chords – B-flat, B-natural, E, just regular chords'.[59] If Coltrane in fact had written down some chords for Tyner intended to be played in *A Love Supreme*, he could not have copied them from the extant manuscripts, which do not show any chord progression resembling that mentioned by Tyner. Coltrane might have written theses chords from memory but Tyner's statement seems to have no connection at all with this work: Within *A Love Supreme*, the progression B♭-B-E does not occur, nor does Tyner play any 'regular chords' at the beginning but, rather, chords built on superimposed fourths.[60] This leads me to wonder if Tyner's story about the manuscript dedicated to him is trustworthy. The subtext of his statement is more about who in the quartet was musically literate and his place in the hierarchy, and about the role of the leader as composer. In this narrative, the manuscript is the highest award which can be given from the leader to a member of his combo; no wonder that Tyner claims it for himself. Moreover, if Coltrane had only written 'regular chords' it would have been only Tyner creating the extraordinary harmonic texture.

The recording session on 10 December 1964 was documented by photographer Chuck Stewart. Some of the published pictures – which could only be taken as witnesses if it is to believe that they document the session and are not staged – show music manuscripts on music stands and in Coltrane's hands, highlighting his role as a composer. It seems that Coltrane and Archie Shepp had two music stands in front of them – one photograph shows Coltrane pointing to Shepp's part[61] – but none of the musicians of the rhythm section had done so. Furthermore, there are pictures showing Coltrane close to a music stand, writing on a manuscript displayed on it,[62] with a manuscript in his hands that he is showing Garrison. The latter manuscript is definitely not one of the extant manuscripts because, unlike them, it is in portrait format.[63] Judging from the

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59 Kahn 2020, 138.

60 See Porter 1985, 606–607.

61 The photographs are reproduced in Kahn 2020, 191 and 204.

62 See Kahn 2020, 198–199. This manuscript was certainly not intended for Tyner, as Kahn suggests, because Davis and Garrison are looking at the manuscript.

63 See Kahn 2020, 140.

published photos, all the manuscripts on the music stands are in landscape format, as are the extant music manuscripts. But it is unlikely that these are the ones displayed on the music stands. For example, on fol. II^r Coltrane sketched the beginning of the interaction between the two saxophones at the end of Part I. The basic idea of this sketch is a strict canon between the two voices, both repeating the *A Love Supreme* motif in the first instance a third lower, the second voice starting with a distance of two crotchets. Neither the strict canon, nor the sequence a third lower have been realised in any of the extant takes. One could imagine that Coltrane had sketched a different and more elaborate version of the interaction of the two 'horns' (which he only adumbrated on fol. II^r) in a manuscript no longer extant. But the remaining tapes from the recording session do not prove this hypothesis, because all the takes of this passage are different. In the four extant complete takes of Part I, the idea of the imitative treatment of the *A Love Supreme* motif has been realised three times (takes 1, 4, and 6 – the exception is take 2[64]), but always in different ways, so it is unlikely that there was an entirely notated version of the antiphonal, call-and-response-like interaction of the two saxophones.

A Love Supreme as an entire work (sometimes called a suite) was performed only once by Coltrane and his quartet in concert, on 26 July 1965 in Antibes. The photographs documenting this concert do not show music stands in front of the musicians,[65] thus no manuscripts were used in the performance. Evidence for the reinvention of *A Love Supreme* as a memorized work can be found throughout the performance.[66] To give just one example: after the introduction, it is not the bass player, but Coltrane who first intones the *A Love Supreme* motif, feeding Jimmy Garrison his part in order to remind him of what had been introduced to him in the studio recording session the year before. Garrison has no opportunity to begin playing the motif himself and when he tries to join the group he fails initially, entering on a downbeat rather than an upbeat.

4 Psalm: Reading out the prayer manuscript

There is no doubt that Coltrane's plan to recite his *A Love Supreme* prayer instrumentally in the fourth part was realised in the recording session on

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64 See the six takes in Coltrane 2015, disc 2, tracks 6, 7, 9, and 11.

65 See the photo in Whyton 2016, 209.

66 Coltrane 2015, disc 3.

9 December 1964. Lewis Porter gives a detailed analysis of the interrelation between the prayer and the music.[67] But Porter does not mention any manuscripts because they only came to light twenty years after the publication of his article. Moreover, Porter does not consider the reference point of Coltrane's performance, the question of whether he remembered the prayer by heart or read it. Porter states that 'the concert version of "Psalm" differs significantly [...] because it does not follow the poem at all.'[68] Taking into account the fact that Coltrane and his musicians did not use any manuscripts in this live performance in Antibes, it is plausible that Coltrane did not play the recorded studio solo based on the memorized prayer,[69] because he could have done the same in the concert successfully, too. But if there was a manuscript in the recording session, which one was it? While Porter states that there are 'words apparently omitted from the recording',[70] it is more likely that the manuscript Coltrane used had readings that differed from the liner notes given in the album. But it is clear that Coltrane did not read from any of the extant manuscripts. Comparing Porter's transcription of lines 57–62[71] to the prayer manuscript, it becomes clear that the passage 'It's true. Blessed be his name' is missing in the prayer manuscript,[72] but was played by Coltrane. In the music manuscript not only this passage but also the following, 'Thank you God', do not appear. The same is true for line 22, from which 'Thank you God' is missing in both the prayer manuscript and the music manuscript, but was played by Coltrane.[73] So Coltrane might have had a manuscript at hand which was closer to the readings in the liner notes than to those in the prayer manuscript. On the other hand, lines 9 and 10 in the liner notes are played in reverse order in the performance,[74] which is the order in which they occur in the prayer manuscript.

These facts suggest that, in contrast to the studio session, in concert, Coltrane neither had a manuscript of the prayer at hand nor had memorized it. What he plays in the fourth part is an evocation of a recitation of an unspecified text.[75] We do not know if Coltrane had already decided to play *A Love Supreme*

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67 See Porter 1985, 613–619.
68 Porter 1985, 619.
69 As posited by Kahn 2020, xx.
70 Porter 1985, 615.
71 See Porter 1985, 618.
72 On the differences between the prayer manuscript and the liner notes see also Jones 2011, 90–96.
73 See Porter 1985, 614, and Coltrane *c*. 2000, 21.
74 See Porter 1985, 614.
75 See Porter 1985, 601.

in Antibes when the quartet embarked for Europe but it is doubtful, because he apparently did not take a manuscript of the prayer with him in order to recite from it. Or, to reframe the theory: If we reduce all performances of *A Love Supreme* to their lowest common denominator,[76] a literal musical recitation of the prayer as indicated in the music manuscript on fol. I[r] cannot be considered a mandatory element of the work.

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76 On 29 August 1973 – six years after Coltrane's death and shortly after the release of the album *Love Devotion Surrender* by Carlos Santana and John McLaughlin on 20 July 1973, which includes *A Love Supreme* (Part I) as the opening track – a 'sheet' of *A Love Supreme* was given to the United States Copyright Office obtaining copyright for *A Love Supreme* as number EU429308 <https://lccn.loc.gov/2019562053> (accessed on 18 March 2020), cf. *Catalog of Copyright Entries*, 2234. Unfortunately due to the closure of the Library of Congress, Washington, this manuscript is not accessible since March 2020.

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Silpsupa Jaengsawang

A Ritual Manual of Healing:
The Body-Balance of the Four Elements and the Four Key Factors of Manuscript Production and Usage

Abstract: The article presents a Northern Thai manuscript titled *Withi bucha that thang si* ('How to pay homage to the four physical elements'). The text has been used as a master version in traditional healing rituals. It is analysed what roles different parts of the text play in these ritual by applying four key factors (production, use, setting, patterns) as heuristic tool. The manuscript is textually dominated by a main prayer named *okāsa* reflecting the twofold communication between the spiritual sphere and the human sphere based on the local belief system encompassing Buddhism and spirit cults. Three hybrid modes related to the manuscript are identified: hybrid content, hybrid use, and hybrid communication, structurally comprising oral parts for recitation and non-oral parts for silent reading.

1 Introduction: Traditional healing in Northern Thailand

Traditional healing by means of paying homage with offerings related to the four physical elements is a part of the life-extension rituals widely practiced in Northern Thailand. There are three kinds of life extensions: extension of a city's (or city-state's) age; extension of a village's age; and extension of human life. The ritual can be performed on different occasions: New Years, *Tang Tham Luang*,[1] birthday ceremonies, or after a person has undergone or survived a serious illness or accident. Life-extension rituals thus serve the purposes of auspicious derivation and reconciliation. In other regions of Thailand, life-

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1 *Tang Tham Luang* or Bun Phawet Festival is the annual ceremony in which thirteen episodes of the Vessantara Jātaka are chanted. Those who listen to the whole story within one day are believed to obtain a rebirth in the future era of Buddha Maitreya. Some also join the festival at the end of the 'agricultural cycle' to extend their lives (Premchit and Doré 1992, 78).

extension rituals are also found, but they are less complicated than those of the Northern Thai regions. The Tai ethnic groups in the eastern sections of the Shan State of Burma (Myanmar) – Tai Yai, Tai Yòng, and Tai Khün – as well as the Lua people in northern parts of Thailand, also include the ritual as a part of their traditions.[2]

The three occasions for which people organize a life-extension ritual are the following:[3] (1) auspicious opportunities connected to one's life and social status, such as house-warming ceremonies, career promotions, wedding ceremonies, birthdays; (2) the departure of suffering, accidents, sickness, natural disasters, or punishment; and (3) four kinds of misfortunes. The ritual of life extension, however, is not intended for children. As elaborately explained by Ganjanapan and displayed in the following diagram (Fig. 1), the life-extension ritual is regarded as non-violent or 'cold' magic.

According to the title of the manuscript studied in this article, namely, *Withi bucha that thang si* ('How to pay homage to the four physical elements'), the manuscript is intended to support ritual use. However, the text includes both the core prayer to be recited by the ritual expert and the other parts which are not to be read aloud; the manuscript therefore seems to contain a hybrid text. The present article discusses the purpose for which the different parts in the hybrid text of the manuscript are intended and how they play a role in the ritual. In order to deal with the research questions, the terms *use* and *patterns* from the heuristic methodology of the four key factors are applied. Inasmuch as the manuscript was written to support ritual use, the other two key factors, *production* and *setting*, are also applied. Besides the preliminary finding that the manuscript contains a hybrid text, other kinds of hybridity may also be found, since different parts of the manuscript reflect different kinds of communication and purposes.

The present article begins with general information on traditional healing and well-being in balance with the four physical elements. After this general information, the case-study manuscript will be presented, as well as a short explanation of the relationship between the manuscript and the ritual. To deal with the research questions, the heuristic tool of the four key factors will then be applied to elaborately analyse the manuscript; this analysis constitutes the majority of the article.

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2 Chimphanao 1986, 109, cited by Hirunro 2014, 47.

3 Hirunro 2014, 52.
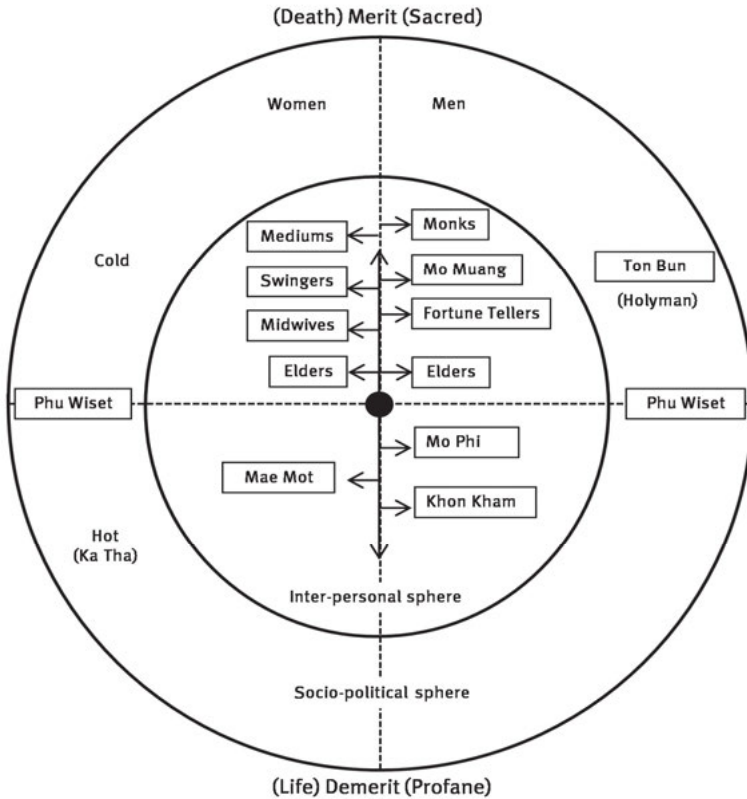
Fig. 1: The position of healer in the moral system (redrawn by the author on the basis of Ganjanapan 2000, 62).

2 Four physical elements and body balance

The human body is composed of four physical elements, each of which is known as *dhātu*. The four elements are also called the *Four Mahābhūta* ('the Four Primary Elements'; 'primary matter'); they are: *Paṭhavī-dhātu* ('element of extension'; 'solid element'; 'earth'); *Āpo-dhātu* ('element of cohesion'; 'liquid element'; 'water'); *Tejo-dhātu* ('element of heat or radiation'; 'heating element'; 'fire'); and *Vāyo-dhātu* ('element of vibration or motion'; 'air element'; 'wind').[4]

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4 Payutto 2015, 71.

The four elements are part of the *Pañca-khandha* ('the Five Groups of Existence', 'Five Aggregates') of which a living being is composed. The Five Aggregates comprise: (1) *Rūpa-khandha* ('corporeality'); (2) *Vedanā-khandha* ('feeling'; 'sensation'); (3) *Saññā-khandha* ('perception'); (4) *Saṅkhāra-khandha* ('mental formations'; 'volitional activities'); and (5) *Viññāṇa-khandha* ('consciousness').[5] Lan Na people believe that sickness is due to several causes,[6] notably the imbalance between the four physical elements of human bodies: solid, liquid, heat, and gas. The ritual is thus held when one is diagnosed by a local healer with physical disorders or element abnormality.[7]

The healing ritual related to the four physical elements is similar to, or part of, or a variation on life-extension rituals, but the healing ritual is intended especially for patients who suffer from chronic or serious illness despite taking medicine. Patients who have not recovered from symptoms despite using medicine may decide to host a ritual aiming at life extension, e.g. *Su Khwan Kòng* ('reconciliation with a meal box'), *Su Khwan Luang* ('great reconciliation [with long chanting]'), *Suat Chata* ('chanting for one's fortunes'), and *Suat That* ('chanting for [the four] physical elements').[8]

Life-extension rituals have two purposes: one for healthy people and one for sick people.[9] Led by the ritual leader, known as *Nan* ('ex-monk'),[10] the ritual is organized at the house of the host; a chapter of monks is invited to the house in order to chant a series of texts. At the beginning of the ritual, the ritual leader reads an *okāsa* word as an introduction to the patient as well as to his or her purposes in hosting the ritual. The ritual lasts for thirty to forty minutes. *Okāsa* (masc.) in Pali means 'room; open space; chance; permission', and *okāsakamma* (neut.) means 'permission'.[11] Hirunro defines *okāsa* words as the expression of ritual causes that can be properly oriented to actually fit a certain occasion.[12]

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5 Payutto 2015, 162.

6 There are seven causes of illness in the belief of Lan Na people: (1) imbalance of the four physical elements, (2) spiritual weakness, (3) misfortunes caused by past deeds, (4) evil spirits, (5) possession by *ka* ghosts, (6) black magic, and (7) taboo breaking (Department of Mental Health 2016, 48–49).

7 Parinyan 1987, 307.

8 Parinyan 1987, 306.

9 Parinyan 1987, 305–306.

10 *Nan* is a male ritual leader who is not fully in trance, as in the case of a female spirit medium, who is described by Anan as sensitive-minded: 'In contrast, *mo muang* do not go into a full trance, which is exclusively in the female sphere. Women and in some cases, transvestites, are culturally viewed as having a "soft soul" (*khwan on*)' (Ganjanapan 2000, 61).

11 Mahāthera 1997, 69.

12 Hirunro 2014, 58 and 268.

The *okāsa* word is thus known as an introduction for a particular occasion or event. The ritual preparation is the collaborative responsibility of the ritual leader and the patient's family members; the *okāsa* word is the task of the leader, whereas the series of standardized Pali texts is prepared by the chanting monks. The case-study manuscript, which may have been written by a scribe who acted as a ritual leader, thus includes a list of offerings and an *okāsa* word, but it excludes the homiletic Pali texts ritually chanted by the monks.

3 The case-study manuscript

As a manual for a ritual leader who starts the event before the series of chants by the monks, the manuscript provides a list of offerings, the sequences of the ritual's beginning, and the *okāsa* word, which dominates the largest part of the manuscript and introduces the patient who hosts the ritual for the purpose of healing or balancing his or her four physical elements, which is done by paying homage to Lord Buddha and other deities with a set of offerings. Dependant on the experience and skill of the ritual leaders, *okāsa* words vary in rhetorical style, word choice, and metre, since they are not *sutta*s or standardized texts mnemonically recited by monks in religious rituals. *Okāsa* words can therefore be flexibly composed by individual scribes or ritual leaders, while the offerings, ritual processes, and ritual sequences are fixed.

3.1 Object

Textual and paratextual evidence in the case-study manuscript leads us to a clear-cut conclusion that the manuscript was used as a manual in traditional healing rituals. The manuscript, which is titled *Withi bucha that thang si* ('How to pay homage to the four physical elements'), is archived at Wat Phra That Hariphunchai, Lamphun province in Northern Thailand.[13] The manuscript is made of *Khòi* paper, from the bark of *khòi* trees (*Streblus asper*);[14] it is 58.6 cm in length and 17.8 cm in width, measured like two vertically adjoined pieces of A4 paper. To facilitate storage and circulation, the manuscript is folded in leporello fashion into six sections that are roughly 10 cm in width (Fig. 2); the text was written only on four sections, with 9–10 lines each.

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13 <http://lannamanuscripts.net/en/manuscripts/4102> (accessed on 7 May 2021).
14 Grabowsky 2011, 145.

Fig. 2: The manuscript *Withi bucha that thang si*. <http://lannamanuscripts.net/en/manuscripts/4102> (accessed on 7 May 2021).

The marginal lines on the left and right margins and the textual lines belonging to the main text were made beforehand, so that the handwriting could be well organized within the marginal lines and below the textual lines. Unlike in palm-leaf manuscripts, the handwriting is not interrupted by a space left for a binding hole; the content is thus layed out in a single column. The manuscript was neatly written in the Dhamma Lan Na script, in Pali and in vernacular languages, without a colophon.

3.2 Text

The manual begins with a short introduction: 'First, the process of paying homage to our four physical elements will be explained here. One who will pay homage should prepare [...]' จักกล่าววิธีบูชาธาตุทั้ง ๔ แห่งคนเราก่อนแล ผู้ใดจักบูชาหื้อแปง,[15] which is followed by a list of offerings in specific amounts: twenty flasks of rice grain, twelve flasks of water, six holy flags[16], four candles,[17] and a cloth of the ritual host, to be dedicated to the four elements. The text continues with 'the *okāsa* word is here [...]' คำโอกาสว่าดั่งนี้ and is followed by the *okāsa* prayer in a long section of Pali and vernacular prose, in which the name of the patient is to be said aloud. Within the prose section, there are some expressions guiding the users to repeat a certain Pali verse included in the text, 'pray the Pali verse three times' หื้อว่าบาลี ๓ หน, three times and then to continue praying the *okāsa* prayer, 'then pray the following' แล้วต่อไปว่า. Such expressions are written in the vernacular language and are only memorized by the ritual leader, rather than being spoken aloud as part of the prayer; hence the ritual performance features a hybrid content – one part for 'announcement' and the other for 'perception'. This issue will be discussed further in section 5.2 ('Use'). The long prose portion is followed by a short, concluding expression: '[the text of] paying homage to the four elements ends here' บูชาธาตุทั้ง ๔ แล้วหนี้แล. In summary, the manuscript text is structured with the introduction, the ritual preparation, the prayer, and the ending.

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15 All translations are my own, unless otherwise indicate.

16 The flags are small triangles, about two inches in width, and made of paper of different colours – usually white, red, black, and yellow (Chotisukkharat 1971, 230).

17 The set of offerings represents the four physical elements of life: rice grains for solidity (earth), water for fluidity (water), holy flags for air (wind), and candles for heat (fire). In the Tai Yuan tradition, there are three kinds of offering sets for life-extension rituals, representing three different things: (1) auspicious agents of the host, (2) four physical elements of life, and (3) abundance (Hirunro 2014, 123–124).

According to the content of the *okāsa* word in the manuscript, the patient pays homage to Lord Buddha with the four kinds of offerings that are associated with the four physical elements of the human body, in exchange for blessings of good health. The meritorious results of this act are also to be gained by various deities and spirits who would in return safeguard the patient and ward off dangers. According to textual analysis, the patient is viewed as paying homage to Lord Buddha and other deities in exchange for protection and well-being rather than to the four elements of one's physical body, even though the text is titled *Paying Homage to the Four Elements*.

4 Manuscript and ritual

The ritual leader prays the *okāsa* prose prayer written in the manuscript while the ritual host or 'the patient' sits behind the leader with his or her venerating hands on the chest. The patient expects to gain apotropaic powers against his or her sickness from the virtues of Lord Buddha and other deities. The content includes the list of offering items to be prepared *before* the ritual and other process guidelines to be followed *during* the ritual. The *okāsa* prose prayer, which is the principal prayer, can be copied onto a separate piece of paper, to be memorized prior to the ritual, so that the leader can recite the prose by heart during the ritual. The manuscript was written in the Dhamma Lan Na script, thereby requiring those who copy the *okāsa* prayer to be literate in the special script. Because the host dedicates the offerings to Lord Buddha and other deities, the leader has to recite the prose portion, with venerating hands in front of an image of Buddha. Unlike other ways of merit-making which are dedicated to *phò kam mae wen* ('Deceased persons or spirits whom the donor caused harm in the past and who can come back and torment the wrongdoer in the form of ghosts or maledictions'), the ritual of paying homage to Lord Buddha and other deities, evidenced in the manuscript, mentions none of those spirits, despite the similar purpose of health and body-balance well-being.

5 The four key factors

The four key factors, which is a heuristic tool for the comparative study of manuscripts from different manuscript cultures, was proposed by Hanna Wimmer, Dmitry Bondarev, Janina Karolewski, and Vito Lorusso in 2015, in affiliation

with the Centre for the Study of Manuscript Culture (CSMC), University of Hamburg, Germany. Unlike printed books that can be made with a production ratio of 1: ∞, a manuscript is considered unique because it is made with a 1:1 production ratio; each manuscript is thus a *unicum* reflecting the choices, preferences, requirements, skills, and errors of individual producers, users, and owners.[18] The study of manuscript cultures deals with texts (content) and objects (physical), thereby requiring further analysis of the material and visual characteristics that are closely related to a manuscript's contexts (social, economic, political, religious, and other backgrounds). The heuristic tool of four key factors was accordingly proposed to facilitate comparative studies of manuscripts existing in different cultures and comprises the aspects of *production*, *use*, *setting*, and *patterns*. These four key factors are closely related; the effects of one key factor on a manuscript cannot be viewed without considering the others.[19] The present article applies this heuristic methodology to study the relationship between the case-study manuscript and the ritual of body-balance healing.

5.1 Production

In order to make a manuscript, a production agency and a production practice are required. The production agency includes the persons (individually or in a group) or institutions directly or partly responsible for producing the manuscript, a process that includes both preparation and the writing process. As explained by Wimmer, the production agency has an impact on the physical manuscript as an object: 'A scribe or illuminator, too, will have a degree of auctorial agency insofar as their decisions will have an impact on the manuscript's physical characteristics, which in turn determine in part how the manuscript's contents will be read and understood, and how the manuscript itself can be used'.[20]

A large number of religious palm-leaf manuscripts discovered in Northern Thailand are found to have been collaborative productions by a group of laypeople or members of the *Sangha*; the collaborative effort is due to the length of these religious texts, which are to be copied onto numerous leaves of palm trees as writing support. Such a group planned and shared responsibilities before they started the writing. This kind of collaborative work in manuscript production

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[18] Wimmer et al. 2015, 2.
[19] Wimmer et al. 2015, 10.
[20] Wimmer et al. 2015, 2–3.

can also be found in Luang Prabang, the ancient Lao royal capital, where manuscript production activity is alive and influenced by modern printing technologies.[21]

The manuscript in my case study contains no colophon; background information on the production of the manuscript, especially on the production agent and year, is thus not provided. However, considering the paracontents that remain, the manuscript itself reveals the social status of the scribe and the sponsor. Evidenced by the homogenous handwriting, the manuscript was written by one person, who was most likely both the scribe and the sponsor. The neat and well-organized handwriting implies that it was copied from a prototype by a scribe-sponsor who was experienced in Dhamma Lan Na script; the scribe-sponsor must have been a monk, novice, or an ex-monk because this script was taught in monastic classes among *Sangha* members. The manuscript's current location in a monastery does not in itself allow us to identify sponsor-scribe as a monk or novice, because a manuscript that was written by laypeople could also be dedicated to a monastery in order to gain merit derived from copying religious books. However, some paracontents in the manuscript imply the social status of the sponsor-scribe as an ex-monk rather than a monk or novice. First, the text is a ritual manual that includes a prayer recited by a master of ceremony or ritual leader. The ritual deals with folk medication, which is supposed to be performed by a lay expert rather than a monk. Second, the manuscript contains no colophon that expresses the scribe's wishes or even communicates with other users; it was thus perhaps made to serve the private use of the scribe-sponsor or, evidenced by the decent handwriting, as a master version for further copies. Third, the manuscript was obviously written for the body-balance healing ritual as it includes a list of offerings in specific amount, the principal prayer, and the sequences of the process; decorations and greeting words are not found. The manuscript would thus mainly benefit the ritual leader. The manuscript was not produced for a single use on a specific occasion but could be used repeatedly, with a symbol indicating the place for announcing the name of the ritual host or patient. More specifically, instead of a person's name written in the position of the symbol, a combination of two double-marks

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21 'Not surprisingly, most of the laypersons who acted as sponsors came from town quarters such as Ban Khili, Ban Vat Saen and Ban Kang, all situated in the neighbourhood of the "twin monasteries" Vat Si Mungkhun and Vat Si Bunhüang. With roughly two-thirds of all dated manuscripts falling into Sathu Phò Hung's tenure as abbot of Vat Si Mungkhun (1904–1945), it seems likely that it was due to this venerable abbot's initiative that the bulk of the manuscript collection in the monastery library (*hò tai*) of Vat Si Mungkhun was established' (Khamvone and Grabowsky 2017, 32–33).

(‖) and a letter with the sound of /b/ (บ) was written (‖บ‖) (see the red frames in Fig. 3), perhaps an abbreviation of บุคคล ('person'). The manuscript could thus be used by replacing the symbol with the name of the patient. After analysing the textual content, the lack of a colophon, the handwriting, the clearly secular processes, and the symbol suggesting repeated use, it can be concluded that this manuscript was made by a ritual leader for personal use or as a master copy.
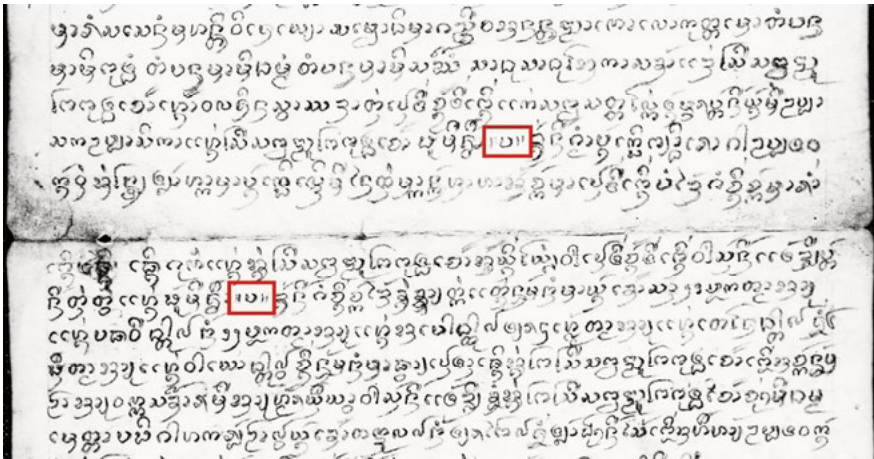
Fig. 3: The symbol to be filled in with the host's name (detail of Fig. 2).

Regarding the production practices, the manuscript was written on *Khòi* paper, bound into a 58.6 × 17.8 cm leporello book, and folded into six parts, each approximately one third of an A4 sheet of paper in size; the shape and the size of the manuscript facilitated portability and storage for the users. The paper was bound, the left and right marginal and textual lines were drawn before the writing; two sides were therefore unintentionally left blank.

Unlike other leporello manuscripts, this case-study manuscript was written on one side of the paper due to the short length of the text. Some missing sentences were added above the lines to complete a lacuna, with a small marker indicating the position in the text of the newly added parts. The manuscript was simply made from accessible writing-support and bookbinding materials. The newly added part filling in the incomplete sentence implies that the manuscript was intended to be read, not to be shown to an audience; such a correction was

thus simply added above the line. In other words, the manuscript served as a ritual manual rather than as an aesthetic object.

5.2 Use

As with the production, use may be regarded under two aspects – practice of use and agency of use – that will be discussed together. As the manuscript could be used as a ritual manual or a master copy, two kinds of users were involved: the users in the ritual and the copyist. As mentioned before, the manuscript could be used both before and during the ritual. The user could study the ritual process as well as memorize the prayer from the manuscript in advance; the user could also hold the manuscript during the ritual to ensure that the ritual was well organized. This hybrid or twofold manuscript usage in relation to rituals also has two aspects: cultic use and discursive use. The cultic use of a manuscript refers to its symbolic status as an object representing something meaningful, while discursive use refers to its treatment as a text. Veidlinger defines cultic use and discursive use as follows: 'The main feature that distinguishes the discursive from the cultic category is that in the discursive, the words of the texts are actually read, whereas in the cultic, the manuscript as a whole is treated iconically, generally as a physical embodiment of the teaching of the Buddha'.[22] The case-study manuscript was mainly used discursively[23] but also cultically if the ritual expert held the manuscript in his hands or placed the manuscript in a container as part of the ritual without reading it, for the purpose of ensuring the ritual's efficacy.

Only the *okāsa* word was read during the ritual; that is, the text in the manuscript could partly be read aloud. The ritual-process guidelines mentioned in section 3.2 ('Text') are in the vernacular language; they are silently acknowledged by the ritual leader rather than being orally spoken out as part of the prayer, illustrating the ritual performance of hybrid content – one part of the material is for 'announcement' and the other is for 'perception'. Wimmer explains that a manuscript can be read silently or aloud by chanting, reciting, or murmuring, for one's own ears alone or to an audience. It can be read thoroughly from

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[22] Veidlinger 2006, 5.

[23] Regarding the discursive usage of manuscripts, there are three modes identified by Paul Griffiths, composition, display, and storage, all of which are associated with textual usage: 'Works will usually be displayed after (or simultaneously with) their composition; more rarely they may be stored after they have been displayed; and those that have been stored may sometimes be taken from storage for redisplay' (1999, 22).

beginning to end or by skimming or used to memorize the contents or to look up particular passages and paragraphs.[24]

The *okāsa* or the main prayer found in the manuscript was written in Pali and in the vernacular, reflecting the twofold communication in the ritual towards the two spheres: the spiritual sphere and the human sphere, mediated by the ritual leader. The prayer is in the vernacular because the ritual aims at healing and comforting the ritual host, to be relieved by the protective power of the Buddha and other deities. The ritual leader thus served as a medium linking spiritual beings to human beings, so that the holy spirits could acknowledge the pleading and react to the patient with blessings. Belief in the existence of the two domains is alive in the ritual. Durkheim defines the two spheres as *profane* and *sacré*, where humans and spirits separately exist, thus a medium is needed:

> All known religious beliefs, whether simple or complex, present one common characteristic: they presuppose a classification of all the things, real and ideal, of which men think, into two classed or opposed groups, generally designated by two distinct terms which are translated well enough by the words *profane* and *sacred* (*profane*, *sacré*). This division of the world into two domains, the one containing all that is sacred, the other all that is profane, is the distinctive trait of religious thought; the beliefs, myths, dogmas, and legends are either representations or systems of representations which express the nature of sacred things, the virtues and powers which are attributed to them, or their relations with each other and with profane things.[25]

Humans need blessings given by virtuous spirits and, in order to be ensured of gaining holy apotropaic power, a consecrated person who serves as a medium and enables communication with the spirits by means of sacred words is required. The spirits exist in the sacred world, with which laypeople cannot connect, as Durkheim explains: 'The sacred thing is *par excellence* that which the profane should not touch, and cannot touch with impurity'.[26] A special procedure is thus created to permeate the boundary and allow a connection between the two domains, because the medium, the ritual leader in this case, is supposed to be an expert in spiritual communication, with his knowledge of the Pali language, his literacy in the Dhamma script, and his experience as a monk: 'There are words, expressions and formulae which can be pronounced only by the mouths of consecrated persons; there are gestures and movements which everybody cannot perform'.[27]

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24 Wimmer et al. 2015, 5.
25 Durkheim 1947, 37.
26 Durkheim 1947, 40.
27 Durkheim 1947, 37.

5.3 Setting

Temporal (time) and spatial (place) settings are fundamental contexts in which a manuscript is produced and used. Setting also covers social, economic, and cultural factors. The manuscript is involved in life-extension rituals in which the Buddha and other deities are invoked to bless the patient in exchange for offerings, and belief in the existence and protective power of holy spirits is alive in the Northern Thai regions. The setting of this manuscript therefore involves a micro-setting and as a macro-setting, both of which share the fundamental characteristics of the Lan Na society in which the people have been influenced by belief in spirits and Buddhism.

5.3.1 Micro-setting: Ritual event

The manuscript leaves no clues as to where and when it was written, yet we can make a few speculations based on its user, who was perhaps an ex-monk, a ritual leader, and also the scribe. The manuscript was possibly written at his house and used for life-extension rituals before it ended up at the monastery where it is kept today; the micro-setting of this manuscript is thus associated with its use rather than its production. Another speculation, however, is that the manuscript has always been kept at the temple from the beginning, which may be indicated by the *okāsa* word in the manuscript, which mentions the following:

> ด้วยนิสันทบุญญรวายสีเยื่องนี้นา มีผลอานิสงส์กว้างขวางมากนักหนา
> มูลศรัทธาอุบาสกอุบาสิกาห่งศรีสัพพัญญพระพุทธเจ้ากระทำได้แล้วจักอุทิศบุญญรวายสีเยิงนี้ไปรอด
> จอดถึงยังเทวบุตรเทวดาอันรักษา<u>วัดวาษาสนาอารามที่นั้นเป็นเคล้าเป็นประธาน</u> [...]

> May the merit derived from this act be greatly transferred to other deities who safeguard <u>the monastery where the ritual is held</u> [...].

A life-extension ritual would be requested by a patient, or by his or her family members, to be organized by a ritual leader who is a local expert and an ex-monk known as *Nan* ('ex-monk') or *Can* ('teacher', 'master'). Perhaps in collaboration with members of the patient's family, the expert would be responsible for the preparation of ritual items, tools, and offerings, as well as scheduling the date and inviting a monk or a chapter of chanting monks. In the process of preparation, the expert or ritual leader could use the manuscript as a checklist for the offerings, a manual to preview the ritual sequences, and as a prayer book for practising the *okāsa* recitation. Even though the manuscript could also play

a role in the preparation process, collectively accomplished by both the expert and the patient's family, the manuscript could only be read by an expert literate in the Dhamma Lan Na script. The ritual would be held at a monastery or at the house of the patient in a spacious hall known as a *Toen*, where all participants could be welcomed.[28]

The duration of the ritual ranges from one hour to three nights, depending on the number of Pali chanting texts selected by monks in accordance with the availability of time and place, the number of patients, as well as possible budgetary constraints.[29] No matter how long the overall ritual takes, the role of the expert at the beginning of the ritual is rather fixed. He starts the ritual with the *okāsa* prayer describing the offerings and the reasons the ritual was organized. The manuscript is brought either from his house or a temple where the manuscript is kept, to be held in the hands of the expert while reciting or placed on a raised tray nearby. Later on, the monks chant the prepared Pali texts until the ritual ends. The manuscript can still be placed on the tray or kept by the expert after the end of the ritual.

5.3.2 Macro-setting: The Northern Thai regions

The manuscript is an outcome of Northern Thai society where, in the past, due to the minimal availability of health services and medicine, people relied on a local expert who was educated in a monastery and believed to be able to link the secular world to the spiritual world. Sometimes, when people could not recover from diseases in spite of treatment by a variety of herbal medicines, then evil spirits and *phò kam mae wen* were suspected to be the causes of the illness. Because these evil spirits were invisible, those who were supposed to facilitate hybrid communication between the two spheres of humans and spirits were required as ritual practitioners. Life-extension rituals did not emerge primarily to heal sick people but rather to ensure the patients of protective powers against any possible (invisible) evils, undetectable and unsolvable by means of medicine. In other words, medicine removed the secular causes of disease while life-extension rituals removed the spiritual causes of disease; medicine solved physical problems while life-extension rituals provided psychological relief. The result that patients expected from treatment was not what they expected from

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28 Chotisukkharat 1971, 60.
29 One hour: Pongsakorn, interviewed by the author in 2020; three nights: Parinyan 1987, 307.

hospitals, but was more spiritual and moral in nature.[30] The ritual is a combination of belief in spirits and Buddhism. The Department of Mental Health gives four reasons why local folk doctors or experts were popular in Northern Thailand: (1) the high costs of healthcare; (2) the long distances to access and the minimal availability of modern medicine; (3) the difficulties of diagnosing and treating unknown illnesses; and (4) the unique abilities of ritual experts to communicate with spirits.[31] Consequently, the significance of life-extension rituals contributed to the ritual sequences recorded in the manuscript, to the list of offerings, as well as to the *okāsa* or introduction to the ritual. According to the text in the manuscript, however, besides the belief in evil spirits, Northern Thai people also believed that physical disorders could be caused by imbalances in the four elements of human bodies.

5.4 Patterns

'Patterns' refers to the organization of a manuscript in terms of its verbal content and as a visible object and thus gives directions about how a manuscript is to be used. A number of factors influence a manuscript pattern: textual genre, purposes of use, available materials, financial support, etc., all of which are recognized in advance before the writing begins. Patterns, then, is regarded as a part of the preparation for manuscript production. Wimmer gives an explanation of patterns, stating that they act as keys or frames that structure and guide the production and the use of a manuscript. Patterns significantly enable, facilitate, encourage, or impede specific kinds of production and use, and concern both the presentation of content by linguistic means or other sign systems. The ways in which the contents of a manuscript are made and organized in the manuscript materials are also associated with patterns.[32]

The patterns reveal the core purpose of the case-study manuscript as a manual for hybrid communication to laypeople and to spirits. The *okāsa* word is provided for imploring blessings and fortunes from Lord Buddha and other deities, while the other sections are intended for laypeople, i.e., the direct user (= ritual leader) and the indirect user (= patient and audience), so that they could prepare the offerings and behave properly during the ritual.

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30 Ganjanapan 2000, 65.

31 Department of Mental Health 2016, 47–48.

32 Wimmer et al. 2015, 7.

Considering both the verbal pattern and the visual pattern, the manuscript was produced to serve as a manual. The ritual instructions and the *okāsa* word are given as one text, instead of one as a text and the other as paracontent, as in the case of other manuscripts in which a prayer is the core content, surrounded by ritual instructions as paracontent. As a result of the combination of prayer and ritual instructions, textual and non-textual paracontent was employed to aid the user in navigating different instructions and performing the ritual properly; the manuscript users must have comprehensively recognized and understood the content and its structure. The most frequently found non-textual paracontent is the double marker (||) dividing different sections: the list of offerings, the *okāsa* word, the repetition, and the end; this marker is necessary because the text was written *scriptio continua* without indents.

Within the *okāsa* word, there is a Pali expression followed by a short vernacular sentence demanding the 'threefold repetition of the Pali [phrase]' ᩉ�᩠ᨿᩖᩅ᩵ᩤ ᨷᩤᩘ�ল�6 ᩉᩫᩁ; the ritual leader has to be careful not to read the vernacular sentence three times but rather the Pali expression. On the other hand, the Pali expression was not written in threefold repetition, but instead the scribe wrote the short vernacular sentence. As mentioned in section 5.1 ('Production'), the manuscript was not intended for a single use on a specific occasion but rather for repeated use, as evidenced by the symbol ||ᨷ|| which indicates the place for announcing the name of the patient. The manuscript could thus be used by replacing the symbol with the name of the patient. Besides that, the marker indicating the newly added part's position in the text is another non-textual symbol used in the manuscript.

Regarding visual patterns, the text was written in *scriptio continua* with some of the aforementioned symbols inserted without an indent. Because the manuscript was bound before it was written, the scribe must have aligned the text with one side of the paper, otherwise the manuscript would have been rebound. As a consequence, the user of this manuscript had to recognize the *okāsa* prayer among the ritual instructions during a recitation. As explained in section 3.1 ('Object'), the manuscript, when folded, is of a portable and handy size; the text was written in 9–10 lines with letters in a legible size. Thus, not only could the manuscript be easily taken anywhere, it could also be held in the ritual leader's hands, to be read in a sitting posture in front of a Buddha image during the ritual.

The prerequisite skill in the Dhamma Lan Na script and in the Pali language imply users who were monks or ex-monks, which shows that the ritual manual was intended as a book for experts. Especially the Pali expressions as a part of the *okāsa* prayer require a person literate in Pali, because the Pali orthography

is different from that of the Lan Na vernacular, despite the use of the same Dhamma Lan Na script for both. The users had to be able to understand the orthography of both languages. Veidlinger argues that activities involved in Buddhism required literacy, unlike those practices associated purely with spirits or ghosts, in which only simple memorized spells were needed:

> Those who deal with the spirits, called *phi*, do not in general need to be literate, as their practices consist largely of invoking simple memorized spells and incantations and contacting the spirits through trances. The more literacy is required for a practice – and thus the more associated with Buddhism the practice is – the higher the prestige accorded it in this system. Practicing monks may be involved in *khwan* rites, but they generally try to avoid the *phi* cult, as it is regarded as something that is not condoned by Buddhism.[33]

In life-extension rituals, even though other deities or holy spirits are mentioned, Lord Buddha is praised as the foremost object of veneration; prayers, *sutta*, and sermons are also derived from Buddhist canonical texts and chanted by Buddhist monks. In addition, two kinds of numerals, the *hora* numeral and the *nai tham* numeral[34], illustrated the manuscript's mixed character; the manuscript was thus supposed to be used by an expert.

Even though the ritual was intended for communication with spiritual beings, the vernacular part dominates the manuscript as well as the *okāsa* prayer. The ritual aims at soothing the patient and his or her audience with protective power given by the Buddha and other deities; thus, the prayer had to be understandable for all the participants, who would be relieved and ensured of its apotropaic efficacy. In addition to the language, the prayer was written in a simple prose style instead of in more complex verse. The manuscript appears to have been written to serve a ritual in which the *sacred* world and the *profane* world reciprocally communicate.

6 Conclusion

Analysed with the four-key-factors, the case-study manuscript has been found to contain three hybrid modes: hybrid content, hybrid use, and hybrid communication. The manuscript was produced as a ritual manual, thereby including

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33 Veidlinger 2006, 161.
34 The two kinds of numerals are basically different; the *Hora* numeral is derived from Burma and is used in manuscripts of secular texts while the *Nai Tham* numeral is used in manuscripts of religious texts (Jaengsawang 2019, 138).

two different parts: the oral part for pronunciation and the silent part for perception, revealing that the use and the production of the manuscript had to be thoroughly understood by the user, if that user was to avoid reading the silent part aloud. The hybrid use of the manuscript has also been considered in two dimensions: purpose and mode. Concerning the dimension of purpose, the manuscript was intended as a ritual manual as well as a master version for further copies, while it could also be used in both a discursive mode (text) and in a cultic mode (object) for life-extension rituals, depending on individual experts. The hybrid communication facilitated by the manuscript is reflected in the setting and the patterns. In the micro-setting, or the life-extension ritual itself, as evidenced by the verbal pattern or the hybrid language (Pali, vernacular), the manuscript text offers two kinds of communication: one for the secular sphere (*profane*) and the other for the spiritual sphere (*sacré*), connected by a medium or a ritual expert. The hybrid communication of the manuscript significantly emphasizes the dependence of local people on influential spirits and Buddhism, still active in present-day Northern Thailand.

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Charles Ramble
The Volvelle and the *Lingga*: The Use of Two Manuscript Ritual Devices in a Tibetan Exorcism

Abstract: This article considers the construction and application of two manuscript objects that feature in Tibetan rituals. One is a type of device known variously as a 'volvelle' or a 'wheel chart', among other names, that is used in various cultures to perform certain simple computations. The example considered here comprises a pair of paper discs that are manipulated for the purpose of elemental and astrological divination. The other object is a block print of an effigy representing the receptacle for the soul of a demon that is 'imprisoned' inside it and subsequently destroyed. The article describes a particular exorcistic ritual in which both devices play a role, before focusing on the composition of the objects themselves. Translations of Tibetan texts related to their use are also provided.

1 Introduction

Tibetan religion in general, and the minority Bön religion in particular, feature a large and often bewildering variety of rituals, the majority of which have never been documented. The number of known rituals is steadily growing as more and more caches of manuscripts come to light, most of them in private collections in culturally Tibetan parts of China and the Himalayan region. Since most of these rituals are either obsolete or are performed only in a few isolated communities, such research as has been done in this domain has tended to concentrate on the available textual component. However, rituals also make use of a wide variety of objects of which some, such as the mandala – a central constituent of most tantric performances – are very well known, while others have attracted little or no scholarly attention at all. Objects may range from unmodified pieces of plant, animal or mineral material to constructions of great complexity requiring multiple and often rare substances in their composition. This contribution will present two manuscript objects that feature in the performance of certain apotropaic rituals. There is no necessary connection between these two devices, and I have seen them used separately at a number of ceremonies, but I shall discuss them in the context of a ritual in which they were both used, in order to

illustrate how objects like these may be employed in concert to ensure the successful outcome of rituals. As indicated in the title, the objects in question are, first, a volvelle, consisting of concentric, superimposed paper discs that rotate separately; and second, an object known as a *lingga* (Tib. *ling ga*),[1] comprising a sheet of paper bearing a blockprint or a freehand drawing representing a demon, and then inscribed with magic formulae. Before describing these objects and the way in which they are used, a brief introduction should be given about the particular setting in which I was able to document their usage.

2 The ritual and its setting

The ritual in question took place in 2008 in the village of Kag in the southern part of Nepal's Mustang District. The inhabitants of Kag are followers of Tibetan Buddhism, but in order to propitiate their household gods and to perform a number of other rituals, notably relating to protection and prosperity, certain families require the services of Bönpo householder priests from a nearby village, called Lubrak, with whom the Kag families have hereditary ties of patronage. In 2008 a woman in Kag, named Chönyi Angmo, lost her husband. This happened to be the third in a series of deaths in the husband's family within a relatively short period of time. Diseases and untimely deaths are often attributed to the action of a disgruntled god of a predatory demon, and sequential deaths among people of a similar age, such as young children or men in their prime of life, as was the case here, are the hallmark of a particular type of creature called *hri* (Tib. *sri*), commonly translated into English as 'vampire'. *Hri* are usually invisible, though they may take the form of one or another animal depending on which of nine categories they belong to (for example, those that prey on babies normally manifest as weasels). The main lama of Lubrak, Tshultrim, was accordingly invited to Kag to perform a ritual for the destruction of the vampire that was haunting Chönyi Angmo's in-laws. The ritual is described at some length, with accompanying video footage, on a website dedicated to Bön ritual,[2] but the procedure may be described briefly here with particular reference to the

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1 At their first appearance in the main text, Tibetan terms and the names of divinities will be presented in roughly phonetic form, followed by the orthographic rendering; in footnotes, only the orthographic form will be given. For personal names and toponyms, only the phonetic form will be used.

2 *Kalpa Bön*, 'Vampire subjugation – Kag 2010' <http://www.kalpa-bon.com/performances/vampire-subjugation-kag-2010> (accessed on 10 March 2021).

episodes involving the two devices that are the main subject of this contribution.

The ritual took more than two full days, beginning in the afternoon of the first and ending late at night on the second. The main location was the shrine room in Chönyi Angmo's house.
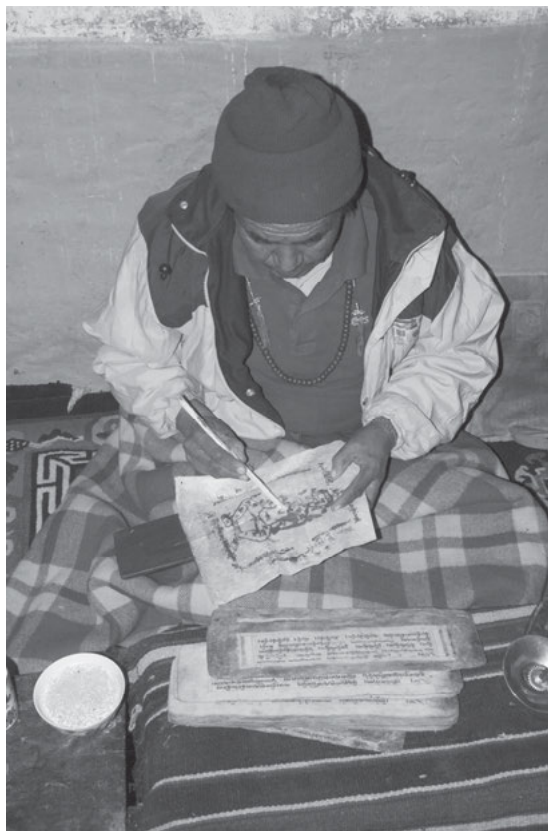
Fig. 1: Lama Tshultrim inscribing magical syllables on the block-printed *lingga*.

Lama Tshultrim and his assistants began by preparing the different effigies, offerings, and other objects that were to be used in the performance. These included a *homa* pit or *homkhung* (Tib. *hom khung*), which is a triangular clay vessel topped with a palisade of barberry sticks that would later serve as the 'prison' into which the soul of the vampire would be lured to its death. Inside the pit the lama placed three small effigies, made by pressing dough into a

wooden mould. On top of these small effigies he placed a larger one of a supine dough figure with its belly hollowed out to form a cup, and into the cup he inserted a cloth wick and pour red-dyed butter, representing the life-blood of the effigy. Finally, he lit the wick to produce a flame, representing its life force. The last item to be placed in the *homkhung* was a sheet of paper bearing a print; the print was made from a wooden block coated with ink of soot and water. The images represented a non-specific demon bound hand and foot. Before placing this image in the pit, Lama Tshultrim chanted a litany, and as he did so inscribed letters on the paper using a wooden stylus dipped into a bowl containing a reddish ink (Fig. 1). He then folded the paper, wrapped it loosely with yarn of five different colours, and inserted it into the pit (Fig. 2).

Fig. 2: The *lingga*, folded into a triangle and wrapped in coloured yarn, 'trapped' inside the *homkhung* amid other ritual objects.

The three small dough imprints, the larger dough effigy with the butter-lamp belly, and the paper print were all versions of an effigy known as *lingga*, and I shall return to them presently.

Vampire-subjugation rituals require that the effigy in which the vampire has been trapped be buried in a pit at an appropriate location, depending on the particular type of vampire one is dealing with. The type that had killed Chönyi Angmo's husband had been identified as one that had to be buried at a cross-roads, of which there was one conveniently located in the main street just outside the courtyard of the house. A neighbour was asked to dig the hole – a three-sided pit – before the main ceremony was begun. However, the direction in which one should face before digging a hole for any purpose – whether to lay the foundations of a house or to bury a vampire – must first be determined by geomantic calculations if one is to avoid misfortune or death. It was to make this calculation that Lama Tshultrim employed a paper volvelle intended for this purpose. Once these and the preparations had been made, he and his assistants proceeded to read the litany.

The general structure that frames rituals of this sort is broadly similar in most cases. After various purificatory preliminaries, the major and minor gods, whose presence is required to empower the proceedings, were invited to enter a row of decorated dough effigies that had been arranged on a shrine as their temporary residences. They were given offerings to please their senses and then entreated to carry out the tasks that were assigned to them. After this propitiation – which took much of the first evening and a good part of the following day – the part of the ritual that was specifically concerned with the destruction of the vampire was performed. A crucial component of this performance was the recitation of the narrative that recounts the first, mythic occasion on which the ritual was performed *in illo tempore*, an evocation that justifies and ensures the efficacy of the performance being enacted. The lama assumed the identity of the culture-hero – in this case Shenrab Miwo, considered by Bönpos to be the founder of their religion – and the vampire was identified with the demoness who featured in that account, a revenant girl. When the soul of the vampire had been enticed into the paper and dough *lingga* contained in the pit, the lama proceeded with a rite that is euphemistically referred to as 'liberation' (*dral*, Tib. *bsgral*), that is, killing. With his ritual dagger he stabbed out the flame representing the life of the supine effigy. The folded paper print was then placed on a board, and as the lama read the appropriate text, the man of the house – in this case a male relative of the widow – proceeded to assault the paper with a series of weapons. First, he shot several arrows into it and then struck it with a mattock and finally with a hammer (Fig. 3). The paper was then stuffed into the

left horn of a yak along with the dough *lingga* and other ritual items, and the mouth of the horn covered with black cloth and firmly bound. After a series of further manipulations, the lama dropped the horn into the pit that had been dug at the crossroads. The hole was covered over and a fire built on top of it.

Fig. 3: Striking the *lingga* with the back of a mattock after it has been shot with arrows.

From this cursory summary of what was in fact a long and quite complex ceremony, I would like to single out just two elements for closer consideration. The first is the device that the lama used to determine the direction in which his assistant had to face when digging the triangular pit at the crossroads; and the second is the paper *lingga*.

3 The volvelle

The first of these is a device contained in a handwritten almanac that Lama Tshultrim uses for making astrological calculations. It consists of two concentric paper discs, a smaller one superimposed upon a larger, and secured to the page with a twist of paper that functions as an axle. The outer rim of the lower disc is divided into twelve segments, each containing one or two syllables, and the upper, smaller one bears a drawing of a creature with a human torso and the head of a horned animal. The lower part of the body tapers away in a scaly tail. The creature in question is Toche Nakpo (Tib. *lto 'phye nag po*), 'Black Belly-Crawler', the divinity of the earth. The position in which Toche Nakpo lies changes through the year as she slowly rotates with the months, and when the earth is dug extreme care must be taken not to strike her in the wrong place (Figs 4 and 5).[3] The text that accompanies the diagram is perfectly explicit about this:

> If she is struck in the head, the man and his parents and children will die; it will be particularly bad for the lama. It is the same whether she is struck on her mane or on her face. [...] If she is struck on the tail there will be conflicts, and it will be bad for the cattle. But if the digging takes place on her belly, all the benefits and blessings will be had. If you dig at her back, that will not be good for you – the hearts of your younger sisters and daughters will burst, and your children will die.

Fig. 4: Volvelle featuring Toche Nakpo, the divinity of the earth.

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3 For the importance of *lto 'phye* in the context of Tibetan 'earth rituals' (*sa'i cho ga*), see Cantwell 2005, 6; for further references see ibid., 6 n. 9.
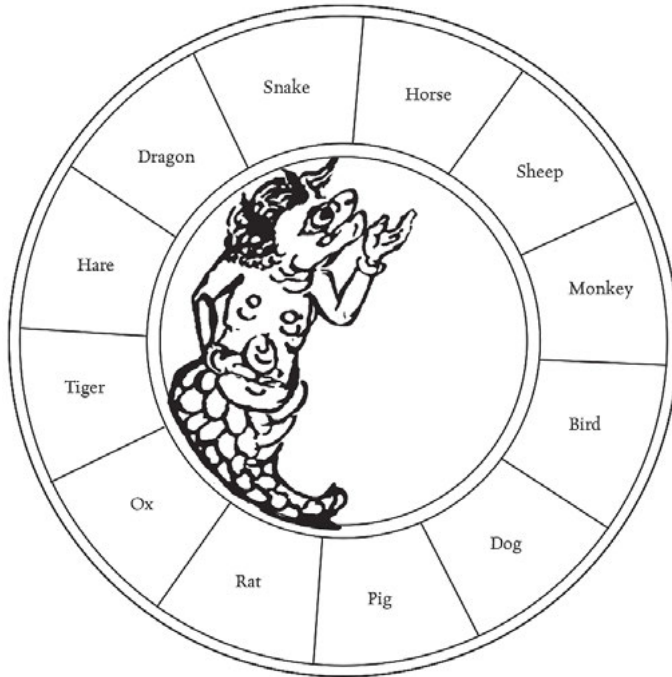
Fig. 5: Key to the volvelle of Toche Nakpo (drawing: Monica Strinu).

Devices of this sort, consisting of two or more superimposed discs of paper or other materials, known variously as 'wheel charts', 'information wheels', and 'volvelles', and used for the purpose of computation, are found under a variety of names in numerous cultures. In Europe they are sometimes known as 'Llullian circles', on the grounds that they were created by the Catalan mystic Ramon Llull (1232–1316). In fact, it seems that Llull's calculator was itself based on the device known as *zā'irjah*, which was widely used in the Muslim lands where he had travelled.[4] While Llull employed it as a means of establishing universal truths for the purpose of converting the Muslims from whom he had acquired it, its use in Tibet seems to be mainly, if not exclusively, for making computations in the domains of astrology and elemental divination. Tibetan volvelles, known as *tsikhor* (Tib. *rtsis 'khor*), 'calculation wheels', can be complex and aesthetically very elaborate, comprising several superimposed discs and able to perform a range of computations. The Newark Museum of Art in

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4 Link 2010, 216; see also Urvoy 1990.

New Jersey, for instance, holds a particularly fine example of a printed almanac from 1763, with three sophisticated volvelles.[5] Lama Tshultrim's volvelle is considerably simpler in conception and more rustic in execution than these, but it serves its purpose perfectly adequately.

The opening lines of the accompanying text, preceding the passage quoted above, state: 'Whatever month it happens to be, that is where her tail should be positioned. Her head touches the "Marginal Seventh"'. The Tibetan term that I have translated here as 'Marginal Seventh' does not appear in dictionaries, but occurs in certain ritual texts as one of a number of hostile powers that are to be averted. The following excerpt is from the text of a ritual known as Tonak Gosum (Tib. *gTo nag mgo gsum*) 'The Three-Headed Man of the Black Rituals', in which the eponymous man of the ritual is a monster with three animal heads that is subjugated and compelled to apply its power to the destruction of a long list of adversaries. The list includes the following passage:

> First, may this ritual repel the obstructions of one's own birth year; secondly, may it repel serious illness; third, may it repel misfortune and loss; fourth, may it repel the 'Fourth-Year Harmer'; fifth, may it repel the 'Particular Ones'; sixth, may it repel dreadful curses; seventh, may it repel the 'Marginal Seventh'; eighth, may it repel the 'Evil Eighth'; ninth, may it repel the 'Raptor'; tenth, may it repel the 'Cemetery Cell'; eleventh, may it repel the 'Clutch of Death'; twelfth, may it repel 'Violent Tussles'; and thirteenth, may it repel 'Victory'; repel all that might harm our beneficent patron![6]

The terms given here in inverted commas are in fact all the names of adverse astrological configurations, one of which is the Marginal Seventh. The Marginal Seventh is the term that designates the month that stands diametrically opposite to any given month featuring on the perimeter of the inner disc. By counting seven spaces in either direction from the space corresponding to any month, one will reach its 'Marginal Seventh'. The animals in question stand for mutually hostile attributes. Thus a man and a woman born, respectively, in 1986 and 1993 (a hare year and a bird year, seven years apart) might be prohibited from marrying; or, if they are determined to do so and their families are soft-hearted, they would need to commission the performance of rituals to offset the dangers posed by their incompatibility. The animal that is located at right-angles to the diameter drawn between the Marginal Sevenths, and facing Toche Nakpo, represents the most auspicious month.

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5 For images of this almanac and its volvelles, see Kapstein (forthcoming).

6 For the Tibetan text, see *Kalpa Bön*, '*mGo gsum*' <http:// http://www.kalpa-bon.com/ texts/mgo-gsum >, fols 8ᵛ–9ʳ (accessed on 10 March 2021).

In Figures 4 and 5, at right angles to the diametric line formed by Toche's head and tail – respectively, in the snake and the horse sections – lies the monkey. The direction to which the monkey corresponds is not given in the diagram, or indeed anywhere in this geomantic text. It is one of the things that lamas learn during their early training: the formation of the universe from the body of the cosmic tortoise. According to an early Bön work on cosmogony, the universe was created by a divinity called Künbum Goje (*Kun 'bum go 'byed*), a name that may be translated approximately as 'He who Apportions Spaces for All the Hundreds of Thousands'. According to this work,

> [Künbum Goje] brought together the sheen of one of his hairs, the spittle of his mouth and the metallic gleam of his fingernails, the warmth of his body and the breath of his mouth, the impurities upon the surface of his body and the radiance of his mind. With them he wrote the Nine Heroic Syllables of the elements on a precious golden tablet. Then he cast the tablet to the ground. In the centre of the golden earth, there came into being the foundation for the lives of the world: a yellow tortoise of gold.[7]

Different parts of the tortoise's body became the five elements, and these in turn were associated with the directions, animals, trigrams, stars, and planets. From the tortoise's lungs came the element iron, lying in the west and associated with the monkey and the bird, the planet Venus, and the trigram ☱ which is known in Tibetan as *da* (Tib. *dwa*; Ch. *dui*).

The monkey, then, signifies the west, and this is the direction in which Chönyi Angmo's neighbour had to face when he proceeded to dig up the street.

4 The *lingga*

Let us now turn to the second manuscript, the *lingga*. The term *lingga* (Tib. *ling ga*) represents the Sanskrit *liṅga*, the term for phallus, a metonym for the Hindu god Śiva. The use of the term in the context of Tibetan exorcism is a reference to a Buddhist myth about the subjugation of Rudra, a wrathful form of Śiva, by a Buddhist god, usually Vajrapāṇi.[8] In the Bönpo version of the ritual described here, the principal divinity responsible for the act of subjugation, and with whom the officiating lama must identify, is a major tantric god Takla Membar (sTag la me 'bar). The *lingga* effigy may in fact represent any one of a number of

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7 Ramble 2013, 214.
8 Discussions of this myth are to found in several works, including Davidson 1991, Stein 1995, and Dalton 2011.

demons or enemies that are to be destroyed in the course off a rite of 'liberation' (see above). In the case of paper *lingga*, the effigy is usually block-printed, but certain priestly communities have a preference for hand-drawn images. The text actually gives instructions for drawing, rather than printing, the image. The identity of the demon may be bestowed by the form of the drawing or the block-print, and the text cited below does in fact give specific directions for different forms of *lingga* according to the purpose for which they are intended. More commonly, however, especially when a block-print is used, the image is that of a generic demon, and its specificity is established by means of appropriate syllables that the lama inscribes on and around the printed form.

The procedure for making *lingga*, and directions for much of the subsequent treatment that it should receive in the course of the ritual, are set out in a text entitled 'Ritual for drawing the *lingga* and the lustration of the *lingga*' (*Ling ga'i bri ('bri) chog ling khrus rnams bzhugs pa legs so*), a translation of which is presented below. Lama Tshultrim's copy is a manuscript Tibetan longbook of six folios written in the headless *ume* (Tib. *dbu med*) script. Text in smaller lettering represents instructions, while larger writing is used for the passages to be chanted. In the translation given below, the instructions will be rendered in italics (even though it seems that the scribe has sometimes erroneously used the larger script for this). For reasons of space, the transliterated text will not be given here, but may be found in the corresponding part of the website of the Kalpa Bön Rituals project.[9] There remain uncertainties concerning the translation of certain passages, but these have been glossed over since they are unlikely to be of interest to non-specialist readers.

The rite of 'liberation' belongs to a class of tantric rituals that are classified as 'violent' (*drakpo*, Tib. *drag po*), and the theme of violence is extended to the materials with which the *lingga* is produced. The text specifies that the paper on which the *lingga* is to be drawn should be poisonous, and the stylus made from an arrow that has killed a yeti (or possibly a bear). The ink is a mixture of blood from different animals that have suffered violent or unpleasant deaths. Ingredients of the sort that are required in such manuals can be exotic, to say the least, and by no means always easily available. Tantric priests such as Lama Tshultrim usually have reserves of the kinds of substances that are specified in their *grimoires*, but add only a minuscule quantity to a base that is made of readily-accessible substitutes. In the present case, most of the blood that Lama Tshultrim used to inscribe the syllables on the print consisted of a wash of red

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9 *Kalpa Bön*, '*Ling ga'i 'bri chog*' <http://kalpa-bon.com/texts/sri/ling-gai-bri-chog> (accessed on 10 March 2021).

clay mixed with reconstituted dried yak blood. I did not ask him whether the stylus he used was actually made from an arrow with the prescribed history.

5 The destruction of the *lingga*

The text presented here is concerned primarily with the creation and purification of the *lingga*; but as we have seen, the process whereby the *lingga* is destroyed is also an important part of the ceremony and therefore of the life cycle, so to speak, of this particular manuscript. The instructions for the immolation of the *lingga* are in fact spread across several texts, but we may conclude here with one that accompanies a particularly important part of the ritual: the sequence in which the stand-in for the man of the house attacked it with arrows, a mattock, and a hammer. The text that Lama Tshultrim chanted during this procedure covers a single piece of paper entitled 'A little folio about the "liberation" ritual' (*bsGral ba'i shog chung bzhugs pa legs s+hō*). The procedure itself consisted of shooting arrows into the *lingga*, then hitting it with a mattock and with a hammer (for which the back of the mattock's head was used, because there was no hammer in the house). Lama Tshultrim read the text three times, and on each occasion his assistant used a different one of the three implements. In fact, the text does not mention a mattock, only a bow and arrows and a hammer; we may therefore attribute the integration of an agricultural implement into the arsenal used against the vampire to the inventiveness that lamas often display with regard to the interpretation of their texts. In this short text, the main tutelary divinity is again Takla Membar. There is also the mention of another major god named Tsomchok Khagying (Tib. gTso mchog mkha' 'gying), whose relevance here is that one of the attributes he holds in his numerous hands is a hammer.

6 Translations

6.1 Translation of the *lingga* text

[fol. 1ʳ] *The ritual for drawing the* lingga *and the lustration of the* lingga. [fol. 1ᵛ] *Draw the* lingga *according to the main text and say as follows.* Hey, I am Takla Membar – hear me, you vow-breaking malefactors! First of all, anger develops from the father, and anger, which is the cause of the hells, is present in you. Then desire develops in the womb of the mother, and desire, the cause of the realm of the hungry ghosts, is present in you. Then stupidity takes form as the

body, and stupidity, that is the cause of the animal realm, is present in you. Thus all three poisons, the three lower realms, are within you.[10] [fol. 2ʳ] To renounce forever the three lower realms, make an effigy, a *lingga*. *Swo!* I am Takla Membar. There is nothing on which to draw the *lingga*, and a surface on which to draw the *lingga* must therefore be sought. Make the surface on which the *lingga* is to be drawn from poison paper measuring one span and four finger-widths.[11] Since there is no stylus with which to draw the *lingga*, make that stylus with which to draw the *lingga* out of a piece, measuring one span and four finger-widths, of an arrow that has killed a yeti.[12] [fol. 2ᵛ] Nor is there any blood with which to draw the *lingga*. Take the blood of a yeti that has died on the edge of a sword; the blood of a mule that has suffered a bad death by poisoning, and the blood of a dog that has died a bad death by rabies, and from a mixture of these three make the blood to be used for drawing the *lingga*. For a general-purpose *lingga*, begin to draw from the crown of the head; for a male *lingga*, begin to draw from the right shoulder, and for a female *lingga* begin to draw from the left shoulder. For an enemy *lingga*, proceed to draw from the right foot; for a demon *lingga*, begin from the left foot, and for a child *lingga* begin from the middle of the privy parts. Therefore listen – hear me! On the crown of the head write the syllable NAN, which signifies being driven by the winds of karma; on either shoulder write the syllable 'CHING, which betokens [fol. 3ʳ] the binding of the malefactors by the protectors of Bön. On each of the four limbs write the syllable YAN, which refers to binding by the great kings of the four directions. Therefore hear me, you evil-doers! You who do not belong to the noxious enemies, you, the eight classes of demigods and all those in the six realms, you who are disembodied – do not enter this effigy! Force the harmful enemies and the *'dre* and *gdon* demons down into this effigy, and quickly summon them into this *lingga*. Wherever in the ten directions of the world these ill-fortuned, noxious hostile enemies may abide, summon them swiftly into this *lingga*, cast them down forcibly into this effigy! *Say these words and visualize the action intensely, repeating and writing the mantra for summoning a great many times.*

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10 The three mental poisons are associated with different parts of the body: flesh (*sha*) corresponds to stupidity (*gti mug*), blood (*khrag*) to desire ('*dod chags*), and bone (*rus pa*) to anger (*zhe sdang*).

11 'Poison paper' (*dug shog*) may refer to paper that has been treated with toxic substances such as aconite or arsenic. According to Lama Sherab Tenzin of Samling, in Dolpo, it may also refer to untreated paper that has been made from the root fibres of *Stellera chamaejasme* (Tib. *re lcag pa*), which has toxic properties.

12 The Tibetan term for yeti, *mi rgod*, lit. 'wild man', may also denote a brown bear.

The chant for the writing is over. And now the chant for binding the daro.[13] *Ideally, it should be recited for five different parts: once for the head, a second time for the two hands and a third time for the feet. Imagine this being diffused from the five poisons,* [fol. 3ᵛ] *and recite as follows.* Hey! I am Takla Membar. You, ill-fortuned sinners in your misery, I summon you into the effigy of this *daro* and take you at the same time as the five poisons: the head, which contains the five poisons in full, and the four limbs that are the four door-guards – this *daro* that has the five points representing the five poisons, I lift you with my five fingers and bind the *daro*, the five poisons and the demons together. Tie down the *lingga*, bind it crosswise: bind its body, bind its speech, bind its mind! (*Mantras*) *Thus is the binding done. Do not let any of your own impurities be transferred to the* lingga. *Fumigate the ritual items and the environs with frankincense and say as follows. Swo!* I am Takla Membar. With this dread substance, frankincense, fumigate the hostile obstructors and the *lingga*; drive the *dre* demons, the obstructor demons, and the *jungpo* demons to distraction! [fol. 4ʳ] Do not fumigate the awesome gods on high, but drive the vampires of males and the demons of females to distraction; do not fumigate the serpent spirits below, but drive the *byad ma* demons, the hostile enemies, mad! *Here ends the fumigation with frankincense. If you have a* lingga *for burning, cast it into the* homa *pit. According to the* Rin chen 'phreng ba *(text) this ritual should be performed six times. If you are performing a vampire-subjugation rite, some sort of skull is ideal, otherwise insert it into a yak horn and place it at the foot of the* dö.[14] *I, Phungbön* [*Gömar*],[15] *have taken this excerpt from other sources.* (*Mantra*) *Here follows the general lustration of the* lingga. *To perform the threefold ritual of distancing [yourself from the enemy], offering it [to the meditational divinity] and crushing it down, it is most important to perform the lustration of the* lingga; *then place it between two lengths of barberry wood and brandish it. Holding it in your hand you should rotate it around your head three times in alternating directions, and recite the following mantra for releasing [yourself].* (*Mantras*) [fol. 4ᵛ] *Recite this once. Then rotate the* lingga *once around your waist and recite it once; and then rotate*

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13 The term *daro* (Tib. *lda ro*) is obscure, but seems to be a synonym for the *lingga* in an unknown language. Khenpo Tenpa Yungdrung Rinpoche, the abbot of the Bön monastery of Triten Norbutse in Kathmandu, has suggested to me that it may belong to the Tanggut language (personal communication).

14 The *dö* (Tib. *mdos*) is a ritual construction, in this case comprising a shallow basket filled with black sand and topped with a tripod of arrows, in which the *homa* pit and other items are placed.

15 The name Phungbön Gömar (Tib. *Phung bon rGod dmar*), often appears in texts associated with the tantric divinities Takla and Phurba, but his identity remains unknown.

it in front of you and behind you as above and recite it once. Perform this in your imagination (?) *three times and recite it three times, but if you have already performed it* [*in the course of this ritual*] *you need not do so* [*again*].[16] *This is how the lustration of the* lingga *is performed.* Visualize yourself as the meditational divinity [Takla Membar], and collect pure water with milk in front of you in a vessel. In your non-conceptual meditation, in that water, from the syllable PAM there arises a lotus; from the syllable RAM arises the sun; and from the syllable A there arises the disc of the moon. From the surface of this comes the white goddess of water, with one head and two arms. With her right hand, she performs the ritual gesture of offering and bestowing, and in her left hand [fol. 5ʳ] she holds a red lotus. She is seated in the full lotus posture, and her body is bedecked with precious ornaments. Then from the heart of the meditational divinity a beam of light shines forth, and imagine that the *jñānasattva*, which is like that goddess, is one with [you], the *samāyasattva*.[17] (Mantras) From the palm of the hand with which she performs the gesture of offering and bestowal, imagine that there issues forth the nectar of wisdom to lustrate whatever *lingga* or sacred circle you may have. Imagine also that all that emanates from your mouth, be it vapour or spittle, is thoroughly purified. Cause the sacred circle or *lingga* or effigy to be reflected in a mirror and lustrate that mirror, *reciting as follows.* (*Mantras*) [fol. 5ᵛ] May all impurities that emanate from me be cleansed! *With these words, perform the actions on the support, and thoroughly purify all the impurities that you breathe out. Infuse the enemy into the* lingga, *and visualize it as the actual enemy itself. Then imagine that the good fortune, influence, prosperity and vital radiance of the enemy are all purified by that water, and recite the mantras repeatedly.* [fol. 6ʳ] *Perform a lustration of that* lingga *as above.* Imagine that that water becomes a mass of wind, and that that enemy's life is purified. Then imagine that that goddess dissolves into light and is mingled with the water. Drink it, and your own life and enjoyment will be endowed with radiance. Sprinkle whatever is left of that water around the house, and imagine that the place in which you are performing this ritual is blessed – then will you generate splendour and radiance for yourself. *After this, fumigate the* lingga *with barberry bark, frankincense, sulphur, the excrement of dogs and jackals, the fat of*

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16 In the course of the ritual, Lama Tshultrim did in fact perform these gestures with the *lingga* exactly as prescribed.

17 The Sanskrit term *jñānasattva* refers to the wisdom deity that is being visualized (Tib. *lha ye shes sems dpa'*). The *samāyasattva* denotes the meditator who identifies with the divinity (Tib. *bdag dam tshigs sems dpa'*) but is impure, because the result is a mental production. Repeated and prolonged performance of this visualisation results in complete union known as the 'non-dual being of activity' (Tib. *gnyis med las gyi sems dpa'*).

a Chinese person, the boot of a leper, wolfsbane, and [*the plants?*] dranak, langru, *and* ognyi,[18] *and recite these mantras.* (*Mantras*) [fol. 6ᵛ] Separate [the enemy] from his or her protective divinities. *It is most important that you should be so cautious and disciplined that other people do not know about this. The lustration of the* lingga *is over. Virtue and blessings.*

6.2 Translation of the 'Little folio about the "liberation" ritual'

When striking with arrows and other missiles, recite as follows. Swo! I am Takla Membar. Now that the time has come to 'liberate' the hostile obstructive enemies, the messengers and agents should accomplish their tasks. To the great bow that is the empty essential nature of being should be set the arrow of wisdom, and a wrathful thunderbolt affixed to it as an arrowhead. Strike the body of the hostile obstructor with this magical missile of an arrow! Since it is the heart that is the seat of black anger, plant the arrow in the middle of its heart! Since it is the spleen that is the seat of stupidity, plant the arrow in the centre of the spleen! Since it is the lungs that are the seat of pride, plant the arrow in the middle of the lungs! Since the liver is the locus of lust, [fol. 1ᵛ] plant the arrow in the heart of the body's heat! As the kidneys are the seat of envy, plant an arrow in the middle of its blood! Shoot these arrows, these magical missiles, into the five elements of its body, and into its eight consciousnesses! *The 'Arrows as Magical Missiles' is over. Then strike it with a hammer. Swo*! Among the attributes held in the right hands of [Tsomchok] Khagying is a fearsome blazing hammer. The material from which it is made is meteorite, and it has a socket of gold. Agents and messengers, take it in your hands, and come and smash it into the brain-blood of the oath-breakers, and reduce their bodies to dust! (*Mantras*) *Here ends the 'Pounding with the Hammer'. May there be virtue.*

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18 Respectively, *brag nag, glang ru, 'og nyid.*

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Martin Jörg Schäfer

'Vu et approuvé': Censorship Notes in Hamburg Prompt Books from the French Period

Abstract: Among the *c.* 3,050 items, most of which are books in manuscript, that comprise the collection known as the Theater-Bibliothek of Hamburg's city and university library, 136 items contain censorship entries from the years when Hamburg was part of the Napoleonic Empire (1811–1814). Remarks in multiple hands make suggestions and negotiate how to avoid referring to the occupying forces, the English enemy, oppression, or upheaval. The prompt book for the 1812 revival of Hamburg's famous 1770s production of *King Lear* is particularly memorable in the ways a simplified adaptation (that was staged long after the occupation ended) is produced by the complex interactions of various hands.

1 Censorship of the Hamburg stage: the stake of handwriting

In European theatre, censorship of the stage lasted well into the twentieth century in most countries.[1] In the German-speaking areas of the late eighteenth and early nineteenth century theatre companies that did not perform at court had to obtain approval for their performances with the local authorities in the first place.[2] The content of the play itself was only one (albeit crucial) element of an overall administrative process. Theatre was a commercial enterprise and relied on pandering to the assumed prevalent taste. (Implicit) standards of offensiveness or objectionability were usually well known. Censorship of the printing press (with regard to journalism and literature) as well as that of public utterances in general provided a backdrop against which censorship of the stage was often not a problem by itself as long as plays and performances remained within an implicit framework of decorum.[3]

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1 Cf. Goldstein 1989, 113–153; cf. Worrall 2017, 45–53.
2 Cf. Maurer-Schmoock 1982, 102–118.
3 Cf. Pieroth 2018, 18–22.

Potentially, theatre censorship can always go along with practices of hand-writing: while the performance of a play is ephemeral the censor needs a tangible basis for his decision, e.g. the content of the play to be performed in a stable container, i.e. manuscript or print. Writing tool in hand, the censor can then cancel or 'amend' words as well as whole passages. However, it is safe to assume (and in a lot of cases well known) that in practice plays were approved or rejected altogether – at least plays by familiar authors.[4] Either way, censorship annotations would not necessarily make their way into the prompt books used within the theatre to facilitate the actual performances: written artefact in hand, prompters help out with lines that may have been forgotten or just poorly memorised; stage managers see to the quiet operation of the performance. Around 1800, these two roles sometimes intermingled in European theatre. It is more likely that these prompt books would take the approved play or version of it as a starting point for producing a 'clean copy' manuscript that would then be put to use in everyday practice.

Prompt books from the French occupation period in Hamburg (1806–1814) prove to be a fascinating exception to this rule of thumb: after the introduction of a due process of censorship in 1810/1811, the local censor, former Hamburg journalist Johann Philipp Nick (1777–1815),[5] would note pages in need of change, suggest and insert amendments as well as sign the final version with a 'vu et approuvé' ('seen and approved') by 'Nick censeur' ('censor Nick') or simply 'Nick'. The prompt book of Kotezbue's popular melodrama *Die Sonnen-Jungfrau* (about a fated transcultural love during the Spanish conquest of Peru) has only very few censorship interventions (despite hints to a minor riot in the subplot). Nick signed it on the date of the performance in question, '22 août 1813' (see Fig. 1). Although Nick is the only censor in town, the respective written artefacts put the interaction of several hands and writing tools on display. In some cases, they replaced the prompt books that had already been in use for several decades.[6] Mostly, these written artefacts were already full of amendments and additions that had been added (e.g. by the principal or the prompter himself) whenever a production was revived after a hiatus. While future enrichments

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4 Cf. Hellmich 2014, 126.
5 Cf. Schröder and Klose 1870, 519; cf. Hellmich 2014, 30–31.
6 In some cases, such an original prompt book is part of the collection in addition to the censorship one. Cf. the 1777 manuscript based and the 1813 print based prompt books of local adaptations of Shakespeare's *Measure for Measure*: Hamburg, Staats- und Universitätsbibliothek 'Carl von Ossietzky' (Stabi), Theater-Bibliothek, 514 (*Maaß für Maaß. Ein Schauspiel in fünf Aufzügen*); cf. Hamburg, Stabi, Theater-Bibliothek, 948b (*Maaß für Maaß. Ein Schauspiel in fünf Aufzügen*).

were to be expected the original page layout hardly ever took them into account. Only few interleaved written artefacts[7] or prompt books with margins for possible corrections[8] are part of Theater-Bibliothek. These tended to be bulky and would have impeded their side stage use during the performance by the prompter or the inspector (a person of overall responsibility who was also the predecessor of today's stage manager). The manuscripts had been written (often by the prompter himself) in German cursive (with rare interjections of Latin) on low-price paper quires in whichever format and with whatever quill and ink seem to have been at hand; they had then been bound into inexpensive card board cover. They also include additional practical information for the subsequent use for a performance: the prompter and the inspector would be in need of cast, prop and set lists as well as cues for lighting, entrances and exits. These lists were often glued in on extra sheets after the production of the clean copy or added on folios that had been left blank (see Fig. 2). In the case of the French period prompt books, most of them were used (often with only minor changes) for a long time after Nick's work as censor ended. The following considerations examine Nick's interventions with respect to a prominent example, Friedrich Ludwig Schröder's 1812 reprisal of his own 1778 adaptation of William Shakespeare's early seventeenth-century *King Lear*.

2 'Nick censeur': Approval and rejection entries

The French army captured Hamburg in 1806. As the capital of the newly founded department Bouches-de-l'Elbe, the city was a part of the Empire from late 1810 up to the expulsion of the occupying forces in 1814. Napoleon decreed the reintroduction of censorship in France in 1810; the new laws were applied in the new territories in the course of 1811.[9] The central 'Direction de l'imprimerie et de la librairie' in Paris had a Hamburg-based agency closely aligned with the local police. Beside the control of printing and bookselling, the agency had its resident censor in Johann Philipp Nick who was responsible for the newspapers, for all published literature and also for the stage. All playbills, which advertised the venue, the date and the name of the play, needed to be bilingual. An overall list of the plays to be performed had to be presented to Nick's supervisor, Louis-

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7 Cf. Hamburg, Stabi, Theater-Bibliothek, 1989b (*Dom Karlos, Infant von Spanien*).

8 Cf. Hamburg, Stabi, Theater-Bibliothek, 499b (*Macbeth. Ein Trauerspiel in Fünf Aufzügen*).

9 Cf. Hellmich 2014, 123–124.

Philippe Brun d'Aubignosc, for approval. D'Aubignosc had the power to prohibit the performance of a play and to close down a theatre if his orders met with resistance. He could also interfere after the fact in case an approved play was deemed to have an undesirable effect upon the public.[10] In general, plays needed to avoid utterances that could be construed as criticism of France and all things French. The English enemy was not to be mentioned; words such as 'homeland', 'patriotism', 'freedom', 'tyranny', 'oppression' etc. were to be avoided. As a matter of consequence, the agency tended to reject works by popular authors such as Friedrich Schiller wholesale.[11] However, a lot of the plays that did reach Nick's desk give the impression to have been edited with a great deal of good will and attention to detail. Others hardly show any interventions.[12]

More than half of the *c.* 3,050 mostly handwritten prompt books in the Hamburg Theater-Bibliothek's collection (ranging from 1750 up to 1880),[13] date from the 1770s to the 1810s. Written artefacts of plays that were never performed can be found next to one hit wonders (i.e. plays that were performed once or twice but never taken up again) and plays that became part of the repertory for decades.[14] Some of the books were in use for quite some time afterwards, sometimes until the 1840s. For some especially successful plays (that were performed more than 50 times over a two or three decades) there is no written artefact preserved in the collection. These might have shown too many signs of wear to be considered worth preserving for another future performance.

Before and after the time of French censorship, none of the many written artefacts in the collection bear witness to explicit censorship intervention (or, for that matter, a due process of censorship). The 136 written artefacts that bear the censor's, i.e. Nick's signature[15] account for nearly all the plays known to have been performed during Nick's tenure from 1811 to 1814. The overwhelming bulk is signed with the aforementioned 'seen and approved' in a dark ink which had probably been black but faded into brown overtime. In various prompt books,

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10 Cf. Hellmich 2014, 124–127.

11 Cf. Stoltz 2016. (Dominik Stoltz has been part of the team that has compiled the index of Theater-Bibliothek but has only published this blogpost.)

12 Cf. *Allgemeine Zeitung* 1815, 1236.

13 Cf. Neubacher 2016.

14 Playbills from 1768 to 1850 can be accessed at <www.stadttheater.uni-hamburg.de>.

15 According to the index of Hamburg Staatsbibliothek 'Handschriftenkatalog' (<allegro.sub. uni-hamburg.de/hans>); cf. Stoltz 2016. Stoltz counts 135 because he does not yet include the *King Lear*-prompt book analysed below. The written artefact clearly belongs to Theater-Bibliothek but was found by the author of this article in the general inventory of Hamburg Staatstbibliothek in 2015. It has since been included in the special collection.

page numbers are listed in Nick's hand on one of the last pages. These are the pages with objectionable content; they contain Nick's minor or major annotations as well as edits by additional hands (and different writing tools) that react to or anticipate Nick's comments. Only in very few cases, prompt books include rejection notices: the most explicit one is on display in Gustav Hagemann's 1790 comedy *Leichtsinn und Edelmuth* was performed on a regular basis until 1798 but was deemed too critical of the military by Nick. His rather genial last page commentary reads:

> In einem monarchischen Staate kann und darf der Soldatenstand als kein Unglück betrachtet werden. Der 15. Auft[ritt] wirft auf jeden Fall ein ungünstiges Licht auf ihn. Die anderen Scenen sind nicht gantz von diesem Vorwurfe frei. Sie werden es mir daher nicht übelnehmen hochzuverehrender Herr Director! wenn ich dieses Lustspiel nicht genehmigen kann.

> In a monarchy, the military cannot and must not be regarded as a misfortune. In any case, the 15th scene shows it in an unfavourable light. The other scenes are not entirely free of this reproach. You will therefore not hold it against me, Honorable Director! If I cannot approve this comedy (my translation).[16]

As mentioned above, some written artefacts Nick received look like newly produced copies instead of the existing prompt books for productions that had been part of the repertory for a longer period of time. They were possibly worn out by their long-time use; the information stored in them might have been deemed too valuable to be messed around with by a (hopefully) temporary occupying power. An additional layer of writing by an outside hand was always at risk of rendering the prompt book as a whole illegible and thus unsuitable for practical use. In such a case, especially if a play was deemed problematic by the theatre company, Nick received so-called clean copies, i.e. books that were produced from scratch and then – as soon as they had Nick's signature of approval – amended e.g. with technical information.

In 15 instances, the company did not produce a new manuscript at all but used an existing print version of the respective play as a basis. This was convenient (and common practice) whenever the stage adaptation of a play would not greatly differ from a published version of a text. Approximately 500 of the 3,050 prompt books in Theater-Bibliothek are based on available printed books and then turned into a unique written artefact via enrichment by often multiple hands. Most of the 15 print prompt books signed by Nick were commercially

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successful (and politically non-threatening) comedies that had been part of the Hamburg repertory for a great period of time. Handing in a print made additional sense in cases in which the theatre company itself had published a particularly successful stage adaptation, which had been the case for the Hamburg productions of Shakespeare back in the 1770s. These adaptations were still the ones performed at the time although they were outdated as far as the intellectual discourse of the 1810s was concerned. Handing in a printed book also conveyed the not so subtle point that a work allowed in print could also be performed on stage: out of the five Shakespeare plays performed under Nick's aegis, two were comedies and made use of the handwritten 1770s prompt book. Three with a potentially problematic contents, however, were handed in as print: the 1770s Hamburg adaptations of *Measure for Measure*, *Hamlet* and *King Lear* had all privileged the family drama over the political dimension. But they still included tales of revolutionary struggle that could be deemed problematic by the French authorities. Handing them in as prints thus meant less work for the scribe (usually the prompter himself) in case of a possible rejection. In case of acceptance, the company would now take the print as a starting point for the new prompt book. The resulting hybrid of print and the multilayered handwriting by multiple users made it easier to distinguish between the original point of departure (i.e. the play presented to Nick), the interaction between the censor's notes and the respective reactions and counter-reactions. Additional technical information could then be added without a problem at a later point in time.

3 The case of the Hamburg 1812 *König Lear*

Against the backdrop of French censorship, it seems rather curious at first that an adaptation of William Shakespeare's *The Tragedy of King Lear* was performed at all five times during the course of 1812.[17] The play by the British playwright is set in a mythical (or early medieval) England and shows the disintegration of authority, various instances of brutal upheaval as well as the invasion of a French army.[18] On the other hand, Shakespeare had been appropriated by the German Romantics more than a decade ago at this point. He was widely considered to be more at home in the German-speaking world than in the London theatre-

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17 According to the playbills accessible at <www.stadttheater.uni-hamburg.de>, performances took place on 13, 20, 22 and 25 March as well as on 11 May and 28 October.
18 Cf. Foakes 1993, 162–177, 295–303, 385–392.

districts.[19] All the other Shakespeare-plays staged in Hamburg during the censorship period were either set in Italy or Denmark. But in the ascending romantic imagination the England-based *Lear*-plot had more the making of a fairy-tale than an analogy to current political events.[20] Above all, the stage-adaptations still performed in Hamburg had first been produced in the 1770s in order to introduce the German-speaking audience to the author. In order to make the plays more palatable, the then principal and lead-actor Friedrich Ludwig Schröder (1744-1816) had equipped the tragedies with happy endings:[21] Hamlet survived and became king; Lear died more from exhaustion and old age than grief; his daughter Cordelia fainted instead of perishing and could succeed him on the throne. In 1778, Schröder's Lear-performance had garnered so much international praise that Mme de Staël included a description in her 1810 quasi-ethnographic exploration of Germany *De l'Allemagne*.[22] Despite the subsequent ban of de Staël's work, its stunning initial success would have contributed to whatever standing Schröder's Shakespeare-adaptations had with the Hamburg censorship office. Above all, Schröder himself came out retirement for the 1811 to 1813 censorship period at Hamburg theatre to take over as principal, a position he had already held for the overwhelming part of the last three decades of the eighteenth century. (However, Schröder, although by now himself an older man, did not take up the part of the aged King again.)

In order to promote his take on Shakespeare back in the 1770s, Schröder had had his adaptations published as an octavo-print 'nach Shakespeare' (based on Shakespeare) but without referencing Schröder.[23] Despite being outdated in light of the late eighteenth's century romantic take on Shakespeare, these books were still in circulation. (They were also still common as template for *King Lear* performances in German speaking theatres.) A print copy of Schröder's 1778 *King Lear*-adaptation formed the basis of the prompt book presented to the censorship office in 1812. Next to the printed 'based on Shakespeare', Schröder's own hand has added '[von Schröder]' (by Schröder) in black ink on the title page: the famous principal does not so much ask to stage a play by the English enemy but rather stresses the local aspect. The written arte-

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19 Cf. Paulin 2003; cf. Blinn 1982. However, the Romantic translation of *King Lear* in what would become the standard Schlegel/Tieck-edition would not appear until 1832. For Johann Heinrich Voss's 1806 *King Lear*-translation in the Romantic mould that was partly integrated into the Hamburg Shakespeare cf. footnote 30 below.

20 Cf. Bate 1986, 1–20; cf. Paulin 2003, 283–295; cf. Moody 2002, 40.

21 Cf. Häublein 2007; cf. Hoffmeier 1964.

22 Cf. de Staël Holstein 1810, 293–296.

23 Cf. Schröder 1778.

fact as a whole consists of 59 folios, 55 of which (4–58) are printed pages. Sheets of the same paper are also glued inside the front and the back of the brownish cover. In black ink, a faded sticker on the cover (that for most of the written artefacts in the collection seems to be have added at a much later date) does not only state the title 'König Lear' (King Lear) and numbers of an earlier index (47 29) but also clearly assigns the book to the 'Soufleur [sic]' (prompter).

A set and prop list is written down in black ink on both sides of the second folio. A red pencil by a different hand adds some minor information (see Fig. 2). On the recto of the third further prop information is inserted by different hands in black ink and in a faded grey pencil that also cancels some of the black ink. Presumably the same grey pencil is at work on the verso of the last folio and the inside of the back cover. A list of eight or nine single words could possibly consist of last names of the performers but is largely illegible. However, none of the last names on the existing *King Lear* Hamburg playbills from the 1770 to the 1820s is an obvious match. On the 55 printed folios at least the same three writing tools leave their mark. But a grey pencil is clearly used by different hands at different points in time; a hand that inserted technical remarks makes use of the grey pencil as well as black ink. At least three different hands (including Nick's) use ink. One of them, which inserts textual additions, is clearly Schröder's himself. Whether the different shades from black to brown indicate lessening of ink in the quill, the process of yellowing or a different ink altogether has yet to be determined by material analysis. Altogether, 82 of the 110 print pages are slightly or heavily redacted by sometimes more than one hand. The modes of written artefact enrichment range from technical information (cues for entrances, exits or sounds) to textual change. The censorship interventions feature prominently in the latter category.

The last page of the printed text is signed at the bottom by Nick's hand in the aforementioned brown, perhaps formerly black ink (see Fig. 3): 'Vu et approuvé par ordre / du Mr le directeur général / de la haute police / Nick censeur' ('Seen and approved by the order of the general director of the state police censor Nick').[24] The next, empty end-page lists page numbers at the top, in all likelihood in Nick's own hand. All pages listed seem to be considered in need of amendment. Similar paratextual indices can be found in various of the written artefacts submitted to Nick. In all likelihood they were produced when the version of a play was not accepted or rejected wholesale. In this instance, each referenced page number is divided from the next by a full stop: 'S. 6. 7. 11. 13.

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24 Similar approvals in other books include a date but often lack the reference to the 'directeur général'.

49. / 66. 67. 69. 74. 78. 85. 96. / 109.'[25] The 6 in 96 in blotted out, but the page in question has similar entries to the other ones. A blot next to the 96 looks like a mistake or a correction. Most pages in question include references to the names England and France: in Shakespeare's play, Lear's daughter is simultaneously vowed by the Duke of Burgundy and the King of France – and after her ban married by the latter without a dowry. In 1778, Schröder had cut Burgundy and only made use of the King of France (to reduce the number of actors). 34 years later, all respective references and salutations are changed into Duke of Burgundy instead; as a matter of consequence Cordelia is addressed as Duchess rather than Queen. These changes amount to eight of Nick's list of thirteen pages with deficiencies.

However, the reintroduction of a character taken from the original Shakespeare-play likely is not to be the censor's work but based on a proposal by the theatre: while the respective deletions could very well be from the same ink and hand as the final approval-note the corrections themselves are written by a different hand, although most of the time with a similar ink. Moreover, the changes don't start on page six, as suggested by Nick's list, but already in the *dramatis personae*-register on page two where the name of France is changed into Burgundy. The first time, the King of France is mentioned in the main text of the play is on page four. Here, a fascinating back and forth between writing tools and presumably different hands takes place (Fig. 4): the 'König' ('King') is deleted with black ink twice; the 'Duke of Burgundy' is written on the blank space on the left margin in what could be a different ink. A thick red pencil then deletes the correction; red dots under the strikethrough nullify the former deletion. Apparently, a grey pencil has the last word: grey dots under the red strikethrough nullify the previous nullification of the correction. Grey vertical lines through the deletion and its withdrawal in the main text reinstate the primary deletion.

The clear differentiation of editing-stages makes it much easier to identify layers by writing tool in the written artefact as a whole. Nevertheless, it remains unclear when the back and forth takes place. It could very well be the case that the back and forth bears witness to a discussion within the theatre company before the book is presented to the censor. After all, later mentions of France are all duly deleted and corrected. It is more likely that the interaction between the grey and red pencil takes place when performances of Schröder's *Lear*-version are revived years after the occupation: twelve additional performances between

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25 Hamburg, Stabi, Theater-Bibliothek, 2029 (*König Lear. Ein Trauerspiel in fünf Aufzügen. Nach Shakespear*), p. 110 (fols 58[v] and 59[r]).

1816 and 1823 are known of.[26] The red pencil suggests changing Burgundy back to France; the grey pencil disagrees and looks to have gained the upper hand – as it is then displayed in the rest of the prompt book.

Nevertheless, the initial change from France to Burgundy on pp. 2 and 4 might be an initial suggestion by the theatre for the censor. This suggestion would then be taken up by him and continuously demanded for some of the additional pages that are listed at the end of the book. After taking out the references to France and England, most of the other numbers refer to pages containing passages of a seditious nature. On p. 11 old Gloster's long monologue about a perceived deterioration of politics and private morals is cut altogether, whether by the hand of the censor or by a hand within the theatre company: 'in Städten Empörung, in Provinzen Zwietracht, in Pallästen Verrätherey' ('in cities, mutinies; in countries, discord; in palaces, treason').[27] Traces of red varnish in the middle of the page indicate that a piece of paper had been glued over parts of the passage. Gluing pieces of paper over existing passages (and folding them in in case they were bigger than the page) or sometimes attaching them with needles was a common amendment practice to offer an alternative, more adequate text. It is found in a great number of books in the Theater-Bibliothek collection: in the handwritten prompt book for *Die Sonnen-Jungfrau* (mentioned in the beginning) nine pieces of extra paper (most of the same type and by the same hand) are sometimes glued and sometimes pinned on and then folded into the more than 90 folios.[28] (After the print publication of Kotzebue's play in 1791 the earlier abridged 1790 stage adaptation is enriched with some of the very parts that had been cut out in the first place.) In the case of the French period *Lear* the addition was removed at some point, probably after the end of the occupation (see Fig. 5). However, the deletion underneath stands; it still fitted in smoothly with the deference to authority in the post-Napoleonic era.

Changes of a similar formal and content-related kind are added with a similar writing tool throughout the prompt book on pages not being singled out by the censor. In his 1778 version, Schröder had already transferred the passage deemed most scandalous in the eighteenth century backstage: this is where the brutal blinding of old Gloster now takes place.[29] The respective passages on pp. 70

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26 <htttp:www.stadttheater.uni-hamburg.de> lists two in performances in 1816, five in 1817, one in 1818, two in 1819 and one each in 1822 and 1823.

27 Hamburg, Stabi, Theater-Bibliothek, 2029, p. 11 (fol. 9^v).

28 Cf. Hamburg, Stabi, Theater-Bibliothek, 1460 (*Die Sonnen-Jungfrau*), fols 31^r, 48^v, 65^v, 66^v, 69^v, 74^r, 79^r, 92^v, 93^v.

29 Hamburg, Stabi, Theater-Bibliothek, 2029, p. 70–71 (fols 38^v and 39^r); cf. Wimsatt 1960, 98.

and 71 are surrounded by a box drawn in the same ink as the other corrections. There is a strikethrough from top left to bottom right indicating a complete deletion of the respective scene. Here, the treason in palaces lamented earlier is in full bloom: not only is the character of Gloster brutalized by a fellow nobleman in his own home, in turn, the perpetrator is then attacked by a defiant subordinate. Either the theatre company already presented a domesticated version to the censor – in that case, there would have been no need to reference the pages – or the censor himself provided the deletion of that which is clearly unacceptable. The brown ink makes both possibilities valid. Notably, the deletion was not reversed after the occupation except for one minor sentence. On the contrary, the aforementioned red and grey pencils are also at work on these pages with the latter tending to affirm and add deletions.

In the case of the Hamburg *King Lear*, a restriction of individual and artistic freedom seems to have started not with the reconstruction of the old European order after 1815 but with Napoleon's reintroduction of censorship. The various hands that interact within the promptbook in a multilayered fashion all work together towards the same goal: an even less brutal and inflammatory version than the already rather tame one staged in Hamburg since 1778. The hand that changes the name of France into that of Burgundy also accounts for an artistic choice that is in no way related to the necessities of censorship: the parts of the spouses Goneril, Lear's power-hungry daughter, and the Duke of Albany, her well-meaning husband, are heavily reworked (by Schröder's own hand). Goneril's part is trimmed down in size. Albany's lines that, like the adaptation as a whole, are based on the prose translations prevalent in the 1770s are now interjected with parts of the new early nineteenth-century romantic metric translations.[30] As a result, Shakespeare's complex full-fledged characters, which Schröder's version at least partially captured, are reduced to clear-cut types of evil (woman) and good (man). But while the content of the *King Lear*-play was simplified in the process of censorship and beyond, the process itself puts a complex scene of multiple hands on display: these interfere into a print as well as interact within this print which the dynamics of the censorship procedure have unintentionally turned into a unique written artefact.

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30 Added and changed passages in Albany's parts are taken from the younger Voss metric translation in Shakespeare 1806. Voss makes use of the new metric approach to translating Shakespeare as established by August Wilhelm Schlegel in the 1790s. A *King Lear*-translation in what would later become the standard Schlegel and Tieck-edition was not published until the late 1830s.

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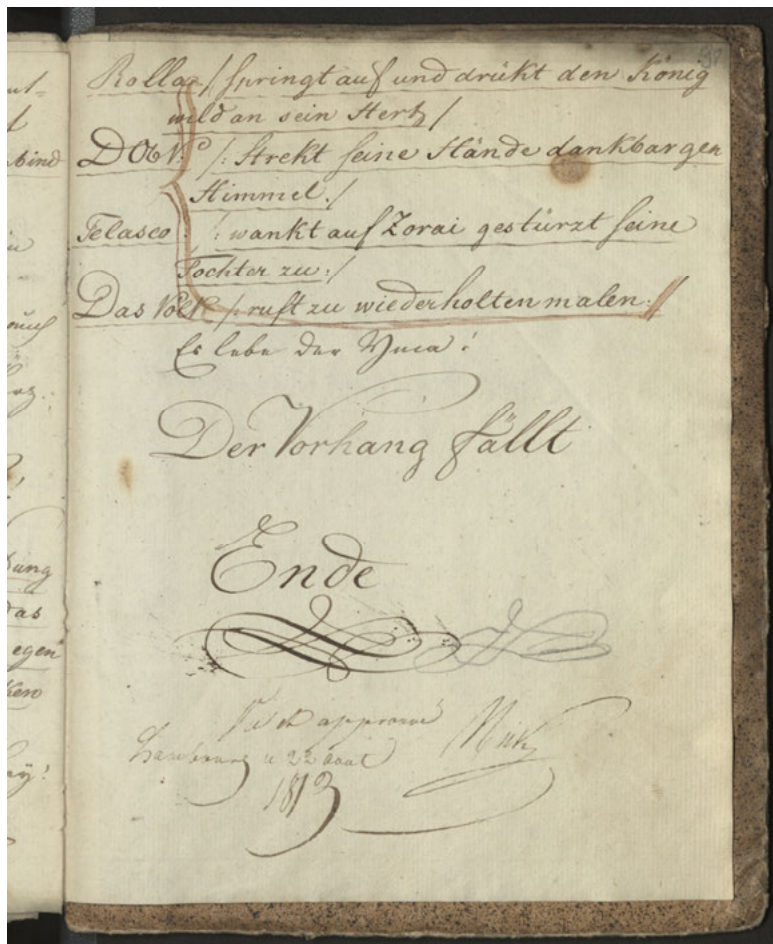
Fig. 1: Hamburg, Stabi, Theater-Bibliothek, 1460 (*Die Sonnen-Jungfrau. Schauspiel in fünf Aufzügen*), fol. 98ʳ. Censorship notes at the end of prompt book of August von Kotzbue *Die Sonnen Jungfrau* (first performed in Hamburg in 1790, censorship note from 1813). © Staats- und Universitätsbibliothek Hamburg.
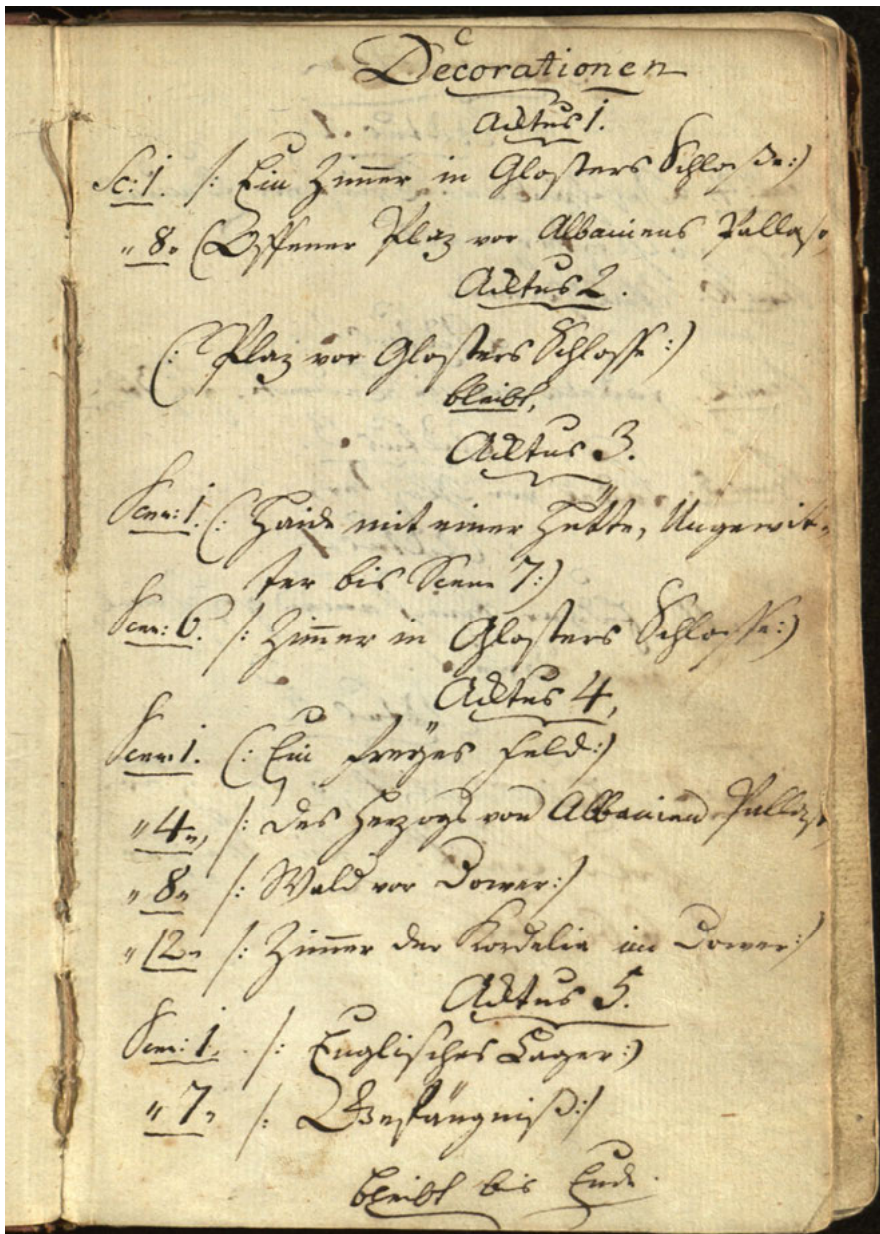
Fig. 2: Hamburg, Stabi, Theater-Bibliothek, 2029, fol. 2^{r-v}. Set and cast list in prompt book of William Shakespeare's *König Lear* based on a print of Friedrich Ludwig Schröder's 1778 adaptation (censorship note presumably from 1812). © Staats- und Universitätsbibliothek Hamburg. **Fig. 2a:** fol. 2^r.

Fig. 2b: fol. 2ᵛ.

Fig. 3: Hamburg, Stabi, Theater-Bibliothek, 2029, p. 110 (fols 58ᵛ and 59ʳ). Censorship note and reference to pages with objectionable content. © Staats- und Universitätsbibliothek Hamburg.
Fig. 3a: fol. 58ᵛ.
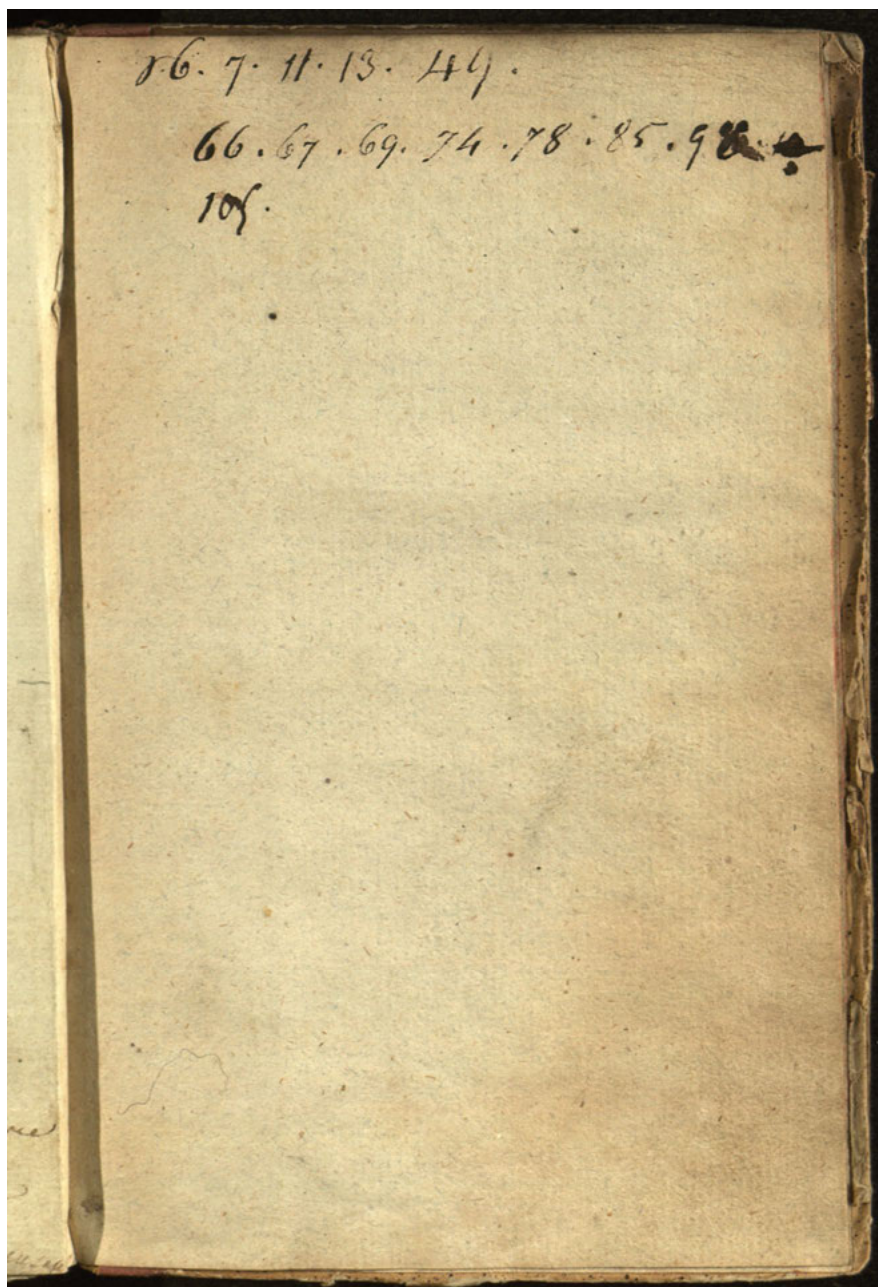
Fig. 3b: fol. 59ʳ.
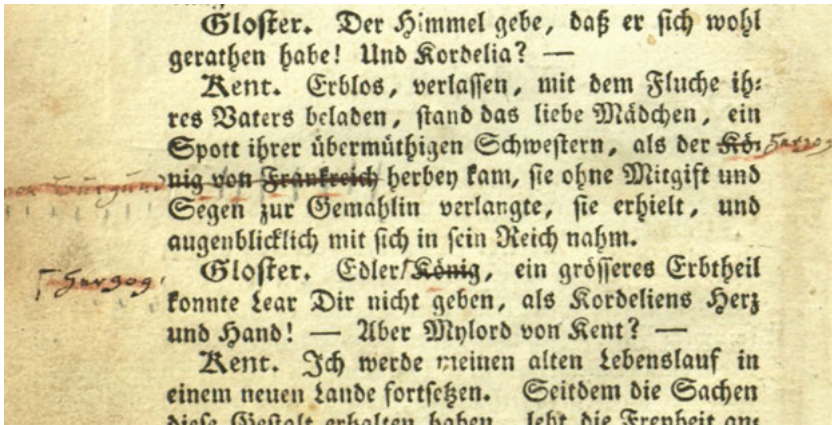
Fig. 4: Hamburg, Stabi, Theater-Bibliothek, 2029, p. 4 (fol. 5ᵛ). Corrections and retractions by multiple hands/writing tools. © Staats- und Universitätsbibliothek Hamburg.
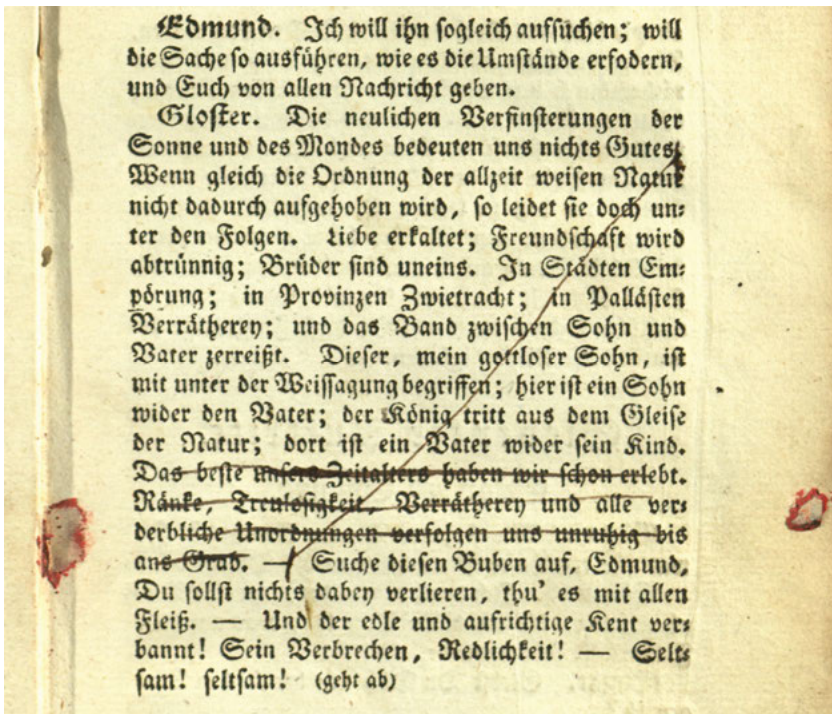
Fig. 5: Hamburg, Stabi, Theater-Bibliothek, 2029, p. 11 (fol. 9ᵛ). Corrections and traces of red varnish. © Staats- und Universitätsbibliothek Hamburg.

Paola Buzi

The Unusual Story of a Wandering Book and its Physical Metamorphosis

Abstract: Manuscripts are movable objects and colophons normally represent the most efficient means of tracing the paths taken by a book during its (sometimes) extended life. This short article deals with an unusual case of a manuscript and of the work it contains, whose itinerant life is narrated by a long and extraordinary title that provides surprising technical details about the book form, the writing material, and the historical events surrounding it.

About twenty years ago, I came across a title attributed to a homily – the Sahidic version of the *Life of Maximus and Domitius* (CC 0323) –, which was unusual in respect of its length and content.[1] At that time, I was greatly interested in the cultural phenomenon of the creation of new long (sometimes extremely long) titles attributed to old works, in order to actualize literary creations that had been written centuries before. Such a phenomenon led the Copts, between the eighth and the ninth centuries, to re-think their entire literary production, discarding what had become old-fashioned and re-shaping, also by means of titles, what was perceived to be still useful. My interest was so focused on that aspect and on the consequent classification of titles in categories,[2] according to their length and combination of *formulae*, that I noticed only superficially the other elements of interest of that exceptional title.

Thus, I believe that it is useful to briefly go back to the content of that title, which tells of the itinerant life of a manuscript (and the work it contains), with a series of unusual technical details – at least for the Coptic tradition – related to its tradition.[3]

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1 Buzi 2001.

2 Buzi 2004; Buzi 2005.

3 If today I am able to see beyond, this is also due to Michael Friedrich and the stimulating series of cultural initiatives that he has organized and promoted within the activities of the Centre for the Study of Manuscript Cultures, having at its core the *manuscript*, in all its possible forms and in its indivisible dual nature of physical object and intellectual product. The first time that I was invited at to CSMC as a speaker was at the conference *One-Volume Libraries: Composite Manuscripts and Multiple Text Manuscripts* (October 2010), whose results were later published in Friedrich and Schwarke 2016. At that time, I had little experience with the material

1 The Sahidic title of the *Life of Maximus and Domitius*

As is well known, books are movable objects. They may change their owner or simply can be produced in a place, to be later given or, as a result of a purchase, transferred to another place.[4] Colophons can often help to follow the itinerant life of books, also by virtue of their documentary nature, providing a series of sociological, devotional and historical data. Titles, on the other hand, do not do this, despite the fact that Coptic titles are sometimes extremely long and, compared to other Christian oriental manuscript cultures, unusually rich in information.

The title attributed to the Sahidic version of the *Life of Maximus and Domitius* is an exception. This work is preserved by two semi-complete codices, one in Sahidic,[5] from the Fayyūm, and one in Bohairic,[6] from Scetis (Wādī el-Naṭrūn), and two very fragmentary manuscripts, both in Sahidic and from the White Monastery.[7] It is the title of the Sahidic semi-complete codex that is of interest to us here.[8]

Found in 1910 in the archaeological remains of the Monastery of the Archangel Michael, near present-day Hamūli, the original codex, datable between

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aspects of Coptic books, since my main research interests ranged from Coptic literature to late antique Egyptian archaeology. I can honestly say that that experience, together with the participation in the networking project *Comparative Oriental Manuscript Studies*, opened up a new world to me.

4 If one does not want to mention here the well-known phenomenon of the codices that were produced at Touton (Fayyūm) for the White Monastery (Emmel 2005, 63–70: 66; Nakano 2006, 147–159), a remarkable example of the itinerant life of a manuscript is represented by CLM 1 = CMCL.AA, a Bohairic-Arabic manuscript, which was manufactured in the Wādī el-Naṭrūn, but stored in Babylon (Cairo), from 1398, as the Arabic note (not a real colophon in fact) of Matthew, patriarch of Alexandria, attests (Vat. copt. 2, fol. v[r]). The original codicological unit is now divided into three shelf marks: Vatican City, Biblioteca Apostolica Vaticana, Vat. copt. 2, 3, and 4; <https://atlas.paths-erc.eu/manuscripts/1>. All websites quoted in this article were accessed on 19 May 2021.

5 CLM 240 = MICH.BO.

6 Vatican City, BAV, Vat. copt. 67.2, fols 34–68 = CLM 143 = MACA.DH, second half of the tenth century.

7 London, British Library, Or. 3581B, fols 55–56 = CLM 1855 and London, British Library, Or. 6954, fol. 52 = CLM 1856.

8 Depuydt 1993, 332-335 (no. 165), 627-628 (no. 412).

the ninth and the first half of the following century, is now dismembered in five shelf marks, and preserved in four different institutions:[9]

– New York, Morgan Library and Museum, M.584: 20 leaves.[10]
– Cairo, Coptic Museum, MS 3818: 4 leaves (hereafter CCa).
– Cairo, Coptic Museum, MS 3814: 23 leaves (hereafter CCb).
– Cairo, Coptic Museum, MS 3817 (lower cover).[11]
– Strasbourg, Bibliothèque nationale et universitaire, MS 583 (a single leaf).

While the Bohairic title consists of a simple, though long summary of the plot of the homily,[12] the Sahidic one[13] contains several intriguing additions that do not have anything to do with the content of the work, but rather with its daring tradition:[14]

> Subject (ϩⲩⲡⲟⲑⲉⲥⲓⲥ)[15] of the life of the Roman saints Maximus and Domitius, sons of Valentinus, emperor of the Romans, who completed a good life full of all virtues and who also fulfilled at all the commands of the Gospels. The one died on the 14th of the month Tōbe, the other on the 17th of the same month. It was recounted by *Apa* Pshoi of

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9 For more details about the codicological description of this codex, see the record compiled by Francesco Valerio and Eliana Dal Sasso for the *Archaeological Atlas of Coptic Literature*: <https://atlas.paths-erc.eu/manuscripts/240>.

10 It was purchased in Paris in 1911 for Pierpont Morgan from Arthur Sambon, a dealer acting on behalf of a consortium of owners including a certain J. Kalebdian, and later restored and rebound in the Apostolic Vatican Library in the early 1920s.

11 CCa, CCb and MS 3817 were acquired by the Egyptian Museum in Cairo, where they were given the inventory numbers of the Journal d'Entrée in 1923, and transferred to the Coptic Museum in 1939. In the CMCL database, CCb is dealt with as a separate codicological unit, not as a part of MICH.BO = CLM 240, while MS 3817 is not included. CCb fol. 1 was eventually transferred to the Museum in Port Said (Egypt), where it bears the call number 3957A.

12 'The life of the Roman saints Maximus and Domitius, sons of Valentinus, emperor of the Romans, who completed a good life full of all virtues and who, during it, also fulfilled all the commands of the Gospels. One, Maximus, died on the 14th of the month Tōbe, the other, Domitius, on the 17th of the same month. It was recounted by Apa Pshoi of Constantinople, the first deacon who lived in Shiet (Scetis) with *Apa* Macarius, man of God, and *Apa* Isidoros who died a deacon. *Apa* Moses the Ethiopian was appointed in his place. *Apa* Pshoi wrote the life of the saints as a memorial and he left it in the church as a benefit for all those who wanted to live in accordance with God. Amen'.

13 <https://atlas.paths-erc.eu/titles/287>.

14 In italics, the passages that are analysed more in detail in these pages. On the relation of paratext/paracontent see Ciotti et al. 2018, <https://www.manuscript-cultures.uni-hamburg.de/papers/CSMC_Occasional_Paper_6_TNT.pdf>. On the concept of paratext see also Andrist 2018.

15 For a reflection on the meaning of this unusual term that is used to define the literary genre the work belongs to, see Buzi 2001, 525–526.

Constantinople, the first deacon who lived with *Apa* Macarius, a man of God, and *Apa* Isidorus. He died as a deacon. *Apa* Moses the Ethiopian was appointed in his place. Pshoi wrote the life of the saints *on a papyrus roll* (ⲉⲩⲗⲟⲙⲟⲥ ⲛ̄ⲭⲁⲣⲧⲏⲥ). He left it in the church as a benefit and a memorial, for all readers, of a beautiful way of life in accordance with God and with virtue, for he met with them for some days while they were still alive when he came to Scetis. When Scetis had been laid waste by the Mastikoi, *Apa* Isidorus took it with him to Alexandria to the Xenon. He spoke about the life of those saints and about his great zeal for them. It then remained there until the time of *Apa* Khael, the most holy archbishop of Alexandria. It was brought to light by a deacon named Eustatios, who had found it in *a large storage box of parchment books written in quaternions* (ⲟⲩⲛⲟϭ ⲛ̄ⲑⲏⲕⲉ ⲛ̄ⲭⲱⲱⲙⲉ ⲛ̄ⲁⲡⲁⲥ ⲉϥⲥⲏϩ ⲉϩⲉⲛⲧⲉⲧⲣⲁⲥ ⲛ̄ⲭⲱⲱⲙⲉ ⲙ̄ⲙⲉⲙⲃⲣⲁⲛⲟⲛ),[16] when he was looking *among books that might have deteriorated over time* (ⲛ̄ⲭⲱⲱⲙⲉ ⲛ̄ⲧⲁⲩⲣ ϩⲟⲟⲗⲉ ⲉⲧⲃⲉ ⲡⲉⲭⲣⲟⲛⲟⲥ), for he was a servant of God. He then met a monk living in the Ennaton, who was from Scetis, and gave it to him. This is the way in which the life of those perfect saints of God was revealed. For the glory of our Lord Jesus Christ. In God's peace. Amen.

If the mention of the act of leaving a work 'in the church as a benefit and a memorial', a model for a correct and pious life, is a recurring element in Coptic literature,[17] all the other technical and bibliological details represent an *unicum*, not only in titles but also in other paratexts, such as colophons.

One may think that these details are completely fictional, a pure exercise of fantasy to make the reading of the work more appealing, but this is not the type of narrative feature that the authors of titles normally used to attract readers' or listeners' attention. In those cases, they rather made use of additional – compared to the content of the work – biographical details, reports of long series of

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16 Depuydt renders the term ⲧⲉⲧⲣⲁⲥ with 'in quarto': 'in a large storage box of old parchment books written in quarto', or alternatively 'in a large storage box of old books, written on parchment quires in fours'. I am inclined to exclude the first translation. The Greek *lemmata* τετράδες/τετράδα are also generically used for quires. See, purely by way of example, the colophon of the parchment codex Athena, EBE, 56 (GA 773), fol. 1ʳ, which contains a *Tetraevangelium*: '[...] This venerable and divine book of the Gospels contains thirty-six quaternions in all, with the exception of the guard leaves and those glued to the plates' (von Dobschütz 1925, 280–284; Marava-Chatzinicolaou and Toufexi-Paschou 1978, 17–26, no. 1; this colophon is being studied by Francesco Valerio within the article for the proceedings of the fourth PAThs conference, 'Christian Oriental Colophons: A Structural Analysis': <http://paths.uniroma1.it/i-colofoni-cristiani-orientali-per-un-analisi-strutturale>). For the meaning of 'quaternion' see Lampe 1916, 1391. In fact, a quaternion is the quire *par excellence*. It should be stressed that the Coptic sentence is redundant, the term ⲛ̄ⲭⲱⲱⲙⲉ ('books') being repeated twice, in relation to the storage box ('a storage box of old books') and the writing support ('parchment books written in quires'). What is proposed here is a simplified translation, respectful of the general sense.

17 It appears, for instance, in the *Life of Onophrius* (CC 0254).

miraculous events, or, above all in martyrdoms, even lurid details about the death of the protagonists.[18]

Moreover, it appears very clear that this initial title is composed of an original narrative nucleus – that is almost identical in the Bohairic version –[19] plus an *additamentum* that the author of the Sahidic title considered relevant for the appreciation, not only of the content of work, but also of the efforts spent to preserve it.

It is important to stress that the characters (*Apa* Pshoi,[20] *Apa* Macarius of Scetis, *Apa* Isidorus the deacon, *Apa* Moses the Ethiopian,[21] the emperor 'Valentinus', in fact Valentinianus I [364–375]) and the historical events (the sack of the barbarian people named Mastikoi/Mazikoi/Mastiques, the presence of welfare structures in Alexandria)[22] mentioned in the title, are real and

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18 A different textual phenomenon is the *topos* of the finding of an ancient venerable book, related to the apostolic tradition. Coptic literature preserves several examples of this phenomenon, such as the so-called *Institutio Abbaton* (CC 0405), whose title reads: 'An encomium which Apa Timothy, archbishop of Rakote (Alexandria), our holy father, who was glorious in all ways, delivered on the making of Abbaton, the angel of death. Our holy fathers the Apostles asked the Saviour about the (Abbaton), so that they might be able to preach about him to mankind, for they knew that men would ask them questions about everything. And the Saviour, who did not wish to disappoint them about any matter concerning which they asked questions, informed them, saying "the day on which my father created Abbaton was the 14th day of the month Hathōr, and he made him king over all creations, which he had made, because of the transgression of Adam and Eve". And the archbishop wishing to learn about this fearful and terrifying being whom God made, and who pursuits every soul until it yields up its spirit in misery, when he went into Jerusalem to worship the Cross of our Saviour and his life-giving tomb, on the 17th day of the month Thoout, searched through the books which were in the library of Jerusalem, and which had been made by our holy fathers the Apostles, and deposited by them therein, until he discovered (the account of) the creation of Abbaton, with an aged elder, who was a native of Jerusalem. When one asked him what was the occasion for the discourse he had forgotten what it was. And he spoke also on the holy apostle Saint John, theologian and virgin, who is not to taste death until the thrones are set in the valley of Josaphat, which is the place wherein the last strife of the world shall take place. In God's peace. Amen'. See also Piovanelli 1993, 25–64 and above all Piovanelli 2000, 265–282, on the case of the prologue of the *Apocalypse of Paul*.
19 See above n. 12.
20 In fact, if *Apa* Pshoi of Scetis is easily identifiable, more complex is the problem of identification of Pshoi of Constantinople, who as such is probably a fictional character, inspired by a real person. For these aspects see Buzi 2001, 527–535. See also Coquin 1991, VI, 2028–2030.
21 *Apa* Moses is said to have fallen victim to the Mazikoi in 407. Palladius, *Historia Lausiaca*, 19.1.
22 On this Libyan tribe, which periodically was responsible for attacks and sacks, above all in the Western oases, killing and enslaving the Egyptian inhabitants of both villages and

undoubtedly refer to the second half of the fourth century or to the beginning of the fifth. More ephemeral are of course the protagonists, Maximus and Domitius – on whose tomb would have been built a little church, first nucleus of the Monastery of the Romans,[23] one of the monastic communities of the Wādī el-Naṭrūn, where most of the narrative is set – but this is part of the fiction of the literary genre of *bioi*.

2 The account of the itinerant life of the work and its value

One of the most striking passages of the second part of our title is the clarification that Pshoi wrote the *Life* of the saints on a papyrus roll (ⲗⲟⲙⲟⲥ ⲛ̅ⲭⲁⲣⲧⲏⲥ),[24] a book form that might appear surprising for a manuscript culture whose main bibliological product is the codex, but that now – in the light of a systematic census of the book forms of Coptic literary tradition – sounds perfectly credible. Thirteen horizontal rolls[25] and twelve vertical rolls (or *rotuli*)[26] are currently known, without taking into consideration those used for documentary texts, which are much more numerous.

All the extant literary rolls are datable between the fourth and the beginning of the sixth centuries, therefore the information provided by the title is certainly credible. It is not specified whether or not the *Life of Maximus and Domitius* was the only work contained in the roll, but this is very likely.

According to the title, when the Wādī el-Naṭrūn was looted and devastated by the Mazikoi, during one of their periodical incursions, *Apa* Isidorus would have brought the book to the 'Xenon'.

The term surely refers to a *xeneôn* or *xenodokheion*, an institution used for the purposes of accommodating and giving assistance to disadvantaged people,

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monasteries, see Modéran 2003, 88, 89, 93, 99, 102, 119, 154, 162 (n.), 167, 168 (the map 'La migration vers l'Orient des Maziques et des Ausuriens entre 398 et 412–413 selon D. Roques'), 170, 172, 187 (n.), 192 (n.), 218, 266–267, 340 (n.), 454, 467 (n.), 468, 482, 579, 649–650, 729, 778 (n.). See also Boozer 2013, 275–292.

23 Toward the end of the *Life of Maximus and Domitius*, we read: 'After that Macarius the Great spoke in the church, saying: "Call this place quarter (ⲣⲁⲅⲏ) of the Romans"'.

24 For the meaning of ⲗⲟⲙⲟⲥ as 'roll' see Lampe 1961, 1396 and Liddell and Scott 1968. See also, for example among the several cases, PSI 10.1146.1 (second century CE).

25 <https://atlas.paths-erc.eu/search/manuscripts/saved?q=horizontal_rolls>.

26 <https://atlas.paths-erc.eu/search/manuscripts/saved?q=vertical_rolls>.

mainly foreign, as the etymology suggests (cf. *hospitium*). *Xenodokheia* ('places where foreigners are assisted') and *ptôkeia/ptôkhotropheia* ('places where the poor are fed') were already present in all the *metropoleis* of the Christian East in the first half of the fourth century. From a juridical point of view, they were private foundations directly controlled by the bishop, and therefore they represented his ability to be effective in managing philanthropic and charitable works, constituting a direct reflection of his power. Such organization of the assistance activities is a direct legacy of the practices and values of the ruling class of Roman and Byzantine societies, echoing the *forma mentis* of the traditional elite, which expressed its prestige also by means of *leitourgiai*, more or less mandatory.[27]

We know with certainty that Alexandria at the time of archbishop Teophilus (384–412) already had a *ptôkheion* and a *xenodokheion*, and also that Isidoros – very likely the same Isidorus mentioned in our title – was '*xenochos*, and a close collaborator of Theophilus. After using him on various occasions, Theophilus condemned him to leave Egypt (in 402)'.[28]

This means that the transfer of the manuscript from Scetis to Alexandria must have happened before the conflict between Isidorus and Theophilus and his subsequent exile. What is more interesting, however, is that our title seems to suggest that these types of institution have also had a (sort of) library, a fact that, as far as I know, was not otherwise known. Since this detail – the transfer of a book to a *xenodokheion* – is not at all obvious – on the contrary it is very surprising –, I would be inclined to take it seriously into account.

We then learn that the manuscript 'remained there until the time of *Apa* Khael', very likely to be identified with Michael I (743–767), who was from the Monastery of St Macarius (Scetis). During his long patriarchate, while stemming the harassment of the Islamic governor, he was able to keep control over the shrine of St Menas (against the Chalcedonians) and to restore the church of St Mark in Alexandria. He was thrown into prison by ʿAbd al-Mālik ibn Marwān, when he discovered that Michael had contacts with the new king of Dongola,

27 Fatti 2003a, 257-296: 260–261. See also the unpublished PhD dissertation, Fatti 2001, Calderini 1935, I, 138 ('Alessandria'); Martin 1996, 728; Hass 1997, 253 and 393 (n. 72); Wipszycka 2016, 248–250. Still valid, although not recent, is Constantelos 1968.
28 Wipszycka 2016, 248, who also discusses his relationship with Palladius. See also Sozomen, *HE* 8.12. For the reconstruction of the life of Isidorus see Fatti 2003b, 283–435 and Fatti 2006, 105–139.

Cyriacus, a fact that might lie behind the epithet of 'the most holy archbishop' used in the title.[29]

Later – but it is not specified when – a deacon named Eustatios found it in

'a large storage box of old parchment books written in quaternions (ογνοϭ ⲛⲑⲏⲕⲉ ⲛⲭⲱⲱⲙⲉ ⲛⲁⲡⲁⲥ ⲉϥⲥⲏϩ ⲉϩⲉⲛⲧⲉⲧⲣⲁⲥ ⲛⲭⲱⲱⲙⲉ ⲙⲙⲉⲙⲃⲣⲁⲛⲟⲛ), when he was looking among books that might have deteriorated over time (ⲛⲭⲱⲱⲙⲉ ⲛⲧⲁγⲣ ϩⲟⲟⲗⲉ ⲉⲧⲃⲉ ⲡⲉⲭⲣⲟⲛⲟⲥ)'.

On the basis of this sentence it seems safe to deduce that our manuscript would have remained for some time in a sort of limbo, with other books, old parchment codices, which had probably deteriorated due to the prolonged use. Eustatios seems to be in charge of the restoration of old books. It is not specified, however, if between the moment in which the *Life of Maximus and Domitius* reached the 'Xenon' and its discovery – certainly post mid-eighth century –, its book form changed, moving from a papyrus roll to a parchment codex, although it is plausible.

Restoration activities are never mentioned in other titles and also seem to be extremely rare in Coptic colophons. The only colophon that I know which mentions a restoration is that of Oxford, Bodleian Library, Clarendon Press, B40.1-2,[30] which reads:

[...] this restoration Basil(ios) a Scriptures (ⲅⲣⲁⲫⲏ/γραφή)-lover, which wants that everyone could dedicate himself (to it), for this reason he restored (ⲥγⲛϩⲓⲥⲧⲁ/συνιστᾶν) this book after that it deteriorated.[31]

Eustatios later met 'a monk living in the Ennaton, who was from Scetis, and gave it to him. This is the way in which the life of those perfect saints of God was revealed'.

The Enaton/Ennaton is the famous monastery – or better, ensemble of monastic establishments, which however constituted a unique complex –, located on the strip separating the Mediterranean coast and the lake Mareotis, nine miles west of Alexandria, according to its etymology, on the way to the sanctuary

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29 Swanson 2010, 19–21; Elli 2003, II, 31–39. The identification of Khael with Michael II (849–851), who occupied the patriarchal seat for sixteen months is less probable because of the ephemeral nature of the historical figure and, above all, due to the fact that, in the opinion of the author of these pages, our title is older than the mid-ninth century.

30 CLM 4196.

31 Edition and translation by Agostino Soldati. See also van Lantschoot 1929, 126–127, no. lxxvi.

of St Menas.[32] Also known in Arabic as 'Monastery of the glass' or 'Monastery of the glass maker', the Ennaton was certainly a rich community, since it could take advantage of the economic activities taking place on both the sea and the lagoon.[33]

It is not clear from the title if the book was moved to the Ennaton or if it is in Alexandria that Eustatios met the monk who lived in the Ennaton. The important fact, however, is that Eustatios is from Scetis and therefore thanks to this circumstance the circle closes: the *Life of Maximus and Domitius* – and the book that bears it – could go back to the place where it had been written by Pshoi.

The title which we are discussing and the related codex, however, are not from Scetis, but from the Fayyūm, and in particular from the Monastery of the Archangel Michael at Phantoou, as we said. Moreover, the codex also contains another work, that is the *Martyrdom of Theodore the Anatolian* (CC 0437), which means that, admitting that our title tells a true story – as I am inclined to think, because of the richness of historical and bibliological details that are not in the least obvious and appear to be based to a great extent on reality –, what we have is a codex derived from an *antigraphon*, very likely written in Scetis or making use of documents related to that milieu. The copyist operating in the Fayyūm must have found it so interesting that he decided to keep it, although all its unusual elements refer to another monastic context, that of the Wādī el-Naṭrūn. Does this mean that the Fayyūmic Monastery of the Archangel Michael used book models from Scetis? We cannot say it with certainty. If this hypothesis were correct, it would remain to be explained, however, why the Bohairic title, contained in a codex from the Monastery of St Macarius, in the Wādī el-Naṭrūn itself, does not include these narrative elements. It is possible to surmise that the title of the Bohairic version is an older product, but this is not a very convincing hypothesis.

Yet, there is another possibility: the copyist operating in the Fayyūm could be the creator of the title – a fact that would be corroborated by the style and structure of several other long titles found in the codices from the Monastery of the Archangel Michael.[34] In this case the author would have been interested not so much in the events related to Scetis – in fact already contained in the original

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32 Other famous monastic centres of the Mediterranean coast were the Pempton, the Oktokai-dekaton and the Metanoia.

33 Gascou 1991, 954–958; Goehring 2018, 538. On the problem of the location of the monastery and for a rich bibliography related to its history and socio-political role, see Ghattas 2017, 37–47. See also <https://atlas.paths-erc.eu/places/118>.

34 Titles belonging to the categories named 'complex structure titles' and 'extended complex structure titles'.

nucleus of the title – as in those relating to Alexandria and its surroundings, events that he may have reconstructed on the basis of official or semi-official documentation, as the mention of Isidorus, the 'Xenon' of Alexandria and bishop Khael seem to demonstrate.

To conclude this brief reflection on an unusual story of a wandering book (Fig. 1) narrated by an exceptional title, it is important to stress that, even if the second part of the title was the fruit of a vivid imagination or a fictional construction, the historical knowledge of the author – because, of course, the creator of the title is an author himself – and his consciousness of the technological aspects of books and their metamorphoses over the centuries remain significant facts.

Acknowledgements

Abbreviations

The following abbreviations and IDs are used in this article:

CC	*Clavis Coptica* or *Clavis Patrum Copticorum* (the complete census of all Coptic literary works available online at <www.cmcl.it/~cmcl/chiam_clavis.html>, and <https://atlas.paths-erc.eu/works>)
CLM	Coptic Literary Manuscript (unique identifier of Coptic literary manuscripts attributed within the framework of the PAThs project and freely available online at <https://atlas.paths-erc.eu/manuscripts>).

It is important to stress that, although other IDs were available for Coptic manuscripts, the introduction and systematic use of a CLM ID has become necessary because PAThs is currently the most exhaustive database of literary codicological units (<https://atlas.paths-erc.eu/manuscripts>). All the other existing ones, including CMCL, Trismegistos, LDAB and the List of Coptic Biblical Manuscripts, are of course extremely useful, but they refer to a more limited time span or focus on specific categories of manuscripts. In any case, they are always mentioned in the PAThs database, when available.

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Fig. 1: The stages of the original manuscript of the *Life of Maximus and Domitius* according to the Sahidic title. Map elaborated by Paolo Rosati, PAThs Team (October 2020).

Uta Lauer

Joint Forces: A Handscroll by Zhao Mengfu and Guan Daosheng

Abstract: The scroll opens with undated paintings of orchid, rock and bamboo by Guan Daosheng (1262–1319) and her husband Zhao Mengfu (1254–1322), followed by seventeen colophons by eminent men of letters of the fourteenth and fifteenth centuries. A particularly noteworthy point is, that two of the colophon authors wrote in place of each other, in their respective calligraphy styles. The joints of the individual sheets of paper bear the seals of the art collector An Qi (1683 – *c.* 1745). The handscroll is recorded in two eighteenth-century catalogues. The scroll invites questions as to authorship, different hands, dating, format, collecting, recording, copying, mounting and archiving – all research areas which lie at the heart of the study of manuscripts.

1 Introduction

This paper is a case study of a handscroll composed of two paintings, one by the Yuan period (1279–1368) painter Zhao Mengfu 趙孟頫 (1254–1322) of an orchid and rock (Fig. 1), one by his wife Guan Daosheng 管道昇 (1262–1319) of bamboo (Fig. 2), followed by seventeen colophons and imprinted with sixty-seven seals. The format is a handscroll with ink on paper, 35.5 × 238.6 cm, belonging to a private collection, and goes by the title *Orchid, Rock and Bamboo*. Questions pertaining to this scroll include the different titles under which it is recorded, the joining of two separate paintings into one single handscroll, the history of the scroll according to the colophons and seals, the unsettling claim by one collector that some colophon authors wrote in place of each other and in the handwriting of each other, annotation marks in colophons, the placement of seal impressions at the joint of two sheets of paper and at the beginning and end of the handscroll, and finally the description of the scroll in secondary texts.

2 Material description

The outer wrapping consists of a slightly damaged piece of decorated brocade[1] on which a paper title slip[2] is pasted. A jade fastener with engraved clouds is attached to the burgundy and beige cord[3] at the beginning of the handscroll. Inside, the scroll opens with a blank sheet of paper as a frontispiece, followed by a panel of mounting silk.[4] Pasted on this mounting silk is a paper label slip.[5] The ink painting of an orchid and rock is signed to the middle right by the artist and bears one of his seals.[6] There are several collector's seals[7] imprinted at the beginning of the painting. Painted on a separate sheet of paper follows a picture of a bamboo branch in ink, signed by the artist and impressed with one of her seals[8] at the lower left of the painting, followed by several collector's seals after the painting. At the joint of the two sheets of paper with the paintings are two seals.[9] After the paintings, there is another panel of mounting silk of the same type as the one before the paintings. Five sheets of a similar, slightly yellowish paper bearing the colophons make up the remainder of this scroll, concluding with a final sixth sheet of white paper with no colophons, only seals.

3 Different titles

There are no titles given on the two paintings proper, only signature and seal of the artists. The outer label slip by an unknown collector reads:

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1 The motives on the brocade are butterfly, flowers, bamboo leaves and possibly pine against an abstract wave pattern.
2 Twelve characters in standard script (*kaishu* 楷書) reading: *Zhao Mengfu, Guan Daosheng, lan zhu hebi, yi bu* 趙孟頫管道昇蘭竹合璧 乙部.
3 The motives on the cord are a pattern made up of lozenges and another of a swastika and a square.
4 The motif on the mounting silk is a phoenix-and-cloud pattern.
5 Sixteen characters in semi cursive/standard (*xingkaishu* 行楷書) script reading: *Yuan, Zhao Wenming gong, Weiguo furen, hui zhu hezuo, Erya cang* 元趙文敏公魏國夫人 惠竹合作 爾雅藏.
6 Signature *Zi'ang* 子昂; seal *Zhao shi Zi'ang* 趙氏子昂, square relief.
7 The majority of the seals will be discussed in detail later in this paper.
8 Signature *Zhongji xi bi* 仲姬戲筆; seal *Guan shi Zhongji* 管氏仲姬, square intaglio.
9 Top seal *Ke shi Jing'an* 柯氏敬仲, square relief; bottom seal *Jing'an* 敬菴, square relief.

趙孟頫管道昇蘭竹合璧乙部

Zhao Mengfu, Guan Daosheng, *Orchid and Bamboo*, joint [halves of a] Bi-disc,[10] yi section.[11]

A second label strip mounted on the silk panel provides a slightly different title:

元趙文敏公魏國夫人蕙竹合作　爾雅藏

Yuan [period], duke Zhao Wenmin (Zhao Mengfu), lady Weiguo (Guan Daosheng), *Orchid and Bamboo jointly made*, Erya (Deng Erya) collection.

Deng Erya 鄧爾雅 (1884–1954) came from a Cantonese scholar family. He had a keen interest in etymology, poetry, calligraphy, seal-carving and painting. As a young man, he studied art in Japan, working as a teacher upon his return to China. Eventually he settled down in Hong Kong. As a leading figure of the Hong Kong branch of the *Chinese Painting Research Society* (*Zhongguo huaxue yanjiuhui* 中國畫學研究會) he saw, handled and studied a great number of classical paintings and calligraphies. Deng Erya's connoisseurship was highly appreciated and his inscriptions much sought after. A title slip written by Deng certainly augmented a work's chances of being considered authentic. The label now mounted on the inside of the scroll for this reason is very precious and therefore was not discarded when the unknown collector replaced Deng Erya's title slip with his or her own. Deng Erya left no other traces on this scroll.

Only two of the colophon writers, the poet and calligrapher Lu You 陸友 (early fourteenth century)[12] and the plum-blossom painter, poet and recluse Wang Mian 王冕 (1287–1359) refer to the title of the paintings. Lu You writes:

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10 The phrase *he bi* 合璧 means to unite or to re-unite two things which belong together. It is sometimes used in colophons, describing the assembly of two paintings into one scroll, as in this case, or of a painting and a matching piece of calligraphy, as recorded in Wang Shimou's 王世懋 (1536–1588) colophon dated 1584 after Qiu Ying's 仇英 (1494–1552) painting *Zhao Mengfu Writing the Heart Sutra in Exchange for Tea* 趙孟頫寫經換茶圖 Zhao Mengfu xiejing huancha tu, which Wang had mounted together with a transcription of the *Heart Sutra* by Wen Zhengming 文徵明 (1470–1559), handscroll, ink and colour on paper, 21.1 × 553.6 cm, The Cleveland Museum of Art.
11　*Yi bu* 乙部 might refer to the classification system the unknown collector employed.
12　Lu You 陸友 (early fourteenth century) is mainly remembered as the author of a monograph on the history of ink, the *Mo shi* 墨史. He entertained close ties with Ke Jiusi 柯九思 (1272–1348), who wrote the first colophon on this scroll, and the scholar and high-ranking court official Yu Ji 虞集 (1272–1368). Lu You's colophon is the third on the scroll, right after Ke Jiusi's and before Wang Mian's.

魏國趙公魏國夫人　蘭竹圖

Duke Zhao of Weiguo, lady Weiguo, *Picture of Orchid and Bamboo*.

And Wang Mian:

趙文敏公魏國夫人蕙竹圖

Duke Zhao Wenming, lady Weiguo, *Picture of Orchid and Bamboo*.[13]

The handscroll is recorded in two secondary texts. The first is the catalogue of An Qi's 安岐 (1683 – *c.* 1745) collection of paintings and calligraphies, the *Moyuan huiguan* 墨緣匯觀 (preface dated 1742), *juan* (scroll) four:

題孟頫管道昇蕙竹合作卷

Inscribing Mengfu, Guan Daosheng, *Orchid and Bamboo jointly made*, handscroll.

An Qi was a wealthy salt merchant of Korean descent and an art collector with a most discerning eye for quality. Eventually, the majority of the paintings and calligraphies from his collection entered the palace collection of emperor Qianlong 乾隆 (r. 1735–1796). There are no traces of imperial ownership on this scroll but An Qi's seals are numerous and imprinted in significant places such as on the joint of two sheets of paper, the beginning and the end of the scroll.

The second text mentioning the handscroll is an entry in Wu Sheng's 吳昇 (active 1662–1722) record of paintings and calligraphies he had seen in other collections as well of as his own collection, the *Daguanlu* 大觀錄, *juan* sixteen:

趙文敏蘭管夫人竹合作卷

Zhao Wenming, *Orchid*, madame Guan, *Bamboo*, jointly made, handscroll.

Although Wu Sheng left no traces on the scroll, he must have seen it in someone else's collection and taken detailed notes. In *Daguanlu,* Wu not only transcribes the legends of the seals impressed on the scroll but actually prints the shape of each seal correctly, including a gourd-shaped seal by Ke Jiusi 柯九思 (1290–1343) after the latter's colophon.

Despite the differences in the wording of the title it seems safe to assume that they all describe the same set of paintings. Other than on the motif of orchid and bamboo, additional information can be gleaned on Zhao Mengfu and

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13 Fourth colophon on the scroll.

Guan Daosheng's official titles and the format of the handscroll. The terms *he zuo* 合作 'jointly make' and *he bi* 合璧 'joint [halves of a] Bi-disc' denote slightly different things. *He zuo* means 'to make together' as if Zhao and Guan had joint their forces to produce one single painting. This is not the case. Although the two pictures complement each other nicely as to composition, placing of signatures and seals and contrasting styles (rough and sketchy versus elegant and refined),[14] they were done on two separate sheets of paper which only later were mounted together on a single scroll. *He bi* on the other hand points to the conscious act of putting together the two formerly separate paintings into one.

This is precisely what happened as one can learn from the contents of the colophons and the placing of the seals, discussed below.

4 The paintings

Orchid and Rock by Zhao Mengfu is an ink monochrome painting on paper in which the artist displayed his mastery of the so-called *flying-white* technique (*feibai* 飛白), of controlling the subtlety of ink-washes and of rough, quick brushstrokes. Especially the long blades of the orchid leaves twist and turn in such a lively manner as if swaying in a gentle breeze. The painting is signed, followed by a seal to the middle right of the composition. There are a number of similar paintings by Zhao Mengfu of this genre, close in composition and brushwork.[15]

Stalk of Bamboo by Guan Daosheng too is an ink monochrome painting on paper. The curving arc of the main stalk attests to the artist's mastery of controlled yet natural brushwork. Despite the knots at the joints of the bamboo, the energy of the brush runs uninterruptedly to the very tip of the stroke in one sweeping movement. The leaves show great variety. The painting is signed to the lower left, followed by a seal. Guan Daosheng is famous for her bamboo

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14 Li 2011, 631–636 reads the contrast between the two paintings as a reflection of the differences between the two individuals. Li's 1965 seminal work made him a proven connoisseur of Zhao Mengfu.

15 To name just a few: *Bamboo, Rocks and Lonely Orchids* 竹石幽蘭圖, handscroll, ink on paper, 50.9 × 147.8 cm (painting only), The Cleveland Museum of Art; *Orchid, Bamboo and Rock* 蘭竹石圖, handscroll, ink on paper, 25.2 × 98.2 cm, Shanghai Museum; and finally *Elegant Rocks and Sparse Trees* 秀石疏林, handscroll, ink on paper, 27.5 × 62.8 cm, Palace Museum, Beijing (although *Orchid and Rock* does not quite reach the bravura of the brushwork of the latter).

paintings.[16] She is credited with having re-integrated bamboo into landscape painting, especially bamboo groves along a river. Despite, or perhaps because of the fact that quite a number of paintings are attributed to her it is extremely difficult to establish beyond doubt even a handful of authentic original works.[17]

To make matters worse, Guan Daosheng and her husband frequently worked as each other's *daibi* 代筆, that is substitute brush or ghost-writer. They were so well-versed in each other's handwriting that they occasionally forgot their assumed persona until it was almost too late. A brilliant example thereof is a letter which supposedly Guan Daosheng had written to a relative but which in fact was penned by Zhao Mengfu.[18] At the end of the letter, Zhao, oblivious of his role as substitute brush, signed as usual, *Zi'ang* 子昻. Having realized his mistake, rather than re-writing the whole letter, he pretty clumsily corrected Zi'ang to *Daosheng* 道昇. There is only one piece of writing by Guan Daosheng which is undisputed, a letter she wrote to the Chan abbot Zhongfeng Mingben 中峰明本 (1263–1323).[19] Other than this, there are only secondary texts which praise her mastery of the three arts of calligraphy, painting and poetry. The most important of these textual sources is Zhao Mengfu's funerary inscription.[20] Already by the beginning of the eighteenth century, specimens of Guan Daosheng's calligraphy as well as painting were considered 'extremely rare'.[21]

Probably inspired by an anecdote in Guan Daosheng's funerary inscription which recounts how the emperor had ordered her, her husband and their son to write a piece of calligraphy which was then mounted into one scroll, complete with a precious polished jade roller and included in the imperial art collection, later collectors followed this precedent by mounting works by members of the Zhao family together. Today there are very few examples of this practice, among

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16 The ultimate book on the subject of bamboo with an emphasis on bamboo painting is Fan Jingzhong 2011: Guan Daosheng's bamboo painting is discussed in context on pp. 447–478.

17 See Ch'en Pao-chen 1977.

18 Guan Daosheng, *Qiu shen tie* 秋深貼, album leaf, ink on paper, 26.9 × 53.3 cm, semi cursive script (*xingshu* 行書), 18 columns, Palace Museum, Beijing.

19 Guan Daosheng, *Guan Daosheng zhe Zhongfeng heshang chidu* 管道昇致中峰和尚尺牘 ('Letter to Monk Zhongfeng'), album leaf, ink on paper, 31.7 × 72.9 cm, part of the album *Yuan Zhao Mengfu Zhao shi yimen fashu* 元趙孟頫趙氏一門法書 ('Calligraphy of the Yuan Dynasty Zhao Clan'), National Palace Museum, Taipei.

20 Zhao Mengfu, *Weiguo furen Guan shi muzhiming* 魏國夫人管氏墓誌銘 ('Funerary Inscription, Lady Weiguo of the Guan Family'), in: Zhao Mengfu's collected writings, section 松雪齋詩文外集，碑銘.

21 *Zhen ji chuanshi jue shao* 眞蹟傳世絕少 ('genuine traces handed down are extremely few'), quoted from Wu Sheng 1712, *juan* 16, 趙文敏蘭管夫人竹合作卷.

them the disputed *Ink Bamboo by the Zhao Family*[22] and the scroll of *Orchid, Rock and Bamboo* under consideration in this paper.

5 Colophons and seals

There are seventeen colophons appended to the scroll and altogether sixty-seven seal impressions. Based on the contents of the seals, their placing, the contents of the colophons and descriptions of the scroll in secondary texts it can be established that the first owner of the scroll was Wang Lingxian 王令顯 (fourteenth century). There are four or possibly five of his seals on the scroll. The first is impressed in the bottom right hand corner of Zhao Mengfu's *Orchid and Rock* painting. This is the standard place for first seals (different rules apply for imperial seals). The legend of this square relief seal *Wang shi zhen mi* 王氏珍祕 ('Rare Treasure of the Wang Family') may indicate that this painting had been in the Wang family collection already before Wang Lingxian's time. Two more square intaglio seals with his personal names appear also to the lower right of Zhao Mengfu's painting, *Wang Guangda yin* 王光大印 below and *Wang Lingxian* 王令顯 above. In the left bottom corner next to Guan Daosheng's *Bamboo* is another of his square intaglio seals reading *Wang shi Chengzhi* 王氏成之. Right above that is a square relief seal with the legend *Wang Xun yin* 王勳印. The identity of the owner of this seal could not be established with absolute certainty but it would make sense if this seal belonged to Wang Lingxian because usually, two complementary seals, one intaglio and one relief are impressed one above the other. *Guangda* and *Chengzhi* are both sobriquets of Wang Lingxian. From the contents and the placing of Wang's seals on the two paintings it is evident, that he was the one who joined the two paintings into one handscroll.

The wealthy Wang family had assembled a collection of paintings, calligraphies, bronzes and other artefacts. They entertained close ties, sometimes lifelong friendship, with prominent literati such as Ke Jiusi, Ni Zan 倪瓚 (1301–1374), Wang Meng 王蒙 (1308–1385; the grandson of Zhao Mengfu and Guan Daosheng) and Wang Mian 王冕 (1287–1359). In the 1350s when the turmoil surrounding rebel fighting and natural disasters in the Jiangnan region reached a peak, the Wang family had to flee their home. Killing, looting and the destruction of estates were rampant. The Wangs found refuge in Suzhou where they

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22 Zhao Mengfu, Guan Daosheng, Zhao Yong 趙雍 (1289 – c. 1369), *Zhao shi yimen san zhu tu* 趙氏一門三竹圖 handscroll, ink on paper, 34 × 108 cm, Palace Museum, Beijing.

stayed for ten years before returning to their ancestral land in Jingxi 荊溪. During their time in quasi exile, the family patriarch Wang Yuntong 王允同 asked the Suzhou painter Chen Ruyan 陳汝言 (*c.* 1331 – before 1371) for a landscape painting depicting the area where they had lived for generations. The inscriptions on *The Jing River* painting[23] are testimony to a network of loyal friends surrounding the Wang family. Wang Lingxian and Ni Zan, both also present on the handscroll under investigation here, wrote colophons. The painter Wang Meng left an inscription as did Zhang Jian 張監, the private tutor of the Wang clan and his son Zhang Jing 張經 (for both of them the date is unknown). Zhang Wei 張緯, the younger brother of Zhang Jing, followed in his father's footsteps as tutor for the Wangs. His colophon too is among those gracing the Zhao/Guan handscroll. A profound friendship connected the Zhang family to Ni Zan. A significant number of poems in Ni Zan's collected writings were dedicated to these close friends and companions.[24]

After Wang Lingxian had the two paintings mounted together on one handscroll, he proceeded to procure colophons from his friends. The first person with whom he shared his latest treasure was the bamboo painter, calligrapher and poet Ke Jiusi. As director of painting and calligraphy in the Kuizhangge Academy where he served as a court connoisseur and curator of the imperial collection, Ke had seen and handled artworks of the highest quality. This put him in a position to evaluate and judge paintings presented to him by private collectors such as Wang Lingxian. Ke Jiusi wrote the first colophon on the scroll, praising the paintings as worthy of admiration.[25] More important even than his colophon are Ke's seals. He imprinted two of his personal, square relief seals[26] on the joint of the two paintings, thus approving of the union of the *Orchid* and *Bamboo* paintings. Furthermore, he impressed his official square relief seal reading *Ke Jiusi jianding zhenji* 柯九思鑒定眞蹟 examined and declared a genuine (brush) trace, in the bottom left hand corner of Guan Daosheng's *Bamboo* painting. The

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23 Chen Ruyan 陳汝言 (*c.* 1331 – before 1371), *Jingxi tu* 荊溪圖 ('The Jing River'), hanging scroll, ink on silk, 129 × 52.7 cm, National Palace Museum, Taipei.

24 It would certainly be a fruitful undertaking to document and cross-reference the connections between all the colophon writers on the Zhao/Guan scroll to obtain a larger picture of how this scroll 'functioned', but this is beyond the scope of this paper. Suffice it here to caution against looking at this scroll as an isolated object in the void.

25 This colophon is not included in Ke Jiusi's collected writings, *Danqiusheng ji* 丹邱生集. However, in *juan* five, which records the paintings to which Ke Jiusi appended colophons, seven paintings by Zhao Mengfu are listed, attesting to Ke's familiarity with Zhao Mengfu's painting. The text of Ke Jiusi's colophon is translated into English in Li 2011, 635.

26 *Ke shi Jingzhong* 柯氏敬仲 (upper part of the joint) and *Jing'an* 敬菴.

paintings are framed by two strips of mounting silk. After the mounting silk the colophons begin. There are two seals by Ke Jiusi, one in the bottom righthand corner and one in the top right, crucial positions at the very beginning of the first sheet of paper. The rectangular relief seal impression at the bottom right is very faint and it is not for certain that this is Ke Jiusi's seal. The square intaglio seal at the top right though is beyond doubt one used by Ke Jiusi, reading *Kuizhangge jianshu boshi* 奎章閣鑒書博士 examined by the Kuizhangge erudite. This official seal bestowed the highest orders onto the newly mounted scroll as genuine works by Zhao Mengfu and Guan Daosheng. Ke Jiusi's colophon is signed and followed by three more of his personal relief seals.[27] Ke Jiusi's inscription and seals truly opened the ensuing parade of colophons with great fanfare.

The second colophon on the same sheet of paper is by Lu Youren 陸友仁, a contemporary and friend of Ke Jiusi. Perhaps because of his social status as a descendant of a textile trader's family, Lu never held any office. Nevertheless, he was greatly appreciated as a calligrapher. He was especially proficient in the ancient clerical script (*lishu* 隸書). Lu was not only a practitioner of calligraphy but also a scholar of epigraphy with a keen interest in inscriptions on bronzes, tombstone inscriptions, stelae and rubbings.[28] Thus it comes to no surprise that Lu Youren wrote his colophon in clerical script in a grid, a form, not commonly seen in colophons. Lu praises Guan Daosheng's bamboo painting as not like something from the women's quarters but as in the same class as her male contemporary Li Kan 李衎 (1244–1320). The colophon is 'signed' with a personal square intaglio seal.[29]

The writer of the third colophon, Wang Mian 王冕 (1287–1359), also from Zhejiang province, was best known for his paintings of flowering plum.[30] His aspirations for an official career had come to naught so Wang earned his living from selling his paintings. Despite this stigma running counter to the literati ideal that scholars pursue the art of painting only as a noble pastime,[31] he was well accepted into polite society and regarded as a scholar recluse. His colophon is full of praise for the paintings by Zhao and Guan, expressed in rather

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27 *Xixun* 錫訓, gourd shape, relief; *Ke shi Jingzhong* 柯氏敬仲, square relief; *Yunzhen zhai* 緼眞齋, rectangular relief.

28 Notably his *Yanbei zazhi* 研北雜志, a kind of brushnotes in two *juan*, attests to his scholarship in epigraphy. Other than that, Lu Youren is best known for his book on the history of ink makers, *Moshi* 墨史 ('History of ink').

29 *Lu Youren yin* 陸友仁印.

30 The best book in English to date on the genre of flowering plum painting is Bickford 1996.

31 This carefully constructed self-image of literati artists was finally unmasked by Cahill 1994.

conventional words. Wang Mian's colophon is signed and impressed with two of his own square intaglio seals.[32] It should be noted that he was a pioneer seal carver, one of the first who not only designed his seals but carved them himself.[33]

Precious little is known about the author and calligrapher of the fourth colophon, Bian Wu 邊武 (middle fourteenth century). He hailed from Zhejiang province, occasionally did paintings in the bird-and-flower genre (*huaniao* 花鳥), to which the two paintings by Zhao and Guan also belong. Bian Wu was primarily appreciated for his calligraphy.[34] He was especially versatile in the calligraphic style of Xianyu Shu 鮮于樞 (1246–1302, a close friend of Zhao Mengfu)[35] to such an extent, that the works of the two were sometimes confused. His colophon is signed, followed by two square intaglio seals.[36]

The colophon penned by the Confucian scholar, poet and minor official Wang Zhonglu 汪仲魯 (1323–1401)[37] was written when he was well advanced in years. This is apparent in the somewhat shaky and yet controlled characters as well as based on the fact that Wang Zhonglu signed his colophon with his sobriquet *Zhenyi bingsou* 貞一病叟 ('sick old man'), one which he had adopted only late in life. He imprinted four square intaglio seals after his signature.[38]

The second sheet of paper bears only one colophon by the daoist priest, calligrapher and painter Zhang Yu 張雨 (1277–1348)[39] who was one of the younger members of the coterie surrounding Zhao Mengfu and Guan Daosheng. When Guan Daosheng passed away in 1319, her husband asked Zhang Yu to compose a funeral ode in her honor. Two points in Zhang Yu's colophon are of particular importance. One is that he quotes from a poem Guan Daosheng had written in 1313, the *Yufu ci* 漁父詞 ('Old Fisherman poem'), while residing in the capital Beijing, expressing her longing for returning home south. He also mentions that

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32 *Wang Yuanzhang* 王元章 and *Wen Wang sun* 文王孫.

33 See Sha Menghai 1987, 98–99.

34 There is a *Qianzi wen* 千字文 (*Thousand Character Text*) by Bian Wu in the National Palace Museum, Taipei, dated 1341, album of 69 leaves, ink on paper, 34.4 × 23.5 cm (each leaf). From secondary texts which record two of Bian Wu's dated paintings in the bird-and-flower genre, one dated 1338 and the other 1347, it can be confirmed that he was active in the middle of the fourteenth century.

35 On Xianyu Shu's calligraphy see Wong Fu 1981, 371–433.

36 *Bo Jing fu* (?) *yin* 伯京父印 and *Bian Wu yin* 邊武印.

37 Wang Zhonglu's biography is recorded in *Ming shi* 明史, 178.

38 *Chunfang si zhi* 春坊私直; *Yueguo shijia* 越國世家; *Wang shi Zhonglu* 汪氏仲魯 and *Xue gu shanfang* 學古山房.

39 His biography in *Xin Yuan shi* 新元史 238. For a translation of this colophon into English see Li 2011, 636.

Guan had died on her way south which means that this colophon was written after 1319. Zhang Yu furthermore comments on the rarity of genuine paintings by Guan Daosheng:

夫人所畫絕少予識其眞

Madame Zhao's paintings are quite rare, but I recognize their authentic value.[40]

In other words, Zhang Yu considers the bamboo painting by Guan Daosheng mounted on this handscroll genuine. Otherwise, he would not have contributed this colophon full of praise. Zhang's colophon is signed and impressed with one rectangular relief seal.[41]

The next sheet of paper opens with a colophon by a certain Gao Yu 高玉 (active in the second half of the fourteenth century) about whom nothing is known. Except the contents of his colophon is extremely interesting, providing a vivid glimpse at the further fate of this scroll. There are some names and most importantly, a date, 1359.[42] In the first month of that year, Gao Yu traveled in the Jiangnan area and visited the Wang family (the original owners of the scroll) in exile in Suzhou at the time. Wang Lingxian's son, Wang Yuntong, the very one who had earlier requested a landscape painting of their ancestral home in Jingxi from Chen Ruyan, now asked his guest Gao Yu to provide a colophon for the *Orchid, Rock and Bamboo* scroll. First, Gao refused because he thought it most disrespectful to write before the already existing colophons by his peers, Ni Zan and Zhang Wei. He further remarks, that Yunlin 雲林 (sobriquet of Ni Zan) solicited the colophon from Dechang 德常 (sobriquet of Zhang Wei). What he does not say because he takes it for granted that this is obvious to anyone familiar with Ni Zan's calligraphic style is, that Ni Zan, after he had obtained the text from his friend Zhang Wei then wrote his text and signed it with Zhang Wei's name on his behalf. Zhang Wei later returned the favour and wrote Ni Zan's colophon on the scroll, signing it with Ni Zan's name. Ni Zan's text of his colophon is duly recorded in his collected works.[43]

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40 Translation by Li 2011, 636.

41 *Juqu waishi Zhang Tianyu yin* 句曲外史張天羽印.

42 The important part of the colophon reads: [...] 至正己亥正月僕過彝齋 (sobriquet of Wang Lingxian) 值公子允出此卷謨爲寫詩如右前有雲林雅製聞德常徵君亦時相與何獨無題也允同歸幸俱道問訊句吳生高玉頓首.

43 Text contained in Ni Zan (s.a.), *juan* 6, 七言絕句.

In the sixteenth century, the calligrapher, painter and art collector Zhan Jingfeng 詹景鳳 (1532–1602) appended a colophon (Fig. 3) in which he remarks quite casually:

前張緯詩却是倪迂墨蹟此豈張又代倪交易各得其所者耶元人多有此戲　景鳳題

Zhang Wei's poem at the beginning is a brush trace by Ni; Zhang then wrote instead of Ni, swapping names and places. People of the Yuan [period] often engaged in this kind of game.

True enough in this particular case. But, if Zhan Jingfeng's generalisation that Yuan artists often enjoyed this kind of play were correct, this would thoroughly shake the foundations of trusting and relying on texts and signatures! In each case, a detailed comparative analysis of the handwriting would be necessary to determine the identity of the writer. With Chinese calligraphy, this presents quite a challenge since calligraphers took pride in being able to write in some-one else's style to a point where the original and the copy become almost inter-changeable. About Zhan Jingfeng it is said that he had studied Zhao Mengfu's calligraphy and painting so well that his works were often taken for genuine brush traces of the master.[44] Zhan Jingfeng's comment is placed across the joint of two sheets of paper, right after the Ni Zan text, actually written by Zhang Wei. Zhan's signature is followed by two personal square intaglio seals.[45] Neither Ni Zan's nor Zhang Wei's colophon bear a seal.

The beautifully written colophon by Ni Zan (Fig. 4) on behalf of Zhang Wei features on the same sheet of paper as the preceding one by Gao Yu plus three more by Zhou Zhu 周翥, Li Ziduan 李子端 and Wei Kui 魏奎 (all three active in the fourteenth century). The next, narrower, sheet of paper bears a colophon by a certain Qian Yuanti 錢原悌 (fourteenth century) and the afore-mentioned text by Ni Zan actually written by Zhang Wei.

The last sheet of paper with colophons opens with a lengthy inscription by Tao Zhen 陶振 (fourteenth century) in semi cursive script (*xingshu*). This is worth mentioning, since one textual source claims that he is a grandson of the painter Wang Meng on the mother's side of the family.[46] As Wang Meng was the

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44 Wang Lianqi 王连起 from the Palace Museum, Beijing, an eminent scholar and connoisseur of the work of Zhao Mengfu has occasionally cast doubt on the role of Zhan Jingfeng as a copy-ist and collector of Zhao's painting and calligraphy, down to the outright production of forger-ies. See Wang Lianqi 2017, 198–200.
45 *Jingfeng* 景鳳 and *Bie zi wen* 別字文.
46 *Xinchou xiaoxia ji* 辛丑銷夏記, *juan* 4.

grandson of Zhao Mengfu and Guan Daosheng, this would place the scroll not only in the Jiangnan region but also in a way in the family line. Tao Zhen's colophon is preceded by one square intaglio seal.[47] Three more square intaglio seals[48] are impressed after his signature.

The last two colophons are by Wang Jing'an 汪敬庵 and Wang Zongyi 汪宗儀. Both colophons are signed, the first followed by two square relief seals, the second by one intaglio seal.[49] Nothing is known about these two people. Yet, from the point of view of manuscript studies, it is noteworthy to take a closer look at the diacritical marks present in both colophons. The first character in the second column of Wang Jing'an's colophon is marked with a circle to its right. At the end of this column, written somewhat apart from the flow of the main text, the small character *huang* 荒 was inserted. The circle means to delete the character and the small character at the end of the column is the correct replacement of it. This was one of the standard ways to correct mistakes. The second occurrence of a diacritical mark in Wang Zongyi's colophon (Fig. 5) is less straightforward. In this case, the last character in column two *lü* 菉 has a vertical line plus three dots next to it. At the end of the colophon, visually clearly set apart, is the small character *lü* 綠 with a circle next to it. That means that Wang Zongyi first marked the character 菉 in his text with three dots, indicating it should be deleted. He then wrote the correct character 綠 after the colophon. Having second thoughts, Wang then put a circle next to the corrected character, deleting it. Reversing his former correction, he then drew a vertical stroke next to the three dots to cross them out.

For the next almost four hundred years a strange silence surrounds the *Orchid, Rock and Bamboo* scroll. Issues of loyalty and fear of punishment for being associated with the people involved with the creation of this scroll[50] and not least the symbolism of orchid (a worthy noble, living and acting in seclusion, unnoticed and un-recognized by those in power) and bamboo (upright official, adhering to Confucian moral values, not daunted by adverse conditions, steadfast) may have been the reasons behind the scrolls temporary disappearance from the public eye.

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47 *Baiyun shanfang* 碧雲山房.

48 *Tao Zhen* 陶振, *Diaoao haike* 釣鰲海客 and *Huayin zhenyi houren* 花隱真逸後人.

49 *Jingan* 敬菴, *Yin qing shijia* 銀青世家 and *Wang Zongyi shi* 汪宗儀氏.

50 It is beyond the scope of this paper to delve into biographical details of those involved in the creation of the scroll. Suffice it to say that the first Ming Emperor Hongwu (r. 1368–1398) did not take matters of perceived disloyalty kindly.

The next sign of life on the scroll are seal impressions by the well-known book and art collector An Qi, who at that time resided in Yangzhou. By far the largest number of seals on the scroll, altogether thirteen, are by An Qi, all strategically placed. The first, a rectangular relief seal reading *An Yizhou jia zhencang* 安儀周家珍藏, is impressed in the bottom right hand corner of Zhao Mengfu's *Orchid and Rock* painting right next to those by Wang Lingxian, the original owner of the scroll. Framing the two paintings, An Qi put his second seal, rectangular intaglio, saying *An shi Yizhou shuhua zhi zhang* 安氏儀周書畫之章, to the lower left of Guan Daosheng's *Bamboo*. Next there are two personal seals[51] by An Qi right after the first colophon by Ke Jiusi and before the colophon by Lu Youren. Right in the middle of the joint of the first and the second sheet of paper, is An Qi's collector's seal, rectangular relief, *Yizhou zhencang* 儀周珍藏. This is a pattern he followed, impressing his seal on the joint of two sheets of paper to confirm, that they had been mounted in this order when the scroll was in his possession. So the same seal is found on the joint before and after Zhang Yu's colophon and again on the joint of the third and the fourth sheet of paper, always in the same prominent position in the middle. The one deviation from this pattern is the joint of the papers four and five. There is no seal of An Qi. This is the place on the scroll with Ni Zan's colophon (written by Zhang Wei), where Zhan Jingfeng wrote his comment across both sheets of paper. Why this omission? Perhaps simply for aesthetic reasons since the Ni Zan signature is so close to the joint that there would have been not enough space for An Qi's seal in that exact middle position he chose for his seal on the other joints? An Qi's seal are again present at the end of the last colophon paper, precisely on the joint. At the top is his gourd shaped relief seal, *Xin shang* 心賞, and further down a rectangular relief seal with the same legend as the first seal before Zhao Mengfu's painting but this is a different seal, 安氏儀周書畫之章. Half of a rectangular relief seal impression visible on the bottom left of the last colophon paper has been pasted over with the last sheet of paper. It is not clear whether this is An Qi's seal or not. The final two personal seals, one square intaglio *Siyuan tang* 思原堂 and one square relief *Lu cun* 麓邨 follow the by then well-established convention of signing with two seals, one intaglio and one relief. An Qi recorded this scroll in his catalogue Moyuan *huiguan lu* 墨緣彙觀錄 (*Viewing Records of Works in Ink*). Most of the artworks in An Qi's possession later entered Emperor Qianlong's collection.[52] The scroll does not bear any imperial traces but that

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51 *Chaoxian ren* 朝鮮人, rectangular intaglio, and *An Qi yin* 安岐之印, square intaglio.

52 On the latest research defining *imperial collection* see Chiang 2019.

does not entirely exclude the possibility that it might have been stored at the palace nevertheless.

After An Qi's engagement with the *Orchid, Rock and Bamboo* scroll there is again a period of discreet silence until the dawn of the twentieth century, a period which saw the end of imperial rule, the establishment of a republic and regional warlords fighting for power. This highly volatile situation also had an effect on the art market.

Again it is the seals and their position on the scroll which reveal something of its later fate. There are no less than six seal impressions on this scroll by the illustrious painter and art connoisseur Jin Cheng 金城 (1878–1926)[53]. He was a legal expert who had studied law in London between 1902 and 1905. After the founding of the Republic he held various official positions. Above all Jin Cheng considered himself a painter and he was heavily involved in a number of art related issues. Most importantly, he served as a member of the *Preparatory Council for the Display of Artefacts* (*Guwu chenliesuo* 古物陳列所) from the Imperial Collection. This gave him unlimited access to the former imperial art collection. He concentrated his research on traditional Chinese painting also frequently evaluating and certifying the authenticity of paintings from private collections. Jin Cheng hailed from a wealthy family of officials in Wuxing, the same town where Zhao Mengfu and Guan Daosheng had originated from. Although Jin spent most of his life in Beijing, his cultural roots lay in Jiangnan. His first rectangular relief seal on the *Orchid, Rock and Bamboo* scroll is prominently and proudly placed above that of An Qi to the left of Guan Daosheng's painting. The legend of the seal says *Wuxing Jin Cheng jianding Song Yuan zhenji zhi yin* 吳興金城鑑定宋元真蹟之印, thus authenticating the paintings as genuine Yuan period. This is an official judgement pronouncing this scroll an original. Jin Cheng impressed his personal seal, *Jin Cheng siyin* 金城私印, on the first sheet of paper before Ke Jiusi's colophon in the bottom right hand corner right above that of Ke Jiusi. In placing his small square intaglio seal *Gong Bei* 鞏北 (one of Jin Cheng's sobriquets) on all the joints of the paper sheets below the seal of An Qi, he declared the order of papers mounted together as one hand scroll as chronologically correct. At the end of the scroll on the joint of the last colophon paper and the ensuing sheet with seals only, there is again Jin Cheng's same seal *Jin Cheng siyin* 金城私印 as on the first colophon paper.

Another contemporary of Jin Cheng, the famous art collector Wanyan Jingxian 完顏景賢 (1876–1926)[54], also made his presence felt on the scroll

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53 Cf. Siu Wai-man 2001.

54 On the art collection of Wanyan Jingxian see Li Chong 2015.

through his seals. A square relief seal, *Renzhai mingxin zhi pin* 任齋銘心之品, is impressed to the right of Zhao Mengfu's *Orchid and Rock*, directly above the seal of Wang Lingxian. A second square relief seal is placed to the left of Guan Daosheng's *Bamboo, Wanyan Jingxianjing jian* 完顏景賢精鑒, to the bottom left, next to Guan's seal. Thus, like An Qi before him, Wanyan Jingxian framed the two paintings with his seals. Two more square relief seals are in the empty space on the first colophon paper between the colophons of Lu Youren and Wang Mian, seeking the company of these two Yuan artists. The seal legends read *Jiuwan baqian Songxue shuwu* 九萬八千松雪書屋 (it is certainly no coincidence that *Songxue* was also the sobriquet of Zhao Mengfu and that Wanyan chose this for his library's name) and *Xiaoru'an moyuan* 小如菴墨緣. These were seals which Wanyan Jingxian frequently imprinted on the pages of rare old books in his collection. His next rectangular intaglio seal occupies the wide empty space between the colophons of Gao Yu and Ni Zan (written on behalf of Zhang Wei), reading *Jin zhang shixi Jing xing wei xian* 金章世系景行維賢. It was not just the available space which made Wanyan place his seal there but also the close proximity to Ni Zan's calligraphy. His final two square seals[55] on the last sheet of paper (the one with seals only, no colophons) are beautifully balanced with An Qi's seals to the left. An Qi's top seal is cut in intaglio. Wanyan Jingxian's seal next to it is the reverse, relief. The same counter balance can be seen in An Qi's relief seal at the bottom and next to it Wanyan's intaglio seal. It is probably not too much to say that Wanyan Jingxian conciously sought a visual dialogue with earlier owners of this scroll. Wanyan entertained close ties with the major art collectors and dealers of the time. He was a good friend of Viceroy Duanfang 端方 (1861–1911) and had dealings with the Japanese art collector Abe Fusajirô 阿部房次郎 (1868–1937) and the Canadian-American John C. Ferguson (1866–1945).[56] The Wanyan family were Manchu bannerman, their fate intertwined with that of the Qing emperors. When imperial rule ended in 1911, the fortune of the Wanyan family declined and they were forced to sell artworks to survive.

The final seal on the scroll on the last sheet of white paper, a beautifully carved rectangular relief seal, *Song Ziwen jianding shuhua jingpin* 宋子文鑒定書畫精品, belonged to the businessman and politician Song Ziwen 宋子文 (1894–1971), better known as T. V. Soong. His parents Charlie Soong 宋嘉樹 (1863–1918) and Ni Guizhen 倪桂珍 (1869–1931) had bought paintings as an investment for all of their six children. Only very rarely, a painting from the family

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55 *Xianxi tang jianding* 咸熙堂鑑定, square relief, and *Wanyan Jingxian zi Xiangfu hao Pusun yi zi Renzhai biehao Xiaoruan yin* 完顏景賢字享父號樸孫一字任齋別號小如盦印, square intaglio.
56 Netting 2013.

collection has re-entered the market, as earlier this year a hanging scroll by the Italian Jesuit court painter Guiseppe Castiglione (1688–1766), sold at an auction in Taipei.

6 The scroll in secondary texts

As mentioned before, *Orchid, Rock and Bamboo* by Zhao Mengfu and Guan Daosheng is recorded in two texts, in An Qi's *Moyuan huiguan* and in Wu Sheng's *Daguanlu*. Both begin with giving the title of the painting, although each gives a slightly different title, followed by a material description of the scroll, saying that this is a work on paper and providing the measurements in *cun* 尺, although they differ on the size. Both authors agree that these are monochrome ink paintings, two separate paintings mounted together on one handscroll. An Qi then lists the names of the colophon authors, plus a transcription and the placement of their seals. Finally, he transcribes Zhan Jingfeng's colophon in full and points out that indeed it is very special, that Ni Zan and Zhang Wei wrote their respective colophons on each other's behalf.

Wu Sheng, after his short introduction of the paintings, transcribes the full text of each colophon in the correct order as present on the scroll. As for the seals, he prints the legend of the seals in regular script (*kaishu*) inside a line drawing of the shape of each seal. This may be hard to read in the small print but it is an added piece of information, to know the shape of the seals, to be able to identify them correctly.

Taken together the catalogue entries of both authors provide extremely useful and factual information for the study of this scroll. They are a sound starting point, leaving it to later researchers, connoisseurs and art lovers to ask fresh questions, further revealing the complex history of *Orchid, Rock and Bamboo* by two of the most eminent painters of the Yuan period.

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Fig. 1: Zhao Mengfu, Guan Daosheng. *Orchid, Rock and Bamboo*, handscroll, ink on paper, 35.5 × 238.6 cm, Private collection. Detail: Zhao Mengfu, *Orchid and Rock,* signature, seals. Images reproduced with the kind permission of the private owner.

Fig. 2: Detail: Guan Daosheng, *Bamboo,* signature, seals.

Fig. 3: Detail: Zhan Jingfeng colophon, seals.

Fig. 4: Detail: Ni Zan colophon written on behalf of Zhang Wei.
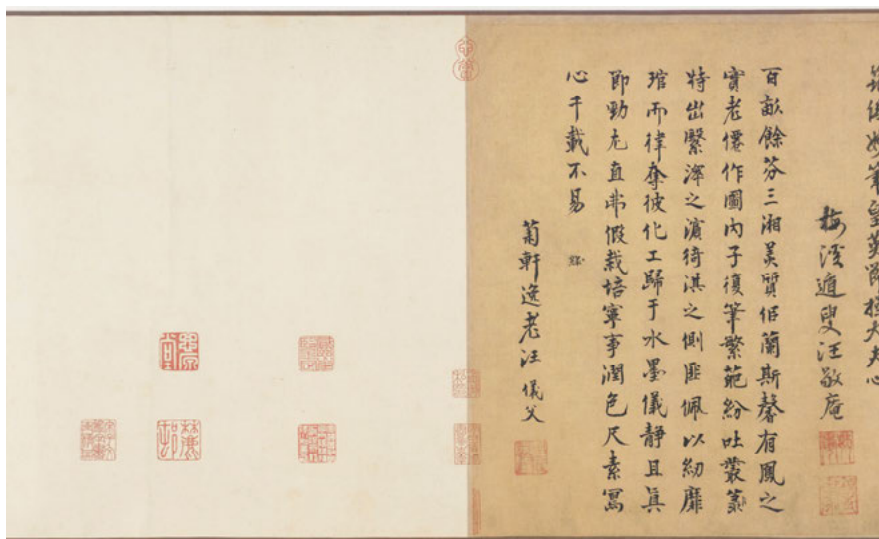
Fig. 5: Detail: Wang Congyi colophon, diacritical marks, seals on last sheet of paper.

Zhenzhen Lu

Touched by a Tale of Friendship: An Early Nineteenth-Century *Zidishu* Manuscript

Abstract: *Zidishu* is a genre of sung verse narrative that flourished in northern China between the mid-eighteenth and the end of the nineteenth centuries. This article examines the earliest dated manuscript containing a text in this genre, copied in 1815 in Beijing, titled *Yu Boya shuaiqin xie zhiyin zidishu* 俞伯牙摔琴謝知音子弟書 (*Yu Boya smashes his zither to mourn a friend, a youth book*). The preface, appendix, marginal and chapter comments added to the main text by the copyist reveal him to have been a fashionable and erudite reader, whose diverse literary interests offer insights into *zidishu*'s early audience and the ways in which elite readers engaged with popular texts.

1 Introduction

The manuscript of *Yu Boya shuaiqin xie zhiyin zidishu* 俞伯牙摔琴謝知音子弟書 (*Yu Boya smashes his zither to mourn a friend, a youth book*), copied in 1815 in Beijing, is the earliest dated manuscript containing a text in the lyrical genre of *zidishu* 子弟書.[1] As both a literature and a performing art, *zidishu* flourished in the urban centers of northern China from roughly the mid-eighteenth century to the end of the nineteenth century.[2] Sung in slow beats to the accompaniment of the three-stringed lute and drawing on a rich repertoire of stories, whose sources range from contemporary events to the existing literary tradition, *zidishu* comprised a genuinely popular literature of entertainment that appealed to both discerning audiences and common ears. Our manuscript reveals that

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1 Capital Library of China (CLC), *ji* 己 401. The exact meaning of *zidi* in *zidishu* is a subject of debate (*shu* denotes 'book' or 'story'). Literally 'sons and younger brothers', *zidi* has been interpreted to denote amateur performers, young men in general, and youths who belonged to the Qing dynasty's (1644–1911) military and administrative system of the Eight Banners. *Zidishu* has been translated into English as 'youth book' (Elliott 2001a), 'scion's tale' (Goldman 2001) and 'bannermen tale' (Chiu 2018).

2 Idema 2010, 370. Guan and Zhou 1984, vol. 1, 1, gives the period between the Qianlong (1736–1795) and Guangxu (1875–1908) eras.

they were once also the object of serious reading, and provides important insights into their early readers.[3]

The murky origins of *zidishu* come to us through anecdotal accounts and representations in the texts themselves. In various sources, *zidishu* is associated with the capital's bannermen, the privileged affiliates of the Manchu ruling dynasty who comprised a sizeable resident population in Qing (1644–1911) Beijing.[4] While we do not know much about the early authors of *zidishu,* we do know that these poetic narratives came to flourish in the Qing capital sometime during the mid to late eighteenth century, including among men of wealth and leisure who took to singing in private gatherings for each other.[5] These coteries continued to exist at the same time that *zidishu* came to acquire widespread popularity in the capital: the songs were performed by professional musicians

3 See Chen 1977 for a comprehensive overview of the sources of *zidishu*. On this particular manuscript, see Lu 2017 and Chiu 2018, 195–210. The main text, preface and commentary have been collated with other versions of the *zidishu* text and published in Huang 2012b, vol. 1, 200–220 (the appendix is, however, not included).

4 See Chiu 2018, 38–56, and Cui 2005, 7–14, for varying hypotheses on *zidishu*'s origins. On the history of the banners, see Elliott 2001b, 39–88. Qing Beijing was spatially segregated, with bannermen residing in the Inner City and non-banner populations in the Outer City. Bannermen possessed legal and economic privileges (such as pensions and allotments of land), and as such were seen as a population possessed of wealth and leisure; by the late Qing, however, their social experiences varied widely, which one finds reflected in the *zidishu* literature (see Guan and Zhou 1984, vol. 1, 1–4, Huang-Deiwiks 2000, and Zheng 2020, 103–109).

5 On these gatherings, which existed through the end of the Qing, see Cui 2017, 243–248, and Liang 2018. The earliest source which documents these gatherings is the 1797 *Shuci xulun* 書詞 緒論 (*Treatise on the lyrical art*) by Gu Lin 顾琳, who mentions the widespread popularity of *zidishu* music in the 'last ten or so years' (Gu [1797], 821; more on this text in Section 4). While this would imply that *zidishu* rose to popularity in the 1780s, the earliest dated imprint of *zidishu*, printed in 1756 in Beijing, suggests that the texts already had a significant reading audience in the mid-eighteenth century (on this imprint, titled *Zhuang shi jiangxiang* 莊氏降香 [Lady Zhuang burns incense], see Huang, Li and Guan 2012a, 121–122).

For an overview of *zidishu* authors, see Huang 2012, who estimates that names of authors are identifiable for no more than one hundred of the over five hundred extant texts of *zidishu* (Huang 2012, 4461). In many instances the only information we know about these authors is the aliases that they have left in the texts; their dates and backgrounds (especially of the early authors) are often difficult to ascertain. Figures with known biographical details include one Aisin Gioro Yigeng 奕賡 (1809–1848), twelfth son of Prince Zhuang 莊親王 (Mianke 綿課, 1763–1826), known in *zidishu* texts as 'Helü shi' 鶴侶氏 ('Companion of the cranes'; see Chiu 2018, 236–257, and Huang-Deiwiks 2000, 65–66); another 'Chunshuzhai' 春澍齋 ('Studio of the spring rain'; b. *c.*1800), also affiliated with the imperial clan (Qi 1983, 319–210); and Golmin 果 勒敏 (1834–1900), a Mongolian general, known by the alias 'Xisuzhai' 洗俗齋 ('Studio of the cleansing of worldliness') (Li 2009).

at public venues such as teahouses, and reproduced by commercial print shops and scribal publishers. Perhaps sometime during the nineteenth century, *zidishu*'s popularity spread from Beijing to other northern locales.[6]

In the extant corpus of *zidishu*, our manuscript stands out not only for its early date but importantly for the commentary which it contains from one reader (see Fig. 1). The vast majority of *zidishu* manuscripts extant today do not contain commentary, which is traditionally associated with the classical exegetical tradition and, in the Ming (1368–1644) and Qing (1644–1911) dynasties, also came to be applied to vernacular fiction and drama.[7] The commentary in our manuscript reveals the work of a reader well versed in these traditions, who saw the minor genre of *zidishu* as worthy of literary attention. His preface, appendix, and chapter and marginal comments together frame the text within a larger realm of elite discourses on friendship – a subject befitting the social world of a fashionable, educated young man living in early nineteenth-century Beijing.

Below, I introduce the manuscript, its background, and its physical characteristics, followed by a discussion of its rich commentarial matter with view to understanding the person who wrote them. It is hoped that this modest introduction to one manuscript will broaden our perspective on how elite readers engaged with popular texts, and shed light on the important role played by personal copies in the transmission of *zidishu*.[8]

2 The manuscript

The manuscript is presently held at the Capital Library of China and belongs to the former collection of Wu Xiaoling 吳曉玲 (1914–1995), a major scholar and

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6 On the dissemination of *zidishu*, see Cui 2005, 134–147, and Chiu 2018, 259–304. Besides Beijing, Shenyang (Mukden) was another major site of production of *zidishu* in the Qing, and debate exists as to which city was the predecessor. Among extant *zidishu* imprints with identifiable dates and places of origin, the earliest come from Beijing; one finds imprints from a range of other northern locations including Shenyang beginning in the late nineteenth century (Lu 2018, 106–112).

7 For an overview of the commentarial tradition surrounding fiction, see Huang 2021, Rolston 1990, 3–34, and Rolston 1997, 1–21. I have benefited greatly from the terminology used by David Rolston to describe various kinds of commentarial matter (Rolston 1990, 52–57). On drama commentaries, see He 2021.

8 For a brief overview of these kinds of manuscripts, see Lu 2018, 112–116.

collector of Chinese vernacular literature.[9] Among Wu's notable personal collection, amassed from his decades of residence in Beijing, are seventy-three titles of *zidishu* in eighty-four volumes. The texts reflect *zidishu*'s wide-ranging subject matter, from contemporary city life in the capital to the celebrated stories of drama and fiction. The books also represent the varied channels of *zidishu*'s transmission: there are manuscripts from scribal publishers who specialized in copying entertainment literature for sale, woodblock imprints from commercial print shops, and personal manuscripts copied by Wu and his father. The manuscript presently under scrutiny came to Wu from his middle school teacher Zheng Qian 鄭騫 (1906–1991), also an important scholar of Chinese literature.[10]

The slim volume of forty-three folios, measuring 12.6 cm × 26.9 cm, has undergone substantial preservation treatment, with backing applied to the original folios and rebound with four-hole sewing. While the original cover is lost, the content appears to be intact. The neatly prepared manuscript presents the full text of *Yu Boya shuaiqin xie zhiyin zidishu* 俞伯牙摔琴謝知音子弟書 (*Yu Boya smashes his zither to mourn a friend, a youth book*; hereafter *Smashing the zither*) along with a preface and table of contents at the beginning of the book. The *zidishu* is divided into five chapters (*hui* 回), each five folios long; each chapter is followed by a prose essay (*ping* 評, literally 'comment') in one or two folios, while comments in smaller characters also appear in the spacious top margins of pages, above the main text (see Fig. 1). The manuscript concludes with a sixth 'chapter', which is actually not part of the *zidishu* text but rather an appended collection of maxims on the subject of friendship.[11]

We know the name of the commentator because he recorded his name, date, and location in detail at the end of the preface: 嘉慶二十年歲在乙亥小陽月既望北平王錦雯雨帆氏題於京師之一石山房 'Signed by Wang Jinwen, courtesy name Yufan, of Beiping, at the Rustic Hut of the Single Picul in the capital, on the 16th day of the tenth month of 1815' (see Fig. 2).[12] That Wang gave his true name, followed by his seals, suggests that the preparation of manuscript was a serious endeavor. Given that the entire manuscript is written in the same hand,

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9 The information on the collection below comes from Wu Xiaoling 1982; see also Wu Shuyin 2004.

10 On Zheng, see He [2021]. Zheng was a native of Tieling 鐵嶺, Liaoning, but grew up in Beijing. He was a professor at National Taiwan University 1948–1981.

11 The typical unit of textual division in *zidishu, hui* 回, shares the same character as the 'chapter' in the vernacular short story and novel, but is much more brief, perhaps to accommodate singing. *Hui* can also refer to a 'session' of storytelling performance.

12 CLC, *ji* 401, fol. 4ʳ. While here translated as a unit of weight ('picul'), *shi* 石 can also be interpreted as 'stone'.

including the marginal and chapter comments, we have good reason to believe that it was copied by Wang – a personal commentarial 'edition' – although his exact intentions for it are unclear.[13] The orderly appearance of the writing suggests that it was most likely not a first draft, but rather intended for perusal, whether by Wang himself or by his friends; as we will see later, the comments reveal a curious awareness of a reading audience, drawing the reader into conversation through the evocative subject of friendship.

Being dressed in commentary, our manuscript differs markedly in appearance from many extant manuscripts which, copied with a standard layout, originated from scribal publishers in Qing Beijing that specialized in the handwritten production of *zidishu*. These shops, which produced and sold manuscripts of a variety of entertainment literature, dominated the book market of *zidishu* in the Qing dynasty.[14] Manuscripts which originated from these shops have a long, vertical format, with verses written in four columns to a page. Chapters are labeled on the first folio, typically above the first line, while the character *wan* 完 ('complete') often appears at the end of the book. Typically, these manuscripts also feature L-shaped marks throughout the text, possibly to assist reading or singing (see Fig. 3).[15] Being the product of professional scribes, the manuscripts are copied in practiced hands. That they are products intended for sale is indicated by seals of scribal publishers and prices labeled on the title pages.[16]

It is certainly possible that Wang Jinwen's personal manuscript is based on such a copy – in his preface, Wang divulges that he had made his annotated copy based on an existing book he bought, although he does not give any other

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13 It is possible that the copyist is not the author of the preface, though the presence of the seals would suggest otherwise. The characters that are occasionally skipped and inserted on the side by the copyist in his marginal comments suggest that, though neatly prepared, the manuscript is a not pre-print copy (nor does Wang mention any intentions to print it in his preface).

14 See Lu 2018, 104–109; on one prolific scribal publisher and that publisher's manuscript products, see Lu, forthcoming. It is not clear when these shops initially came into being, but extant sales catalogs from them can be dated to the nineteenth century on the basis of stories they contain which refer to contemporary events.

15 The L-shaped marks appear at the bottom of pages every 8–10 lines, marking subdivisions within each chapter. Their actual function in the context of singing and reading *zidishu* is subject to investigation. Of note is that the L-shaped marks are not exclusive to manuscripts of *zidishu* from scribal publishers, but also appear in some personal manuscripts, although not CLC, *ji* 401.

16 For images of such title pages, as well as pages inside *zidishu* manuscripts from scribal publishers, see Lu, forthcoming.

information about his source.[17] Indeed, *Smashing the zither* appears to have been one of the most beloved stories of the *zidishu* genre, attested by no less than nineteen extant copies from varying sources, including at least two from scribal publishers.[18] Comparison between Wang Jinwen's manuscript and one likely from a scribal publisher reveals a number of similarities in the visual organization of the *zidishu* text, with four columns to a page, corresponding page breaks, and similar, if not completely identical texts (Fig. 3).[19] Yet Wang's manuscript is also noticeably different: there is copious space in the top margins for marginalia; section titles and pagination appear in tiny characters on the side margins of pages; the verse is uninterrupted by L-shaped marks; and there is no '*wan*' 完 character to mark the end of the *zidishu* text. Tellingly, the paper used as writing support also differs from the thin variety one commonly finds in manuscripts from scribal publishers.

Whatever the basis of Wang's manuscript was, he transformed it in the process of copying, presenting the *zidishu* text anew as an object of literary scrutiny and dressed in the trappings of a fine book. The verses making up the main text are presented almost in the manner of calligraphic art, in vivid contrast to the neatly punctuated preface, marginalia and chapter comments.[20] The beginning of each chapter, too, is uninterrupted by the usual chapter title, leaving only the

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17 CLC, *ji* 401, fol. 3ᵛ.

18 Judging by its large number of extant copies, *Smashing the zither* makes it into the top ten titles of the *zidishu* literature. A survey of extant *zidishu* (587 titles in total) reveals between one and thirty-five extant copies for each title, with the average being 5.24 copies (Lu 2018, 103). See Huang, Li and Guan 2012a, 25–28, for a list of the extant copies of *Smashing the zither*. The majority are manuscripts, but there are four woodblock imprints representing two editions (a 1907 edition from Tongletang 同樂堂 and an undated edition from Beijing's Jingyitang 經義堂). Of the two copies from scribal publishers, one comes from Baiben Zhang 百本張 ('Hundred volumes Zhang') and one from Jujuantang 聚卷堂 ('House of accumulated scrolls'). Both are in the collection of the Chinese National Academy of Arts 中國藝術研究院, which is not presently accessible to the public. I have thus based the following comparison on a published facsimile of a manuscript in the collection of the Academia Sinica in Taipei, which, while missing its original title page, shares the features of manuscripts from scribal publishers (Fu Sinian Library, T10-123; the facsimile is published under the title 'Shuaiqin' 摔琴 in *Suwenxue congkan* 俗文學叢刊 (500 vols), Taipei: Xinwenfeng, 2001–2004, vol. 384, 373–422).

19 Compare with Fig. 1. Many (but not all) of the breaks within lines (when some characters are written in smaller size to fit into the seven-character line) are the same in the two manuscripts. Some character variants are present.

20 Works of calligraphy are typically not punctuated, while reading matter often is. Of course, the verse here is intended to be read (and verse is usually unpunctuated in books of *zidishu*).

spacious margins to announce the flowing lines of verse and a dramatic reading experience about to unfold.[21]

3 The story, preface, and commentary

The story from which the manuscript takes its title, *Yu Boya smashes his zither to mourn a friend*, centers on the friendship between two men of Chinese antiquity, Zhong Ziqi 鍾子期 and Yu Boya 俞伯牙, the latter of whom was a master of the *qin*.[22] According to legend, Ziqi understood Boya like no other, perceiving Boya's every intention with his music. It is in association with this story that the Chinese term *zhiyin* 知音 – roughly translatable as 'one who understands the tones' – comes to stand for the best of friends, while *yin* in its full range of connotations includes not only musical sound but also the deep resonances of the heart-mind.[23]

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21 In a rare manner for *zidishu*, the chapter titles are listed together in a table of contents at the beginning of the book (Fig. 4). The two-character titles capture the plot with great poetic economy and echo the ways that dramatic scenes are often named: 'Meeting over the zither' 琴遇 (The first chapter); 'Sealing the bond' 敘盟 (The second chapter); 'Woeful parting' 情別 (The third chapter); 'Fulfilling the promise' 踐約 (The fourth chapter); and 'Smashing the zither' 摔琴 (The fifth chapter). In manuscripts from scribal publishers, one typically does not find such poetic titles but simply numbered chapters.

22 The *qin* is an instrument with usually seven (occasionally five or nine) strings strung over a long wooden sound box, played by plucking the strings using the right hand while fingering is applied with the left hand. Here I have employed the common, if somewhat liberal translation of *qin* as 'zither'; alternative translations ('lute' and 'psaltery') are discussed in van Gulik 1969, viii–ix, n. 4–5. While in the *zidishu* (and the early seventeenth-century short story described in the following paragraph) the protagonists are known as Yu Boya and Zhong Ziqi, in earlier texts the former is known simply as Bo Ya, and the latter sometimes as Zhong Qi. For the sake of consistency, I refer to the two henceforth as 'Boya' and 'Ziqi'.

23 On this story and early Chinese music theory, see Berthel 2016. Versions of the story appear in the *Liezi* 列子 (date uncertain), *Lü shi Chunqiu* 吕氏春秋 (*The annals of Lü Buwei; c.* 239 BCE), and *Han shi waizhuan* 韓詩外傳 (*The Han commentary on the Book of Odes, c.* 150 BCE), the last two of which describe Boya to have broken his *qin* upon Ziqi's death, though none of these accounts mention the term *zhiyin*. The earliest source which employs the term in connection to the story may be Cao Pi 曹丕 (187–226)'s 'Yu Wu Zhi shu' 與吳質書 ('Letter to Wu Zhi'), collected in the influential sixth-century compilation *Wen xuan* 文選 (*Anthology of fine writing*), which comments on Boya's renunciation of music-making as an act of grief for the loss of a rare, true friend ('*zhiyin*'). On these early sources, see Nylan 2001, 106–107, and Shields 2015, 47–48. In texts from before the Han dynasty (202 BCE –220 CE), the term *zhiyin* referred primarily to the understanding of music, a meaning which it retained through the Tang dynasty (618–907),

The story comes to us in various forms, but the probable direct source for the *zidishu* is the version contained in the early seventeenth-century short-story collection *Jingshi tongyan* 警世通言 (*Words to admonish the world*), compiled by Feng Menglong 馮夢龍 (1574–1646), from which at least three other works of *zidishu* have been adapted.[24] In this regard, our *zidishu* text resembles many other works of the same genre in deriving from vernacular fiction, while the verse form itself also draws on a long poetic tradition.[25] While we do not know when this particular text was written or by whom, it exhibits the skillful blend of colloquial expressions and classical cadences which one finds in the finest works of the *zidishu* literature. Dramatized into scenes (Fig. 4), and teeming with the sounds and images of classical poetry, the lyrical narrative brings to new emotional heights a celebrated story of friendship found and lost.

As the story goes in the *zidishu*, Boya was a minister in the ancient kingdom of Jin, and Ziqi was a rustic woodcutter in the kingdom of Chu. One autumn night, while traveling by boat through the Chu countryside, Boya took out his *qin* to play under the moon, only to be overheard by Ziqi on the shore. Summoned to the minister's boat, Ziqi revealed himself to be wonderfully versed in the art of the *qin*, and was able to perceive from Boya's music what he had on his mind – first the towering mountains, then the flowing river. Barring worldly formalities, the two became the best of friends. They made a vow to meet again at the same place a year later, but Boya would return to find himself alone under the moon. Meditating on his boat deep in the night, Boya is visited briefly by

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even as it came to be used increasingly in the sense of 'close friend' as seen through poetry (see Shields 2015, 47, n. 51).

24 See Chen 1977, 27–30, and Yin 2017. Compared to the classical texts cited in the previous note, Feng's vernacular short story is a much more elaborate version, and may itself have drawn on earlier sources from the Ming dynasty, including a vernacular story and a *qin* song (see Hanan 1981, 229, n. 15, and Wu Zeyuan 2020, 53, n. 16; in the latter, pp. 51–88 contain a detailed reading of the story alongside late imperial Chinese discourses on *qin* music). See Wu Shuyin 1994, 1–13, for an annotated version of this story. For a list of translations into European languages, see Bishop 1956, 129–130; see also the translation in Yang and Yang 2005, 7–20.

25 See Qi 1983, 321–323. Qi points out *zidishu*'s affinities with a variety of verse genres, from narrative ballads to classical poetry, and makes note of *zidishu*'s tremendous formal flexibility through the use of a basic seven syllable line padded with any number of additional syllables (a technique known to the writing of drama and *ci* poetry). Notably, Qi also observes *zidishu*'s affinities with classical prose writing in the form of the 'eight-legged prose essay' (*baguwen* 八股文) (323–325).

the ghost of Ziqi, who comes to bid him a final farewell.[26] In the last scene, a devastated Boya meets Ziqi's aged father onshore, who leads him to visit Ziqi's grave. After playing his *qin* one last time, Boya smashes it against the stone terrace – upon the loss of one who truly understood him, he would never play again.

The bond of music, the poignant turn of events, the idealized image of a friendship formed on intuitive understanding – these have all contributed to the enduring legacy of the story of Boya and Ziqi in literati culture.[27] In traditional Chinese literary criticism, the deep, intuitive understanding of another's mind is often extended to the experience of reading itself, where many a commentator has sought to authorize his own readings of a text with the claim of true understanding.[28] In our manuscript, Wang Jinwen applies serious reading to an unusual genre, drawing inspiration from the commentarial tradition as well as from a range of anecdotal literature on friendship. Combining literary criticism, philosophical contemplation, and personal reflections, the preface and comments interspersed throughout the manuscript fashion an image of Wang as a reader both erudite and full of feeling.

Wang's preface begins with expounding the importance of friendship among the five relationships (*wu lun* 五倫) of Confucian ethics. These are the relationships between ruler and subject, father and son, husband and wife, elder and younger brother, and that between friends; Wang observes that, while friendship feels out of place among them, it is actually crucial, for each of the pairs in the preceding relationships can in fact be friends. Wang goes on to cite the Italian Jesuit Matteo Ricci (1552–1610) on a friend being a second self – this would have come from *Jiaoyou lun* 交友論 (*De Amicitia*), the missionary's famed treatise on friendship, first printed in 1595 in Chinese and widely influential in elite circles in succeeding centuries – and notes appreciatively that Ricci 'understood deeply the meaning of 'one who knows the self'" (*shen ming zhiji zhi jiezhe ye* 深明知己之解者也).[29] Then, citing 'a person of former times' (*xiren* 昔人),

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26 This scene does not appear in the short story. There is another scene unique to the *zidishu*, which depicts Ziqi's conversation with his parents after his initial encounter with Boya; there his filiality is emphasized.

27 Lam 2007, 70–73, discusses the story in connection to music and male friendship in the Ming. Also see Wu Zeyuan 2020, 42–74. The tradition of *qin*-playing itself has a long history of associations with literati culture; on this topic, see van Gulik 1969, Watt 1981, and Yung 2017, among others.

28 Huang 1994, 53–55; 61–66.

29 The term '*zhiji*' 知己 ('one who knows the self'), like '*zhiyin*', denotes the best of friends. Wang does not explicitly cite the *Jiaoyou lun* in his preface, but may take the source to be

Wang proceeds to elaborate on how quick friendships often turn out to be disastrous, as the joys of initial association become replaced by doubt and hatred, and intimate friends end up as foes. Here Wang has in fact borrowed half the preface of a late Ming collection of erotic short stories, *Huanxi yuanjia* 歡喜冤家 (*Lovers and foes*).[30] He deftly weaves the impassioned exposition on the fickleness of romantic relationships into his remarks on the decline of 'the Way of Friendship' (*you dao* 友道) in the present world, where relationships are governed by the desire for profit and by self-interest. In the face of easy friendships, laments Wang, one hardly comprehends the rarity of encountering one who genuinely understands the self – a truth attested by the tale of *Yu Boya smashes his zither to mourn a friend*. He concludes the preface with a personal touch:

予幼而失學。於一切深文奧旨。不能明悉。嘗自撰一聯云。詩書門外漢。市井箇中人。雖自賦庸愚。然每於稗官野史。凡無違於名教者。必細心玩味。偶購得此書。見其事可傷心。文堪寓目。[...] 閱之使人感慨難釋。故不嫌鄙陋。謬加評點。貽笑大方。諧鐸有云。非敢放顛。亦非作達。然凡我同心。見此書者。幸憐[予]之苦心。諒予之痴態可也。

I did not complete my schooling in my youth, and am thus unable to comprehend profound essays and abstruse treatises. I have once composed a couplet [to describe myself]: 'An outsider to the world of letters / I'm an insider of the markets'. Though I claim to be vulgar and ignorant, I would time and again [come across] the wild histories of storytellers, and so long as they do not betray the Confucian teachings, I would linger over them with care.[31] By chance I purchased this book; I saw that its story is capable of moving the heart to sorrow, and that its writing is worthy of perusal. [...] Reading it, one is full of uneasy feelings that do not give way to sighs. Thus I didn't care for my own humble station and presumed to add commentary to the text, all the while making a fool of myself. As *The*

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obvious to the reader. On the reception of this work in China, see the introduction in Billings 2009; Hosne 2014; Vitiello 2011, 85–89. Ricci's first and most popular work in Chinese, it comprises a diverse collection of sayings on the subject of friendship. The quote on a friend being one's second self is part of the first maxim, and comes from Aristotle (see Billings 2009, 158; introduction, 26–28).

30 See Hanan 1981, 161 and 235, n. 62, and Lévy 1998 on this collection, whose preface is dated 1640 and signed with the name 'The Reclusive Fisher of West Lake' (Xihu yuyin 西湖漁隱). The collection has over a dozen extant editions from the Ming and Qing, printed under various titles; a facsimile reprint of the 1640 edition can be found in the *Guben xiaoshuo jicheng* 古本小說集成 (Shanghai: Shanghai guji chubanshe, 1990), vols 62–63. Hanan speculates that its author was a Gao Yiwei 高一葦 of Hangzhou. That Wang deliberately avoided citing his source may be due to its erotic content.

31 'The wild histories of storytellers' refers to the trivial literature of fiction and its milieu. In the Chinese term *baiguan yeshi* 稗官野史, *baiguan* ('storyteller') refers literally to minor officials in early dynastic times who purportedly collected stories from the streets. He 2013, 3, translates the term *bai* as 'huckster' in reference to its root meaning as rice-like weeds.

Joke Bell has said: 'it is not that I dare to be so audacious; nor am I feigning my disregard'.[32] To everyone who is of the same mind as myself and reads this book, please pity the pains that [I] have taken, and forgive me for my mad act.[33]

In this preface, Wang emerges as both worldly and sentimental, self-professedly ignorant yet surprisingly well-read. In spite of his apologies for his humble educational background, his apparent learning emerges through the fluent writing in classical Chinese, while the texts quoted betray an intimate familiarity with the literature of the late Ming, a time when friendship came to the forefront of both socio-political discourse and literary representation.[34] In many ways, the seventeenth-century short story on which the *zidishu* is based exemplifies the ideas of egalitarian friendship and authenticity of feeling which informed philosophical discussions of its time. Wang's familiarity with this earlier literature emerges through the texts he quotes in his preface and commentary; employing the rhetoric of *qing* 情 ('feeling') and *li* 理 ('principle'), and fashioning himself as a reader of feeling, he emerges at once as a connoisseur of late Ming literature and a nostalgic reader of his own times.[35]

    The wide range of texts Wang quotes reveals his familiarity with the spectrum of anecdotal literature that informed the cultivated intellectual life. These include the works of some of the most prominent men of the Ming and Qing; in their informal writings, they displayed their knowledge of diverse subjects, from history to hearsay, and led the way in literary fashion and debate. Besides the late eighteenth-century *Joke Bell* cited by Wang in his preface, Wang cites two other contemporary anecdotal collections, the *Xianqingtang ji* 閒青堂集 (*Recollections from the Leisurely Blue Hall*) of Zhu Lunhan 朱倫瀚 (1680–1760) and the *Yuewei caotang biji* 閱微草堂筆記 (*Random jottings at the Cottage of Close Scrutiny*) of

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32 This is a 1791 collection of humorous anecdotes by the dramatist Shen Qifeng 沈起鳳 (b. 1741).

33 CLC, *ji* 401, fol. 3ʳ⁻ᵛ. I inserted the character in brackets, which would have appeared on a missing part of the page.

34 See McDermott 1992; Huang 2007; Billings 2009, 22–39; Vitiello 2011, 83–92. In the re-evaluation of Confucian ideas by scholars of this time, some highlighted friendship's foundational place in the five cardinal relations, while others argued for friendship founded on shared ideals. Qing scholars continued to wrestle with the tensions between equality and utility, and between friendship and kinship and other social relations (Kutcher 2000, 1622–1625); this later intellectual context remains to be more fully explored.

35 For example, see CLC, *ji* 401, 3 *hui*, fol. 1ᵛ, marginal comments. In 5 *hui*, fol. 6ᵛ, chapter comment, Wang quotes four lines of verse from the short story, uttered by Boya upon smashing the zither; he does not refer explicitly to the story as his source, but rather describes it as 'the *qin* song of Boya' (*Boya qin ge* 伯牙琴歌).

Ji Yun 紀昀 (1724–1805).[36] The appendix at the end of the manuscript, titled 'Axioms on making friends discreetly, compiled by The Banal One' (*Yongxing bian shenjiao geyan* 庸行編慎交格言), itself employs the anecdotal form of maxims (Fig. 5). In five folios, it contains a feast of quotations gathered loosely around the theme of friendship, drawn from a range of sources including Matteo Ricci's *Jiaoyou lun* and the anecdotal writings of prominent Ming scholars such as Xue Xuan 薛瑄 (1389–1464) and Chen Jiru 陳繼儒 (1558–1639).[37]

The collage of voices that can be found in Wang's commentary includes not only anecdotal literature, but also songs, proverbs, colloquial sayings, and contemporary *zidishu*.[38] It appears that Wang was not lying when he reveals his keen interest in the 'wild histories of storytellers', which alludes to fiction and other minor genres. His undertaking of writing commentary on a work of *zidishu*

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36 Zhu Lunhan served as a lieutenant general in the banner system during the Qianlong era (1736–1795) and was an accomplished painter, calligrapher, and poet. Ji Yun, prominent scholar-official, is best known as the chief editor of the imperially commissioned *Siku quanshu* 四庫全書 (*The complete library of the four treasuries*) in the 1770s. In a chapter comment (5 *hui*, fol. 6ʳ), Wang cites 'poems mourning friends' (*wanyou shi* 挽友詩) from each of the two abovementioned collections. He appears to have confused *Ru shi wo wen* 如是我聞 (*Thus have I heard*), the second compendium of anecdotes in Ji's voluminous *Random jottings*, with a different compendium in the same collection, the *Luanyang xiaoxia lu* 灤陽消夏錄 (*Record of spending the summer at Luanyang*) (Wang cites the former as his source but the verse actually comes from the latter). The translations of the titles of Ji's works here are borrowed from Chan 1998, 12–13.

37 For the most part, Wang does not identify the sources he quotes, though in two instances he does name Chen Meigong 陳眉公 (Chen Jiru) and a Tiansui xiansheng 天隨先生. Through searching the *Scripta Sinica* database (<http://hanchi.ihp.sinica.edu.tw/>, accessed on 15 Nov. 2020), I found that some of the quoted 'axioms' correspond with texts in various Ming editions – *Xinke housheng xunzuan* 新刻厚生訓纂 (*The newly carved compendium of advice for preserving longevity*); *Xue Wenqing gong dushu lu* 薛文清公讀書錄 (*Reading diaries of Mr. Xue Wenqing* [*Xue Xuan*]); Ricci's *You lun* 友論 (*Treatise on friendship*); and the *Ande zhangzhe yan* 安得長者言 (*The elder's words*) attributed to Chen Jiru. Whether Wang gathered these passages from an intermediate source is subject to investigation. I suspect that a number of other 'axioms' alluding to romantic relationships come from fiction commentaries; this is a topic for further investigation.

38 Often Wang does not cite the sources of his quotations, but rather leads them with an introductory phrase such as 'the ancients have said' (*guren yun* 古人云), 'a former person has said' (*xiren yun* 昔人云), 'someone has said' (*huo yue* 或曰), 'as the common saying goes' (*suyu yun* 俗語云), 'as the ancient saying goes' (*guyu yun* 古語云), or 'an ancient song has said' (*guqu yun* 古曲云). Twice in his comments, Wang cites lines from *Qiao dongfeng* 俏東風 (*The fair east wind*), a romantic story that was among the earliest works of *zidishu* to have become popular in the capital (4 *hui*, fol. 3ʳ, marginal comment, and 5 *hui,* fols 6ᵛ–7ʳ, chapter comment; in these instances he does cite the source). On this *zidishu* text, see Huang, Li and Guan 2012a, 348.

may well have been inspired by this literature, which by the nineteenth century had a well-developed tradition of being read alongside commentary. In many a printed work of fiction and drama from the Ming and Qing, comments may be found interspersed throughout the pages, where commentators asserted their own voices through remarks on the skillfulness of the writing, the plot and characters, or even other literary works and topics of intellectual debate.[39] Wang's familiarity with this tradition of literary criticism can be seen in a number of examples, such as in a chapter comment which likens lines from the *zidishu* to those from *Xixiang ji* 西廂記 (*The story of the western wing*), a classic work of drama from the Yuan dynasty popularized as a kind of lovers' bible in succeeding centuries:[40]

> 不如不見。免得牽連。二句真乃絕世妙文。記得西廂記有云。你也掉下半天風韻。我也
> 拋卻萬種思量。此皆一樣筆法。［…］

> 'It would have been better had we not met at all; that saves one from [a certain] painful longing.' These are truly marvelous lines without equal! I remember that *The story of the western wing* has said: 'You've thrown down half a heaven of beauty, / And I've tossed away a thousand kinds of worry.' The method of writing [*bifa*] is the same [...].[41]

What stands out about the commentary in the manuscript, aside from remarks on the literary aspects of the *zidishu* text, are the personal responses and ruminations which Wang records as a reader. Sympathizing with the fate of the characters in the story, Wang frequently reveals himself to be 'shedding tears' (*luo lei* 落淚); from time to time, he also expresses his personal yearning for friends of true understanding. In these moments he appears charmingly personal while

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39 David Rolston traces three stages in the development of fiction commentaries, including an influential final stage taking place in the last two-thirds of the seventeenth century, when commentators not only wrote commentaries but also took editorial control of the texts they commented on (Rolston 1997, 1–10). Yuming He 2021 discusses the commentarial culture around drama, whose commercially printed editions proliferated in the late sixteenth and early seventeenth centuries; she notes how, in this publishing context, 'the provision of commentarial notes became part and parcel of making a book' (180).

40 These lines come from a moment in the play when the male protagonist, Scholar Zhang, longingly recalls his first encounter with the female protagonist, Yingying, at the temple; her glance at him upon her departure threw him head over heels.

41 CLC, *ji* 401, 3 *hui,* fol. 6$^{\text{r–v}}$, chapter comment. The lines quoted from *The story of the western wing* seem to be a variant of the received text; possibly, Wang is citing them from memory. The translation in West and Idema 1991, 199, is: 'You've thrown down half a heaven of beauty, | And I've picked up a thousand kinds of worry' (In the translation above, I have changed the verb in the second line according to the text given in the manuscript).

curiously attentive to potential readers. In the scene 'The bond', just before Boya and Ziqi seal their friendship, Boya asks Ziqi his age, and Ziqi says that he is twenty-seven. Wang divulges in his marginal comment above the main text:

看此書時。予年正二十有七。因思子期為古之名賢。予乃今之俗子。固不能如古人之奇遇。然亦有好俗之友。故每逢會及。雖不能言古人之同調。亦能有心心相照。語語投机之樂。即有依依不忍暫離之意。恐過此情緣。難期再會。人生壽夭。寔難預料。因自警之餘。願告普天下之好友者。如遇其人。不可捨之而去。務須以伯牙為前車之鑑。

As I am reading this book, I am exactly twenty-seven years old.[42] I've been thinking, Ziqi was a man of virtue famed in antiquity, while I am merely a crude man of the present, so naturally I can't have the marvelous encounters of the ancients. But I, too, have friends who are fond of my crudeness, so that every time we meet, though we can't speak of having the same sentiments as the ancients, we can still share the joys of heartfelt understanding and the happy meeting of words. It follows that there arises the feeling of not bearing to part, for fear that when the present gathering is dispersed, it shall be hard to meet again. Life and death are truly hard to predict. And so, besides cautioning myself, here is to all who are fond of friends: if you encounter the person, do not leave him behind; you must take Boya's case to be a lesson.[43]

In spite of the distinct voice which emerges through comments such as this one, we do not know anything about Wang besides what he divulges in the manuscript – that he was a resident of the capital in the Jiaqing era (1796–1820) and a native of Beiping 北平.[44] Were he indeed twenty-seven at the time of copying the book, he would have been born around 1790, in the last years of the Qianlong era (1736–1795) during the high Qing and the advent of *zidishu*'s heyday in the city. We might ponder Wang's curious couplet in the preface describing himself as being 'an insider of the markets' while an 'outsider to the world of letters'. Is it simply part of the humble self-image he affects, just as he speaks elsewhere of his own 'worldliness'? Could this couplet allude to his involvement in the book trade, playing on the image of bookdealers as merchants of culture who are themselves uncultured? If so, this may explain his appetite for 'the wild histories of storytellers' – popular sellers of the book market – and may even suggest a motive behind the manuscript he prepared.

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42 By our count he would be twenty-six years old; the age given in premodern Chinese texts typically includes an extra year from when a person is born, to account for time in the mother's womb.

43 CLC, *ji* 401, 2 *hui*, fol. 5ᵛ, marginal comment.

44 It is not clear to me whether this 'Beiping' in fact refers to Beijing. Beiping was the name of the capital during the fourteenth century and in the Republican era (1911–1949), but it can also refer to places in Hebei and Liaoning provinces.

We have nevertheless no direct information on Wang's livelihood, the book he had bought and copied from, or his exact intentions for the finely prepared manuscript. But surely he was aware of a community of readers who, like himself, enjoyed reading, writing, and pondering, who sought sympathetic company in reading as in life, and who were 'fond of friends.'

4 For further study

While Wang Jinwen presents a fully guided reading of *Yu Boya smashes his zither to mourn a friend*, it is notable that his comments do not refer to the singing of *zidishu*, which had come into vogue in Beijing's elite circles during the late eighteenth century. A contemporary native of the capital, Gu Lin 顧琳, mentions *Smashing the zither* in his *Shuci xulun* 書詞緒論 (*Treatise on the lyrical art*) of 1797, a sophisticated text in classical Chinese presenting *zidishu* as an elegant art of performance.[45] In a series of essays, drawing on an earlier tradition of informal prose writing, Gu applies the language of drama criticism to *zidishu*, touching on aspects from taste and aesthetics to instrumental accompaniment and the articulation of the voice. The final section is devoted to 'establishing clubs' (*li she* 立社) – elegant gatherings of small groups of friends who would sing for each other.[46]

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45 Gu [1797], 831. Like Wang Jinwen, Gu presents his text in a carefully copied manuscript, accompanied by a preface and commentary – in this case penned by a friend of Gu's who similarly dabbled in fashionable literary circles, one Li Yong 李鏞 of Tieling 鐵嶺, Liaoning. By Li's description, 'Sir Gu is a fashionable gentleman, who pursued the miscellaneous arts in his youth and dropped his studies; when he grew old, he regretted it greatly, and resolvedly pushed aside all worldly distractions to focus on writing, and has since obtained many results [...].' 顧子，倜儻士也，幼騖雜技，廢讀，長頗悔，力摒一切煩囂，矢志筆墨，邇來多所獲。 [...] (Gu [1797], 818). Li's preface is followed by Gu's own, signed with Gu's seals (facsimile in Guan and Zhou 1984, vol. 1); there Gu divulges that storytelling is a great hobby of his, and that, while he hardly aspired to officialdom, he found his monthly stipend to be sufficient to support his family. This suggests that he was a bannerman of at least middling rank. Guan and Zhou 1984 contains a typeset version of the entire text of *Shuci xulun* with its prefaces and commentary, along with facsimiles of two folios from the beginning of the manuscript, but does not give further information as to the whereabouts of the book.
46 See Gu [1797], 829–830. In Gu's vision, such clubs should not be raucous gatherings, but rather serious, elegant events, made up of a small core group of close friends and with the singing of *zidishu* at the center. Gu suggests that these groups be held every month or eight times a year, with a rotating leader who is in charge of collecting money from group members to cover the costs of wine and food.

Whether these clubs had also facilitated the reading of *zidishu* – and just how the social worlds around *zidishu* changed over time – are questions that remain to be explored. Wang Jinwen's manuscript draws our attention to a large and lasting realm of private reading and writing, through which *zidishu* texts continued to be transmitted alongside their lives in performance. In the early decades of the twentieth century, as the songs faded from the capital's ears, readers continued to copy, compile, and comment on the texts, which may account for the substantial numbers of extant manuscripts from this time.[47]

Smashing the zither appears in the Republican-era (1911–1949) collection of another Beijing resident, a Sanwei shi 三畏氏 ('Thrice-reverent one') of Jintai 金臺, who took great pains to assemble the scattered texts with the help of a friend and fellow collector.[48] The visible original bindings of the manuscript indicate its probable origin among Beijing's scribal publishers of an earlier era.[49] By their time, the two collectors tell us, the elegant songs had long fallen out of fashion, and the once ubiquitous books were hard to find. Yet their prefaces reveal their solace in having found each other; in his preface, Sanwei shi further expressed his wish to print the collection, so as to make it known to others who shared his love.[50] While *zidishu* belonged to a bygone era, then, the hope for friendship did not fade. In reading and collecting, one finds a community of like-minded others, and continued hope for true understanding.

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47 Much remains to be understood about the decline of *zidishu*, commonly thought to have taken place at the end of the Qing dynasty, when it came to be replaced by other popular genres of performance (see Cui 2005, 31–34). The large numbers of extant books of *zidishu* that date to this time and beyond call for further study. For a preliminary discussion, see Lu 2018, 112–116.

48 See the preface by Sanwei shi, dated 1922, in *Lütang yinguan zidishu xuan* 綠棠吟舘子弟書選 (*A selection of youth books compiled by the Poetry Studio of the Green Pear Trees*), Capital Library of China, *ji* 己 486, fols 2ʳ–3ᵛ, which appears among nine folios of prefatory writings bound together with a motley mix of six *zidishu* in a composite volume (the prefatory writings are reproduced in Huang, Li, and Guan 2012b, vol. 10, 4455–4460). 'Sanwei' was an alias of Yunhe 蘊和 (b. 1868), a Manchu writer and collector who served in the mansion of Prince Gong 恭 during the Qing dynasty; on his life and works, see Li 2020. 'Jintai' as a place name commonly refers to Beijing; the aforementioned Gu Lin also signs himself as a native of Jintai.

49 The manuscript appears as part of a composite book, along with five other items which would have originally been separate books; the original binding in green and red threads resembles that of manuscripts from the scribal publisher Jujuantang, and reveals that the text was originally copied into two volumes. It is not clear to me whether Sanwei shi decided to bind all these items together or whether this took place at a later time. His preface indicates that he had at one time assembled one hundred *zidishu*, but these appear to be the only ones extant.

50 CLC, *ji* 486, fol. 3ᵛ.

Acknowledgements

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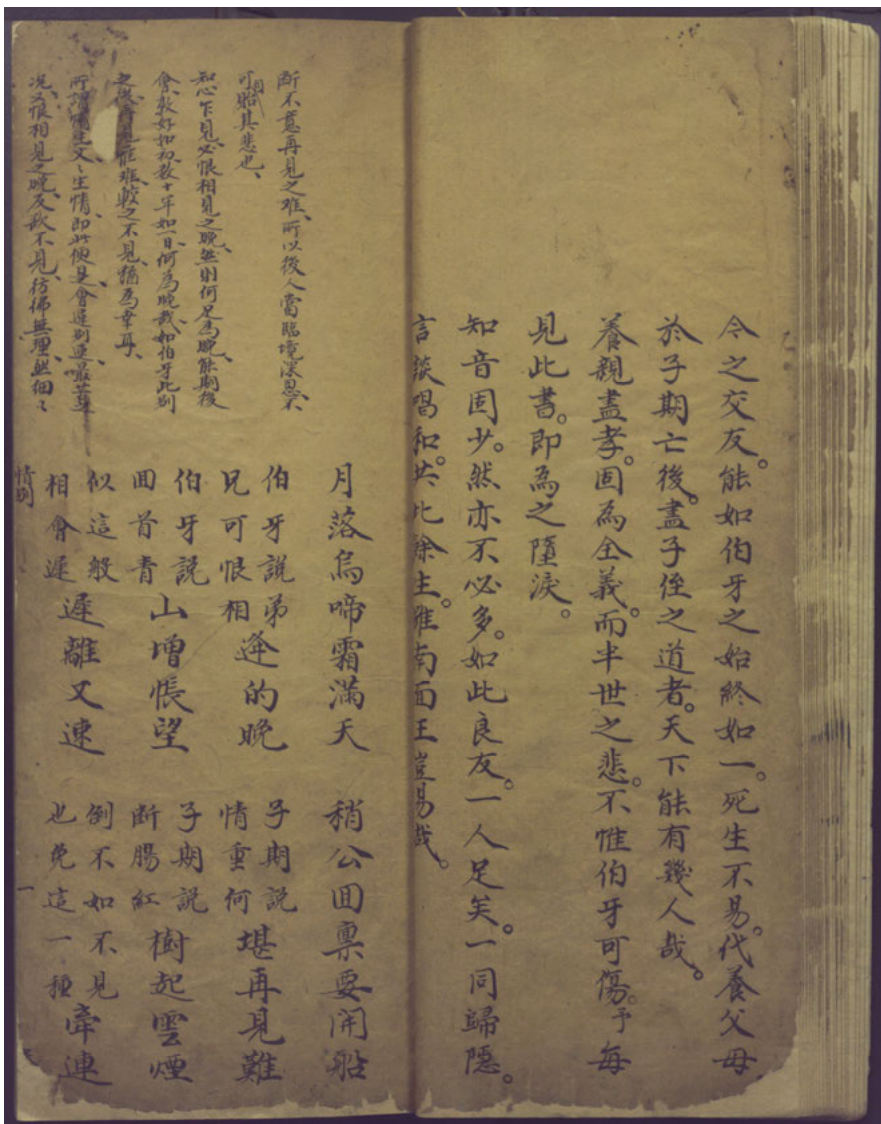
Fig. 1: Capital Library of China, *ji* 己 401, fols 18ᵛ and 19ʳ (right: end of chapter comment to Chapter 2; left: beginning verses of Chapter 3, with marginal comments at the top). Courtesy of the Capital Library of China, Beijing.

Fig. 2: Capital Library of China, *ji* 己 401, fols 3ᵛ and 4ʳ (right to left). From the preface signed by Wang Jinwen, with his seals. Courtesy of the Capital Library of China, Beijing.

Fig. 3: Fu Sinian Library, A T10－123, fols 9ᵛ and 10ʳ (right: end of Chapter 2 verses; left: beginning verses of Chapter 3; note L-shaped mark near the bottom left corner). Courtesy of the Institute of History and Philology, Academia Sinica.
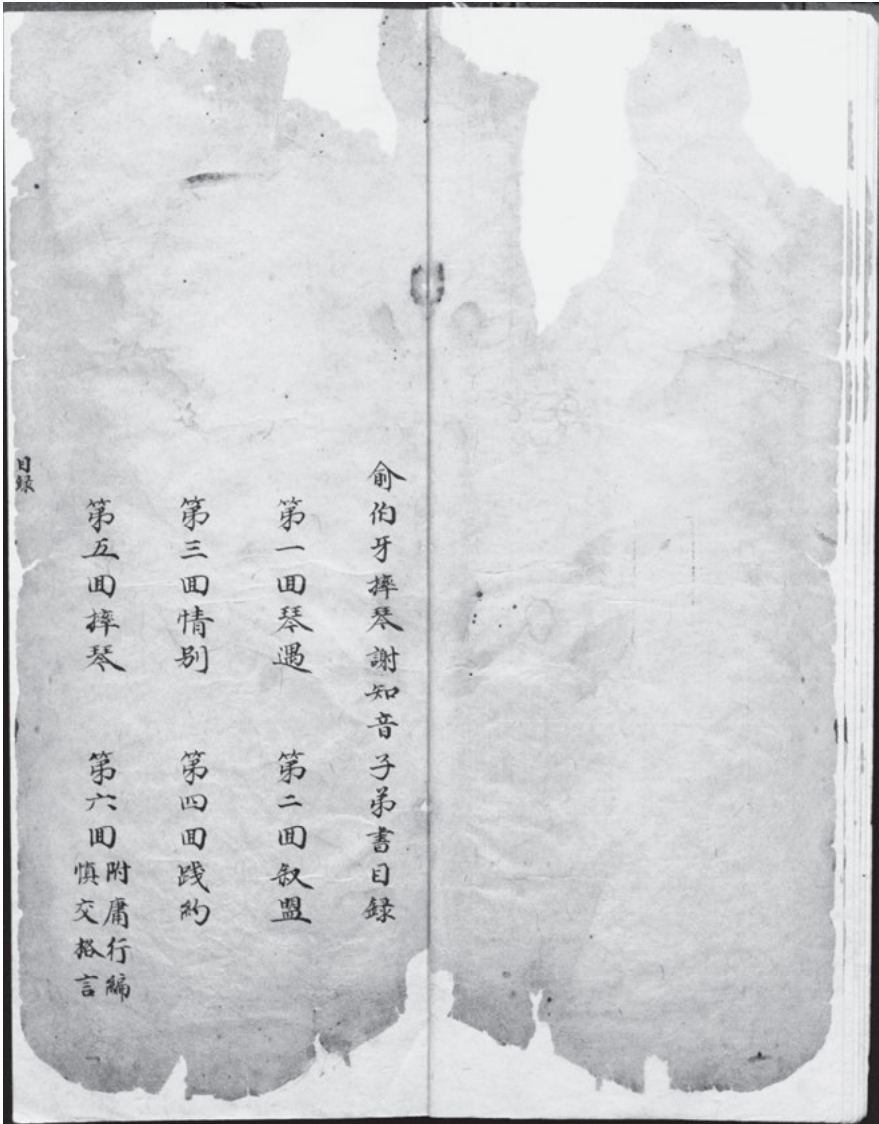
Fig. 4: Capital Library of China, *ji* 己 401, fols 4ᵛ and 5ʳ (right to left; left: table of contents). Courtesy of the Capital Library of China, Beijing.
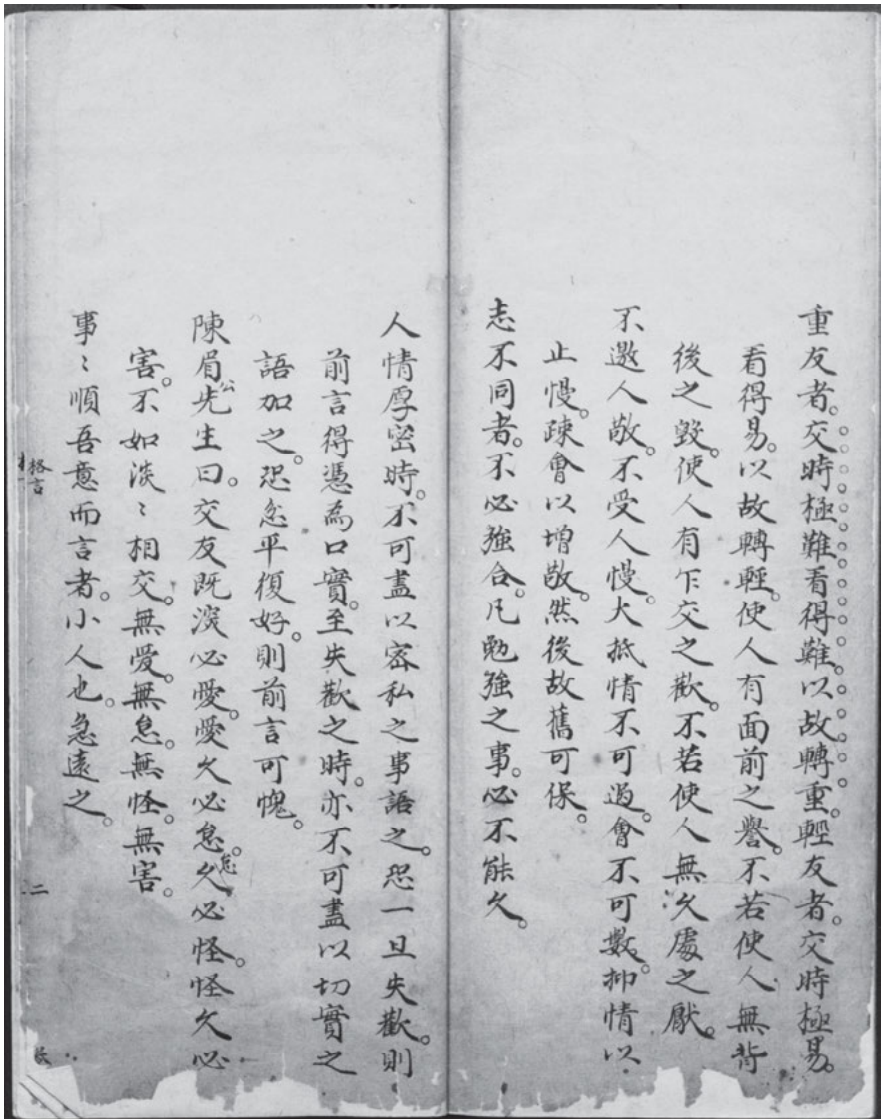
Fig. 5: Capital Library of China, *ji* 己 401, fols 39ᵛ–40ʳ (right to left), from the appendix, 'Axioms on making friends discreetly, compiled by The Banal One'. Courtesy of the Capital Library of China, Beijing.

Charles Melville
On Some Manuscripts of Hatifi's *Timurnama*

Abstract: The versified 'history' of Timur (Tamerlane) by the Persian poet 'Abd-Allah Hatifi (d. 1521) achieved considerable success in his lifetime, which spanned the turn of the fifteenth – sixteenth centuries and also the eclipse of the Timurid dynasty and its replacement in eastern Iran by the Safavid dynasty (1501–1722) and in Transoxiana by the Uzbeks. This popularity is reflected in the large number of surviving manuscripts, both in Iran and in Ottoman, Indian and Central Asian collections, many of which are illustrated. This paper describes a number of illustrated manuscripts along with their paracontents, with the aim of drawing connections between them and comparing the milieux in which they were commissioned and received.

1 Introduction

The author of the *Timurnama* (Book of Timur), 'Abd-Allah Hatifi (*c*. 1454–1521), was the nephew of the famous Persian mystic and poet 'Abd al-Rahman Jami (d. 1492) and came from Khargird, near Jam, in eastern Khurasan. He served at the shrine of another celebrated 'saint', Qasim Anvar (d. 1434), the mausoleum at Khargird erected by 'Ali-Shir Nava'i (d. 1501), the outstanding politician, patron and man of letters at the brilliant court of the last effective Timurid ruler, Shah Sultan-Husain Bayqara (r. 1469–1506). Hatifi was thus closely connected with a network of the literary elite of the epoch, invited at a young age to attend the poetic sessions (*majlis*) at the court in Herat (now western Afghanistan). Hatifi himself, however, preferred a life away from high society and spent his time mainly at Khargird, emulating not only the secluded lifestyle but also the work of the great epic poet, Firdausi of Tus (d. 1025), whose *Shahnama* (Book of Kings) inspired his own *Timurnama*, completed between 1492 and 1498. A decade later, after the collapse of the Timurids, he met the young Shah Isma'il, founder of the new Safavid dynasty (1501–1722), who commissioned Hatifi to write a verse epic about his exploits too (which he did not finish).[1]

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1 See Bernardini 2008, 127–146, for the fullest treatment of Hatifi's life and work, incorporating his own earlier publications.

Shah Isma'il had come to Herat to meet the threat of the new power in the east, Muhammad Shibani Khan, a descendant of Chinggis Khan, who shortly after Sultan-Husain's death captured Herat (1507) having, more significantly, already seized Samarqand, Timur's capital (1501), initiating Uzbek rule in Transoxania. Among the losers in this contest for control of the eastern portion of Timur's former empire was Babur (d. 1530) – descended from both Chinggis Khan and Timur – who fled to Kabul and later founded the Mughal Empire. In short, Hatifi's literary milieu and the context in space and time in which he lived thus combined to explain not only the nature of his work – a heroic epic poem in celebration of the legendary exploits of Timur (d. 1405), the Chaghatay Mongol conqueror and founder of the now dying empire of his successors – but also its appeal to audiences and patrons appropriating or contesting his legacy, whether in Iran (the Safavids), Central Asia (the Uzbeks) or India (the Mughals).[2]

Hatifi wrote a *Khamsa* ('Quintet') in emulation of the *Khamsa*s of Nizami Ganjavi and Amir Khusrau Dihlavi, but replaced the earlier poets' romances of Alexander/Iskandar with an epic about Timur, thus implicitly identifying Timur as another Alexander. While Hatifi acknowledged Nizami, he modelled his work on the *Shahnama* of Firdausi. Hatifi's poem, like Firdausi's, lies on the cusp of 'history' and 'epic' in the treatment of historical themes and subjects in distinct but clearly related and avowedly literary genres. Hatifi's main source of historical information about Timur was the *Zafarnama* ('Book of Victory') by 'Ali Yazdi (d. 1455) and illustrated manuscripts of 'Ali Yazdi's history (itself a sophisticated literary production with prose passages liberally interspersed with poetry), certainly provided models for the illustration of Hatifi's work.[3] The *Timurnama* is found both as a separate volume, and sometimes copied together with other poems of his *Khamsa*.

In a recent publication I described several copies of Hatifi's *Timurnama* ('Book of Timur') found in Cambridge University Library and compared them, at certain points, with some splendid manuscripts kept in the National Library of Russia (St Petersburg).[4] Since then, I have had the opportunity to examine some more illustrated copies of the *Timurnama* and add them to the ongoing

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2 Subtelny 2010, 187–196, condenses a lifetime's research into a succinct account of the cultural splendour of late Timurid Khurasan.

3 See Melville 2019, 100–104.

4 Melville 2018.

discussion here.[5] The study has been undertaken in the context of my project on the illustration of history in Persian manuscripts,[6] but in the following I aim to focus on these artifacts as books and draw attention chiefly to their codicological features and paracontents, such as seals and colophons, rather than on their visual programmes, although these too were not part of the author's original concept of this work – as indeed was rarely the case.[7] Since none of these copies has been described previously, this brief analysis adds to our knowledge of the production, reception and dissemination of the work, so widely sought after by contemporary audiences.[8] We shall arrange the six codices under discussion according to their main geographical associations.

2 A *Timurnama* in Walters Art Museum, W. 648

The first copy is in the Walters Art Museum, Baltimore and is available in its entirety on the 'Digital Walters' website, W. 648.[9] It measures 236 × 138 mm (page) and 160 × 72 mm (written surface), with 166 folios. Margins are ruled in blue, gold and black and the headings framed in gold and black rulings; rubrics are written in gold. The text is transcribed in 15 verses in two columns per page. It is undated but evidently of the sixteenth century. The colophon (fol. 166ʳ), mentions the scribe, Pir 'Ali al-Jami, who also transcribed the illustrated copy of the *Timurnama* in St. Petersburg (Dorn 447) from the Ardabil shrine, similarly undated (colophon, fol. 176ʳ), the five illustrations in which, however, are in a completely different style and of immaculate quality. Pir 'Ali al-Katib made another copy of the *Timurnama*, dated the end of Rajab 940 AH / February 1534 CE;[10]

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5 A first presentation of some of these codices was given at a workshop in Leiden on 29 November 2019. I have since continued to note other copies, but here I will focus mainly on manuscripts I have seen in person.

6 Leverhulme Emeritus Fellowship, EM-2018-033\5.

7 One might think of Matthew Paris's illustrations to his *Chronica Majora* as an obvious exception and possibly Rashid al-Din's production of illustrated manuscripts of his *Jami' al-tavarikh*; see Lewis 1987; Blair 1995.

8 For a 'provisional' but thorough list of manuscripts, see Bernardini 2003, 10–17.

9 <thedigitalwalters.org/Data/WaltersManuscripts/html/W648/> (accessed on 16 March 2021).

10 Sofia, SS Cyril and Methodius National Library, OP 994, fol. 153ʳ. The manuscript has two miniatures of indifferent quality: fols 19ʳ (accession of Timur at Balkh) and 68ʳ (battle against Toqtamish Khan).

it is not clear if other scribes with a similar name are the same person, but a certain Ghiyath al-Din 'Ali Jami also made a copy of the *Timurnama*.[11]

The Walters manuscript contains two full-page paintings without text, recorded as being 'Safavid' but not showing many elements of Safavid painting of the early sixteenth century and perhaps more likely of Central Asian origin.[12] They illustrate two of the most commonly depicted scenes – the wedding of Timur's son Jahangir (fol. 37[r]) and Timur's battle against Toqtamish, Khan of the Golden Horde (fol. 75[v]).[13] They have suffered from the trimming of the text block when the manuscript was rebound as a small and attractive volume, possibly in Rajab 1269 AH / April 1853 CE.[14]

Paracontents include a list of the section headings (fols 1[v]–2[r]) and two earlier 'Hindu-Arabic' pagination systems, one in red, starting from fol. 4[r] – i.e. after the list of headings, which was a later addition to the volume and one in black, starting on fol. 8[r] as fol. 5[r]; the two systems then run in parallel to fol. 64[r], numbered 62[r] in red and 61[r], correctly, in black. The Index corresponds with the red foliation (rubrics on a verso side are given the number of the facing recto page). An ownership seal of al-'Abd Yar Beg ibn Aq Muhammad is dated 1019 AH / 1610 CE (fol. 166[r]);[15] the name, currently unidentified, is also suggestive of a Central Asian owner.

This copy, therefore, was probably produced in Herat in eastern Iran in the first half of the sixteenth century, or Transoxiana (? Bukhara), where it quickly ended up and perhaps was completed with the pictures. It therefore invites comparison with the next manuscript, which, however, can more certainly be associated with Central Asia.

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11 Tehran, University Library, MS no. 6035, dated 950 AH / 1543 CE. Grateful thanks to Majid Saeli and to Karin Ruehrdanz (pers. comm.), who has also noted a *Divan* of Jami by 'Mir' 'Ali possibly in place of 'Pir' in Tashkent, MS no. 2205 dated 933 AH / 1527 CE. Maulana Mir 'Ali Jami was a celebrated pupil of Sultan-'Ali Mashhadi and Mir 'Ali (without the Jami), if not the same person, even more so, Minorsky 1959, 106, 126–131; a mistake over spelling is rather unlikely. The Pir 'Ali b. 'Abd al-Rahman al-Jami, who made a copy of *Yusuf & Zulaikha* in 893 AH / 1488 CE, in Vienna, ÖNB, Mixt. 1480, was the son of the poet.

12 Barbara Brend kindly endorsed this suggestion.

13 The appearance of elephants in the battle, however, suggests the iconography of the Indian campaign. The picture is set in the text at exactly the same verse as the Sofia manuscript, fol. 68[r] and Dorn 447, fol. 77[v], i.e. the two copies associated with the same scribe.

14 The trimming has nevertheless preserved most of the catchwords. The date is found on fol. 4[r], originally fol. 1[r]; the binding with its Ikat-fabric doublures is clearly of nineteenth-century Central Asian origin, supporting the suggested place of production (or repair) of the manuscript.

15 The full name was supplied by John Seyller.

3 Harvard Art Museums 1957.140

This manuscript was copied by Sultan Mas'ud b. Sultan Mahmud in 959 AH / 1552 CE (colophon, fol. 175ʳ).[16] Page measurements are given as 244 × 156 mm and the text is transcribed in 14 verses per page, in two columns; margins are ruled in blue, gold and black and columns and headings in gold and black; rubrics are written in gold. Other evidence that the scribe was working in Bukhara at this date confirms the Central Asian production of the manuscript,[17] which contains four miniatures in typical Bukhara style, two of them in a double-page illustration of the wedding of Jahangir (fols 34ᵛ–35ʳ), the others depicting the defeat of Shah Mansur the Muzaffarid ruler of Fars (fol. 83ʳ) and the defeat of the Mamluks at Aleppo (fol. 137ᵛ).

The manuscript has an elaborate colophon, identifying the dedicatee as al-Sultan b. al-Khaqan b. al-Khaqan Muzaffar al-Din Muhammad Darvish Bahadur Sultan, who can be identified as Darwish Khan, son of Baraq Khan son of Suyunjuk Khan, a line of the Shibanids. At the date given (959 AH / 1552 CE) he seems to have been governing Tashkent on behalf of his father, Baraq Khan, who had taken up control of Samarqand two years earlier; soon after the latter's death in 963 AH / 1556 CE he was acknowledged as Khan of Tashkent.[18] He appears to have been a benevolent figure, unlike his father, and responsible for various benefactions in Tashkent.[19] The timing of the scribe's prayers for his long reign, from distant Bukhara, may be explained by Darwish Khan's presence

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16 <harvardartmuseums.org/collections?q=1957.140> (accessed on 31 March 2021). At the time of writing it has still been impossible to inspect the Harvard manuscripts in person; both in 2019 and previously for the whole duration of my three-month fellowship at the Aga Khan Program for Islamic Architecture (Harvard University) in 2014, when the museum was closed for renovation and the collection stored in sealed crates. I am grateful to Mary McWilliams for supplying a little extra information to what is available online.

17 The fine copy of 'Ali-Shir Nava'i's *Sab'a sayyara* ('Seven journeys') in the Bodleian Library, Oxford, Elliott 318, was copied in Bukhara by Sultan Mas'ud b. Sultan Mahmud in 960 AH / 1553 CE, see fol. 71ʳ; thanks to Karin Ruehrdanz for once more pointing me in this direction. As noted on several dated architectural inscriptions (e.g. fols 30ʳ, 47ʳ), this manuscript was made for the library of Sultan Abu'l-Fath Muhammad-Yar Bahadur Khan, i.e. the appanage ruler of Bukhara who was killed the following year, see Muhammad Yar 2006, 231, 235–236. It is wrongly catalogued as the work of the calligrapher Muhammad 'Ali.

18 Muhammad Yar 2006, 160–161. Thanks to Robert McChesney and Uktambek Sultanov for their help with this identification. Baraq Khan, also known as Nauruz Ahmad, called upon Sultan Muhammad-Yar's help in his efforts to win Bukhara in 958 AH / 1551 CE, Muhammad Yar 2006, 230.

19 Sultanov 2012, 327–330.

in the west of the realm in the company of his father while Baraq Khan was striving for supreme power in the Khanate, but the dedication to the son rather than the father seems rather striking.[20] Not enough is known about either man to be sure how they might have interacted. There are two seals, on fols 2^v ('Abd-Allah Muhammad Ibrahim) and 175^r (Husain Muhammad), both unidentified, but possibly from India.[21]

4 Harvard Art Museums 2014.392

The earliest copy to be discussed here is perhaps the most interesting, not only for its date almost within the lifetime of the poet, but also for its journey, which linked Iran, Central Asia and India most clearly. It was completed in 927 AH / 1521 CE by the scribe Mahmud ibn Ishaq Siyavushani.[22] The calligrapher is well known: his father, Khwaja Ishaq al-Shihabi, was taken together with his family to Bukhara after the Shibanid ruler 'Ubaid Khan captured Herat in 935 AH / 1529 CE. While in Bukhara, Khwaja Mahmud became the pupil of the celebrated calligrapher Khwaja Mir 'Ali.[23] The same scribe, under the name Mahmud ibn Ishaq al-Shihabi, also copied the *Timurnama* in St. Petersburg, Dorn 446 (undated, sixteenth century).

The margins are elaborately ruled in blue, white, black, gold and green and the headings and columns in gold and black; rubrics are written in red.[24] The manuscript is of interest for various reasons. In the first place, it has been foliated in reverse order, as though it were a European book, with pages numbered from left to right, as is clear from the neat numerals seen on the top right-hand corner of what would be the verso side of an Arabographic volume. Secondly,

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20 Muhammad Yar 2006, 230, states that Nauruz Ahmad went from Tashkent with all his sons to capture Bukhara.

21 Thanks again to John Seyller for deciphering them. The seal on fol. 2^v is dated regnal year 25, suggesting an Indian owner.

22 This is listed as no. 279 in the exhibition catalogue of Kevorkian Collection, 1914, under the title *Zafarnama* (Karin Ruehrdanz, pers. comm.); the flyleaves contain other numbers relating to Kevorkian. There are *c.* 151 folios. The online record gives dimensions 250 × 155 mm (page), 180 × 85 mm (written area). My further comments are derived from analysing the images placed on <harvardartmuseums.org/collections?q=2014.392> (accessed on 31 March 2021).

23 Minorsky 1959, 131–132. The calligrapher is not realistically to be confused with Pir 'Ali, see above, n. 11. See also Richard 1989, 147.

24 On folios with a painting that extends beyond the standard written area, the text is within an inner margin ruled in blue, red, gold and black.

although it was evidently copied in Herat before Khwaja Mahmud was taken to Bukhara, it was very probably not completed by that time – at least, not the ornamentation. The evidence of this is the fact that the ten paintings were all produced in Mughal India, *c.* 1600, in spaces left blank for illustrations, and perhaps also the decorated margins. The seals on the final folio, together with an inscription at the bottom of the page that might have provided some clues as to the history of the book have been erased.[25] It is possible that Khwaja Mahmud took the manuscript with him to Bukhara and from there it found its way to India (though it would be surprising that the missing paintings were not produced in Bukhara first); perhaps more probably, it remained in Herat and was brought to India later, as happened to so many Persian manuscripts. Apart from the paintings, the provenance of the manuscript via a sojourn in India is clear from the worm holes in the paper margins and the eighteenth/nineteenth-century lacquered covers.

As for the illustrations, it is noticeable that they all occur in the later portions of the text, the first being a scene of Timur hunting in the region round Shiraz.[26] The subjects chosen for depiction are quite standard, including seven battle scenes and two feasts, although in two cases they illustrate events not so far noted elsewhere (see below, Table 1).

The next copy demonstrates a more direct link between Iran and India.

5 A *Timurnama* from Sotheby's 2019 auction

This copy was offered at Sotheby's London auction of 23 October 2019, undated but estimated to be from *c.* 1570–1580; it is bound together with Hatifi's *Khusrau & Shirin* (fols 1ᵛ–75ʳ).[27] It measures 232 × 143 mm (page) and 150 × 78 mm (written surface), with elaborately ruled margins and columns and headings ruled in gold and black; rubrics are written in gold.[28] There are three illustrations of *Khusrau & Shirin* (Khurasan, *c.* 1570) and nine of the *Timurnama* (Qazvin, *c.* 1580)

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25 The date 1029 (?) AH / 1620 CE is inscribed on fol. 10ʳ (European foliation); the Museum notes perhaps more correctly record the date 1026 AH /1617 CE.

26 'Abd-Allah Hatifi, *Timurnama*, ed. U'sha' 1958, 82, at line 21.

27 Notes on fol. 1ʳ refer only to Khusrau & Shirin, paintings and a *chaharlauh* (illuminated title page) and 76 folios, but this does not necessarily suggest the two poems were not initially bound together when they reached the Mughal library; see also below.

28 Sotheby's 2019, 82, lot 140.

(from fol. 76ᵛ).²⁹ The *Timurnama* is transcribed in fourteen lines (verses) in two columns per page and is incomplete at the end.³⁰

The opening folio (fol. 1ʳ, see Fig. 1) and the pages separating the two poems (fols 75ᵛ–76ʳ, see Figs 2–3) are covered with seals, ownership notes, valuations, transfers and library checks (*'arz-dida*), which indicate that the manuscript was formerly in the Mughal Royal Library before reaching the Hagop Kevorkian collection, as well as guest contents such as the records of the births of the owners' children.³¹ The earliest seal, on fol. 75ᵛ, belongs to the Mughal librarian Fath-Allah b. Abu'l-Fath, dated 1006 AH / 1597–1598 CE, but there is a very early inspection note dated 28 Day *mah-i ilahi* 32, i.e. referring to the era introduced by Akbar, that is 18 January 1588.³² It is a very unostentatious note at the bottom of fol. 76ʳ, which confirms that both poems of the manuscript were bound together, probably within a decade of its production. The *Timurnama* starts on the reverse side of the folio. There are numerous seals and inspection notes from the reigns of Jahangir (1605–1627) and Shah Jahan (1627–1658), up to year 2 of the reign of Shah 'Alam (1707–1712).

The copy has evidently been trimmed to fit its current binding, but otherwise seems unexceptional; even though it was clearly treasured as a fine book and opens with a luxurious illuminated title page, it was estimated to be of third class (fol. 1ʳ).³³ As can be seen from the table below, the paintings depict standard, popular scenes frequently chosen for illustration – battles, courtly receptions and a hunt. Some have been deliberately wiped (fols 128ʳ, 173ᵛ); others are marred by corrosive yellow pigments and some show retouching.

The fact that this copy entered the imperial Mughal library so soon after its production in Iran confirms the interest in the text that celebrates the exploits of the distant ancestor of the Timurid dynasty in India.

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29 They are numbered, up to 10, but there is no number 7; without closer inspection of the text it is not clear whether one image has been removed. The manuscript was sold previously at Sotheby's on 22 April 1980, lot 307.

30 The text ends on p. 232 of the printed edition, 'Abd-Allah Hatifi, *Timurnama*, ed. U'sha' 1958.

31 Three birth dates recorded in 1022 AH / 1613 CE, 1160 AH / 1747 CE and 1195 AH / 1781 CE, fol. 75ᵛ.

32 I am indebted to John Seyller for all the information on the seals that follows; most of the librarians mentioned in the inspection notes are listed in Seyller 1997, 347–349, Appendix B.

33 It was at some point valued at 80 rupees (fols 1ʳ, 76ʳ), but later dropped to 20 rupees (fol. 75ᵛ). For this designation and other examples, see Seyller 1997, 274–276, Table 1.

6 A *Timurnama* in the Asiatic Society of Bengal, no. 651

This is further confirmed by the copy in the Asiatic Society of Bengal, Kolkata, the latest of the group under discussion, dated Dhu'l-Hijja 1041 AH / June 1632 CE, by an unnamed scribe (colophon, fol. 107ʳ). Its dimensions are 240 × 125 mm (page) and 160 × 72 mm (written area), with quite elegant margins ruled in blue, gold and black and columns and headings in gold and black. Rubrics are written in tomato red. There are 15 verses to the page, in two columns. The volume came from the library of the College of Fort William. It was clearly once a handsome book, introduced by an attractive double title page (fols 1ᵛ–2ʳ) predominantly decorated in blue and gold with touches of red flowers and the text in a good scribal *nastaʿliq* couched within 'clouds' of gold. The most striking feature now is the large number of replacement pages in sections throughout the text (e.g. fols 2–7, 22–25, 30–39, etc.) and especially towards the end (fols 77–103); these pages are not ruled with either column or margins. As several of the catchwords do not match (e.g. fols 57, 71, 89, 98), it is clear there has been some disturbance and very probably loss of illustrations.

As it is, the manuscript contains three paintings of quite acceptable quality and in surprisingly good condition, the first of which, the *Miʿraj* (Ascension) of the Prophet Muhammad (fol. 8ʳ), is not commonly found in *Timurnama* manuscripts.[34] Timur's battle against Amir Husain of Balkh (fol. 17ʳ) and another against the Indians (fol. 49ᵛ) are commonly chosen subjects (see Table 1). In all cases, the format is the same: two verses above and two below the picture. The manuscript was clearly produced and illustrated in Iran, probably Isfahan, and found its way to an Indian collection.

7 The Free Library *Timurnama*, Lewis O. 43

The final volume presented here is the only one in the group that remained in Iran. It contains a different and more unusual circumstance than the others that is worth being given more attention. Now kept in the Free Library of Philadelphia, Rare Book Department, John Frederick Lewis Collection of Oriental Manuscripts, O. 43, it has 190 folios, with 12 lines per page in two columns. It

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34 One exception is in the Cambridge University Library, Add. 1109, see Melville 2018, 59–60.

measures 233 × 145 mm (page) and 142 × 67 mm (written area). Marginal rulings in blue, gold, blue and red; columns and headings ruled in gold and black, rubrics are written in red. It has a single, modern foliation and the catchwords are in place; in short, it is a neat and clean copy, with just a couple of seals and ownerships notes.

The colophon (fol. 190ʳ) records the name of the scribe, Muhammad b. Mulla Mir al-Husaini and the date of the completion of copying as Ramadan 991 AH / September 1583 CE. Muhammad b. Mulla Mir's signature appears on several manuscripts over a lengthy period, such as the *Timurnama* in St Petersburg, Dorn 445 (dated 987 AH / 1579 CE), as well as other poetic texts, including a *Shahnama*, dated 1016 AH / 1608 CE.[35] Seals on fols 171ʳ and 172ʳ are both dated 1210 AH / 1795–1796 CE,[36] the latter in the name of Husain Quli Ja'far, evidently the father of the owner of the two seals of Husain Muhammad Husain on fol. 190ᵛ, dated 1255 AH / 1839 CE. This is confirmed by the inscription above the seals by Mir Muhammad Husain Khan son of General (Sarhang) Ja'far Quli Khan, governor of the regions and districts of Marand, dated 24 Jumada II, 1255 / 4 September 1839 CE (Fig. 4). He is possibly to be identified as Ja'far Quli Khan Dunbuli, a figure active in Azerbaijan in the reigns of Agha Muhammad Khan and Fath-'Ali Shah and later governor of Shakki.[37]

The manuscript is available digitally in its entirety on the OPenn website where, however, the subjects of the five attractive and neatly executed paintings are not identified.[38] They appear to be contemporary with the production of the copy, though with the somewhat unusual extension into the margins in the form of the depiction of single figures breaking through the frame.[39]

Examination of the textual setting for these pictures, however, reveals that they all replace 10–12 lines (verses) – or take up the space of what is, normally,

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35 Metropolitan Museum of Art, New York, Cochran 3 (13.228.16). Thanks again to Karin Ruehrdanz for other indications, such as that another copy of the *Timurnama* was made probably by Muhammad b. Mulla Mir's father, Mulla Mir b. Muhammad al-Husaini, in 973 AH / 1565 CE. See also Richard 2013, 832–833, for work completed in 1018 AH / 1609 CE.

36 I am grateful to John Seyller for checking these seals; he reads 'Muhammad Islam' on the upper register of the oval seal on fol. 171ʳ.

37 I am indebted to Assef Ashraf for this suggestion, based on references to 'Khavari' Shirazi, *Tarikh-i Zu'l-Qarnain*, ed. Afsharfar 2001, vol. 1, 80–84; 96–97; 114–116; 194–196; 240 and Bamdad 2008, vol. 1, 248.

38 <https://openn.library.upenn.edu/Data/0023/html/lewis_o_043.html> (accessed on 16 March 2021).

39 See Brend 2000 for a discussion of this topic. Thanks to Barbara Brend also for her comments on these paintings.

one page of text (see Fig. 5).[40] But (and this is the particular oddity), the pictures do not appear to have been painted over the missing text. In other words, whereas it is not unusual to find examples of a manuscript in which illustrations have either been added to existing spaces left blank for a picture that was not executed at the time, as seen also above – or painted over text in an effort to enhance the market value of the volume – in this case, a lacuna appears to have been introduced deliberately into the text (verses have been omitted) to make room for a picture. It is as though someone at the point of designing the layout of the volume had planned pictures to illustrate text that has been excluded: so that the picture literally stands for the words it replaces.

If this is indeed the case, it is worth looking at the five examples a little more closely.

The first, on fol. 28ʳ, depicts Husain Sufi, the ruler of Khwarazm, entertaining Timur's envoy.[41] The line above the painting is part of the envoy's speech: 'To the world, I am Qarachar Noyan; what was Qarachar? – I am Qara Khan!'[42] The text resumes on fol. 28ᵛ, at line 16: that is to say, 12 verses are omitted. These verses are the concluding part of the envoy's speech and have no narrative value that could lend itself to depiction; in other words, their omission has little or no impact on the meaning of the passage and none on its visual potential. The text resumes with the verse, 'He then gave tongue to his message, he finished saying all it was necessary to say'. The Khwarazmian ruler then replies.

The second painting, on fol. 58ʳ, depicts Timur's troops setting off on the second campaign to Iran, via Mazandaran. The line above the painting, 'The wheeling firmament's brain went blank from the fearsome blare of the trumpets of departure' (text, p. 67, line 14), exactly marks the moment the army set off. The text resumes (fol. 58ᵛ) on p. 68, line 7 (see Fig. 5): so 15 verses from the printed edition are omitted. The passage is briefly descriptive of the march in general terms and mentions the arrival in Firuzkuh and the coming of various envoys, together with Timur's desire to put paid to all the discord (*fitna*) in Luristan and elsewhere. The text resumes with the army's arrival in Tabriz. Although the omitted passage could offer various details for a painting, an image, if larger and more sophisticated, could equally well stand for the action; but the

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40 All but one picture page does actually contain a verse or two as well, suggesting the text was abbreviated also, as in the example in Fig. 5: 15 verses are omitted in a space that would be filled by 11 verses.

41 In this case, the outer blue margin is drawn over the figure breaking through the frame.

42 'Abd-Allah Hatifi, *Timurnama*, ed. U'sha' 1958, 30, line 4. For his conflation of Qarachar and Qara Khan, see also Bernardini 2008, 134.

painting itself lacks detail and indeed the falcon on the leading horseman's wrist suggests a hunting expedition rather than a military march.

The third scene, on fol. 72ᵛ, comes in the chapter on Timur reviewing his troops after the Shiraz campaign against Shah Mansur Muzaffari. The verse above the painting (text p. 84, line 4 from bottom) reads, 'One spurred on [his horse] with a tufted tail, the tip of his spear was like racing hooves'.⁴³ The next 11 verses in the printed edition are omitted, the text resuming on p. 85, line 9, with Timur anticipating the next expedition and seeing his heavily armed heroes all present. The excluded verses not only describe the Rustam-like heroes lined up, but Timur mounting his steed, with a bejewelled helmet and a parasol above. It cannot be said that the painting that replaces this passage conveys anything of the scene, which has a military aspect but is rather an open-air picnic with attendants. It is difficult to imagine that the intention of the artist was to replicate the missing words with his image. This is a unique example of the illustration of this scene, but military reviews are not an uncommon subject for depiction.

The fourth scene (fol. 132ᵛ) depicts one of Timur's battles on the Indian campaign in 1398. This is a very popular scene for illustration and is located in the text, in this manuscript, on p. 159, line 16: the carnage was such that 'many desires remained in the mind, many expectations stayed mired in the mud'. The next 10 verses are omitted, the text resuming on p. 160, line 6, 'The Indians fell into captivity, wise or foolish, young or old'. The omitted passage describes in colourful terms the fall of the Indians in battle ('Indian heads fell piecemeal under foot, [like] coconuts from the tree') and their captivity, roped like a caravan of camels, the Indian elephants useless like fallen chess pieces. In other words, there is plenty of material in these lines that could have inspired images to replace the text. In fact, on the contrary, the siege scene bears no relationship to either the missing text, or the verses before or after it. This shows that there was a considerable dislocation between the work of the scribe and artist.

The final painting, on fol. 140ᵛ, is inserted in the chapter on Timur's winter quarters in Qarabagh and the arrival of envoys from the Ottomans, in 1401, a topic not otherwise depicted. It is a full-page painting, located between lines 4 and 16 of p. 169 in the printed edition, thus replacing 12 lines of text (a whole page: this one contains no verses). The verse before the picture (fol. 140ʳ), 'We were victorious over the Muzaffarids, with the customary punishment we twisted their ears', is followed in the omitted verses by a discussion, essentially following Timur's account of his conquests and encouraging the Ottomans to

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43 This is rather a loose translation; the exact meaning of the verse is not clear to me.

submit; a passage that does not lend itself to a narrative depiction, but which is adequately envisaged in the painting that replaces the text.

Of the five paintings analysed, two could be said to illustrate the omitted text – essentially, where the passage in question is a conversation and does not lend itself to any particular narrative elements to be visualised. The other three do not really illustrate the text at all – or only in the most superficial way: an expedition, a military review and a battle.

Even if the paintings are not contemporary with the calligraphy, the fact remains that they were inserted into a blank space that omitted, presumably deliberately, the exact number of verses that would have made up the page. This is a most unusual situation – the only alternative being that the underlying text was cleaned off so thoroughly that there remain no traces of it (only a more profound penetration of the painted area might confirm this). But even then, why go to such pains, later, to add a painting that could merely have covered the text, and why do such a poor job of the substitution of image for words? It is not as though it is a cheap production – on the contrary, it appears to be a handsome volume and if genuine (or even if a fake), it raises more questions than I can answer at present.

8 Illustration cycles

The illustrations in the six copies mentioned here are tabulated below (Table 1), with reference to their precise position in the printed text (page.breakline).

Table 1: Illustrations in manuscripts of Hatifi's *Timurnama*.

Manuscript/ scene	Harvard 2014.392	Walters W 648	Harvard 1957.140	Sotheby's Lot 140	Free Library Lewis O. 43	Asiatic Soc. Bengal 651
Mi'raj of the Prophet Muhammad						10.1
Timur fights Amir Husain				21.11		21.15
Timur enthroned				26.4		
Timur's envoy to Husain Sufi					30.4	

Table 1 (continued).

Manuscript/ scene	Harvard 2014.392	Walters W 648	Harvard 1957.140	Sotheby's Lot 140	Free Library Lewis O. 43	Asiatic Soc. Bengal 651
Wedding of Jahangir		45.8	44.2 (double p.)	44.2		
Timur departs on Iran campaign					67.14	
Timur hunts near Shiraz	83.21			83.12		
Timur reviews his troops					84.-4	
Battle against Toqtamish Khan	97.13					
Defeat of Toqtamish Khan	100.6	100.5		100.2		
Timur defeats Shah Mansur			107.18	107.12		
Battle against Sultan Ahmad Jala'ir of Baghdad	115.8					
Second battle against Toqtamish Khan	131.15					
Feasting after the defeat of Toqtamish	134.17					
Battle against the Indians				143.-3		141.-3
Conquest of India	159.13			156.2	159.-6	
Timur receives envoys from Rum					169.4	
Timur's siege of 'Aintab	177.11					
Timur fights the Mamluks at Aleppo			183.6			
Defeat of the Mamluk sultan at Damascus	194.7					
Timur and the captive Ottoman Sultan	224.2			226.-2		

On the whole, although the 33 paintings across the six volumes share only eight subjects between them and none appears in more than three copies, these are among the most frequently illustrated topics, such as the wedding of Jahangir, battles against Toqtamish Khan and the Indian campaign, as in manuscripts of the *Zafarnama* of 'Ali Yazdi also.[44]

These two campaigns were joined, among Timur's greatest triumphs, by his defeat of the Ottoman sultan, Bayezid, at the battle of Ankara in 1402, not so strongly represented here, but an event that explains the interest in Hatifi's poem in Ottoman circles, the warlord being regarded there too as a model for emulation. It is noteworthy that the earliest recorded copy of the *Timurnama*, attributable to Herat in the author's lifetime, has the seal of Bayezid's son, sultan Selim I (r. 1512–1520);[45] and the second oldest, dated 905 AH / 1499 CE – also in Hatifi's lifetime, is an Ottoman copy.[46]

The pictures are not always inserted at precisely the same point in the text, but are close to other examples noted elsewhere,[47] as are other subjects found only once or twice in these copies – the coronation of Timur is naturally one such popular subject. On the other hand, two or three of the subjects depicted in the Harvard codex 2014.392 have not so far been noted elsewhere. Further work is required to determine whether the introduction of pictures had any impact on the text, in terms of the addition or omission of verses, particularly in the immediate vicinity of the paintings. In so far as this question has been observed in these examples, apart from the strange case of the volume in the Free Library of Philadelphia, the text has appeared to be rather stable and the verses readily identifiable in the printed edition. It is worth noting, however, that the Philadelphia manuscript Lewis O. 43 contains the interpolated 49-verse section in praise of Muhammad and 'Ali (fols 10ᵛ–12ᵛ), that is also found in the Cambridge University Library copy, King's Pote 85.[48] This clearly sectarian passage either represents the Shi'i religious affiliation of the scribe – consistent with the Safavid context in which it was written, or points to the omission of this section in copies made in a more Sunni milieu There is also a significant lacuna in Lewis O. 43 between fols 39ᵛ and 40ʳ, where two folios have dropped out, 45 verses and one long rubric – equivalent to three lines – being missing. This lacuna is

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44 See Melville 2019, tables 2 and 3.

45 Richard 1989, 360-61.

46 Bernardini 2003, 10.

47 Melville 2018.

48 Melville 2018, 64. Lewis O. 43 does have a rubric for this heading, unlike the blank in the King's copy.

not sufficient to have included the passage on the funeral of Jahangir that is found, so far uniquely, in the St Petersburg manuscript PNS 411.[49] Neither passage is found in the other copy digitally accessible (W. 648 in Baltimore). A new edition, which can be expected to document numerous alterations and variations in the textual transmission, and perhaps explain some of them, is long overdue.

9 Conclusions

This brief survey of a number of manuscripts of Hatifi's *Timurnama* has revealed something of the wide variety of ways in which this popular work has been reproduced and preserved and how some of the volumes have travelled before ending up in different collections, in this case mainly in the USA. An important part of their existence before dispersal beyond the region was spent in the area between Khurasan (eastern Iran), Transoxania and northern India, that is between Herat, Bukhara and the Mughal courts. It was precisely within this region that the towering personality of Timur continued to exert the greatest and most immediate claim to attention, not only as the heartland of his rule and that of his Timurid successors, but as the scene of one of his most renowned conquests and ultimately as a source of dynastic legitimacy for Timurid-Mughal rule in India.

The concentration on illustrated copies of Hatifi's work possibly distorts the picture of how the work was received and appreciated, for the desire for a precious book already implies a rather specific clientele, like the Shibanid khans of Bukhara and Tashkent and a circulation of volumes among princely courts. It is striking that of the 62 manuscripts in Iranian collections, none appears to be illustrated,[50] nor any of the 19 preserved in the Biruni Institute in Tashkent. The handful of manuscripts discussed here, therefore, is not necessarily representative of the whole large corpus, but it is interesting to observe that the same scribe might produce more than one copy of the *Timurnama*, among them rather well-known calligraphers such as Mahmud b. Ishaq Siyavushani, Mahmud b. Mulla Mir Husaini and Pir 'Ali Jami.

The seals recording the ownership of the manuscripts at different times, and particularly the extensive library checks from the Mughal royal collection

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49 See Melville 2018, 58.
50 Thanks to Majid Saeli for the catalogue list.

and other inscriptions found in the ex-Kevorkian volume sold at Sotheby's in 2019, offer some insights into the life of these manuscripts and their evaluation after their creation, while despite similarities in layout and format, with the 14–15 verses of the poem normally transcribed per page, the marginal rulings, treatment of the chapter headings, pagination, binding and re-binding make each slim volume an individual and personal work, typical indeed of books in the era before printing. The copies discussed here thus extend and contribute, in general terms, more examples of the typical illustration schemes found in the *Timurnama* manuscripts of the sixteenth century and their wide dissemination from Istanbul to Delhi and Bukhara highlights the value of achieving a better acquaintance with the transmission of the work.

Acknowledgements

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Fig. 1: Seals from fol. 1ʳ of a *Timurnama* sold at Sotheby's, London, 23 Oct. 2019. Photo: author.

Fig. 2: Seals from fol. 75ᵛ of a *Timurnama* sold at Sotheby's, London, 23 Oct. 2019. Photo: author.

Fig. 3: Seals from fol. 76ʳ of a *Timurnama* sold at Sotheby's, London, 23 Oct. 2019. Photo: author.
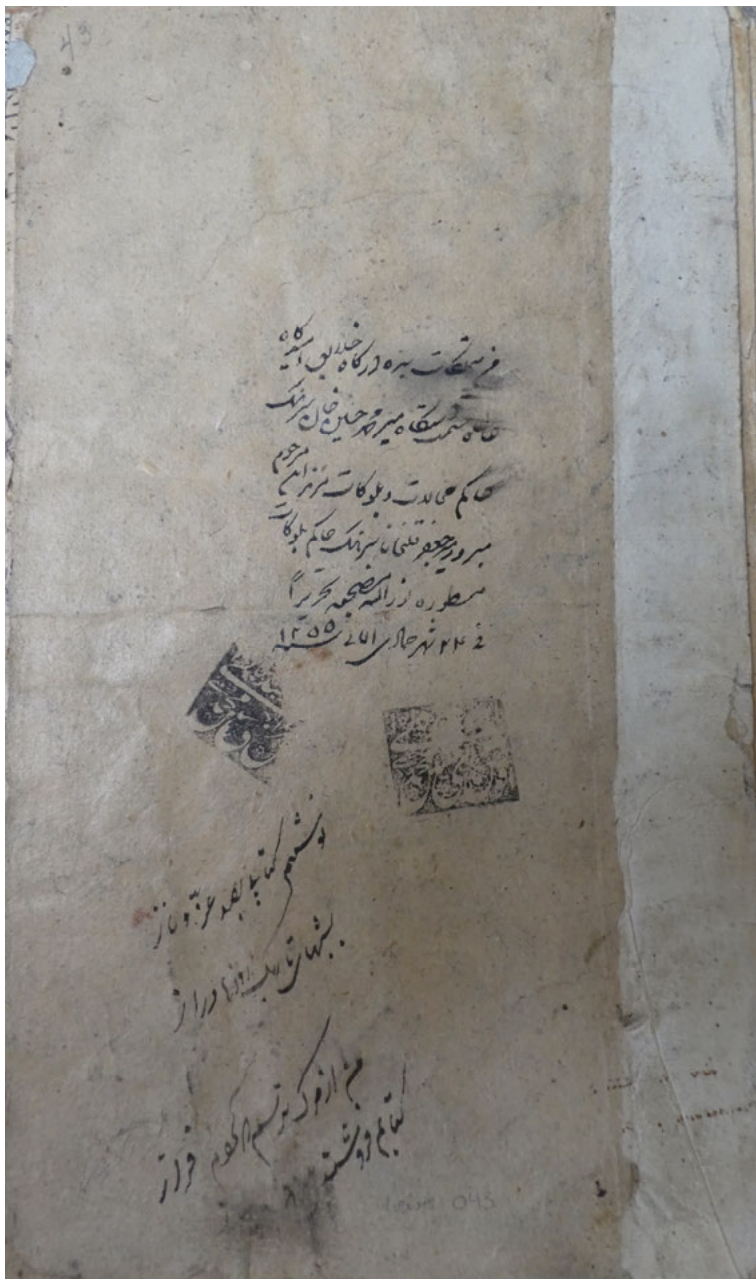
Fig. 4: Seals and inscription from fol. 190ᵛ of a *Timurnama*: Free Library of Philadelphia, Lewis O. 43. Photo: author.
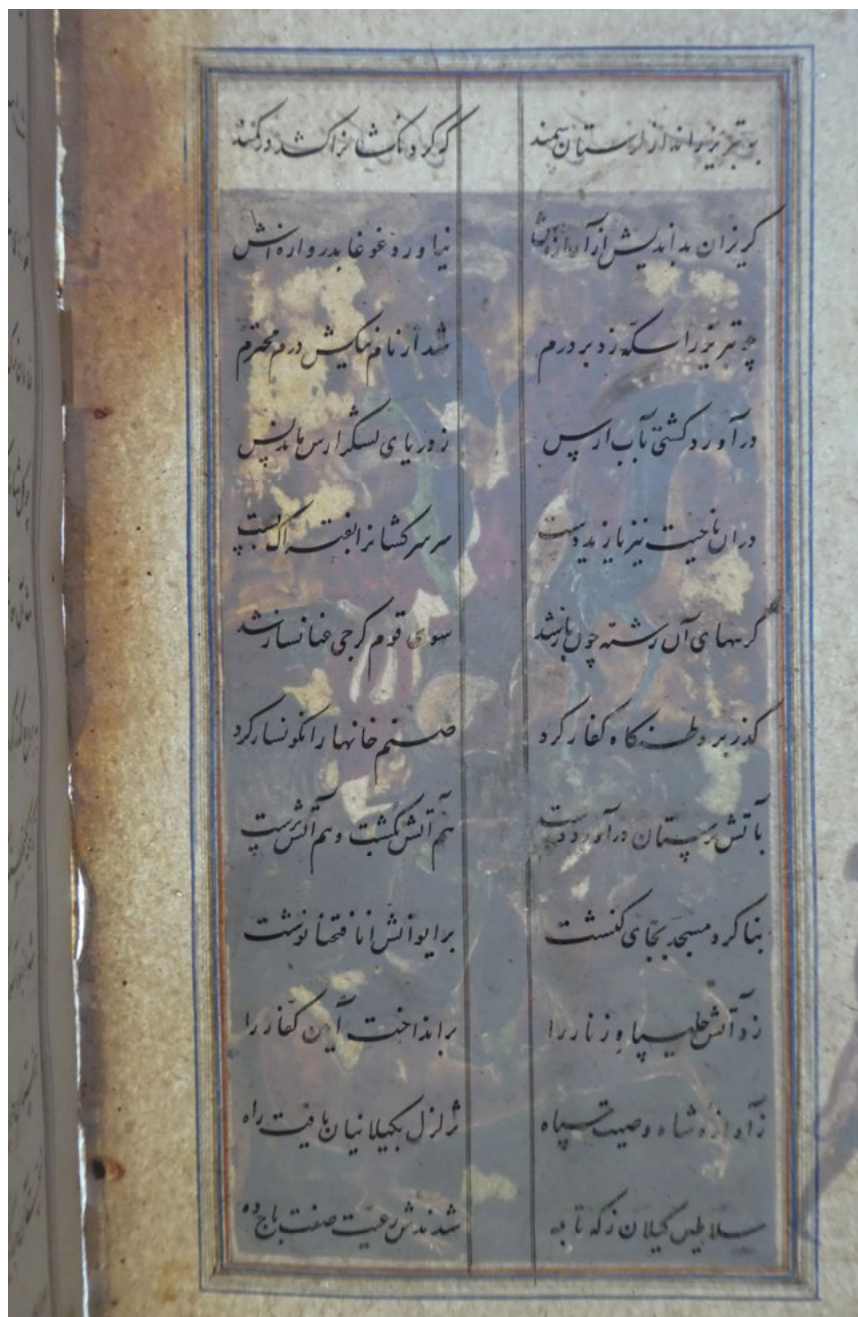
Fig. 5: Fol. 58ᵛ of Hatifi, *Timurnama*: Free Library of Philadelphia, Lewis O. 43. Photo: author.

Contributors

Patrick Andrist is a senior researcher at the Ludwig-Maximilians-Universität of Munich and a Privatdozent at the Université de Fribourg (Suisse). His research concentrates on structural codicology applied to the scientific analysis and description of Greek manuscripts, especially ancient Bibles, and on the development of new approaches to manuscript databases. He also works on the history of Christian polemics from the beginnings to the fifth century.

Alessandro Bausi, Professor of Ethiopian Studies at the Universität Hamburg, is a philologist and linguist working on ancient and medieval texts and manuscripts. He has contributed in particular to the earliest phase of ancient Ethiopic scribal and literary history, including epigraphy and canonical and hagiographical-liturgical collections, to the textual criticism of Ethiopic texts, and to studying the manuscript culture of Ethiopia and Eritrea.

Malachi Beit-Arié is Professor Emeritus of Codicology and Palaeography at the Hebrew University of Jerusalem and founder of SfarData codicological online database.

William G. Boltz is Professor of Classical Chinese at the University of Washington, Seattle. Teaching and research interests include Classical Chinese language, early Chinese manuscripts, early writing systems, sinological philology, and textual criticism.

Dmitry Bondarev is the head of West Africa projects at the CSMC and a lecturer in the Department of African Studies, Universität Hamburg. His research interests cover African linguistics (Saharan, Chadic, and Mande languages), literacy studies, especially in the context of Islamic exegetical traditions in African languages, the history of writing in Arabic-based scripts (Ajami), and the palaeography and codicology of West African manuscripts.

Antonella Brita is a researcher and lecturer in Semitic philology at the Università degli Studi di Firenze. Her main interests are Ethiopian hagiographic traditions and Gəʿəz manuscript culture. She works on the reception of foreign late antique and medieval hagiographic texts in Ethiopia, the emergence of local hagiography, and the use of hagiographic manuscripts in liturgical contexts and ritual healing practices.

Christian Brockmann is Professor of Classical Philology (Greek) at the Universität Hamburg and heads the long-term project 'Etymologika' at the Akademie der Wissenschaften in Hamburg.

Heidi Buck-Albulet is a researcher at the CSMC, Universität Hamburg, currently with a project on collaborative poetry in contemporary Japan. After working at the Universität Tübingen, where she received a PhD in 2002, and as a visiting professor at the Universität Heidelberg, she first joined the CSMC in 2014.

Paola Buzi is Professor of Egyptology and Coptic Civilization at Sapienza University of Rome and the principal investigator of the ERC Advanced Grant project 'Tracking Papyrus and Parchment Paths'. She combines historical, literary, and codicological interests with

archaeological research, covering a wide chronological period, from dynastic Egypt to the early Middle Ages.

Giovanni Ciotti is a postdoctoral researcher at the CSMC, Universität Hamburg. His main research interests are comparative manuscript studies, the history of manuscripts in Tamil Nadu, Sanskrit-Tamil linguistic and literary interactions, and Indian grammatical literature, along with its influence on the formation of modern Western linguistics.

Claudia Colini is a researcher at the BAM (Bundesanstalt für Materialforschung und -prüfung) and a member of the Cluster of Excellence 'Understanding Written Artefacts', CSMC, Universität Hamburg. She is a book conservator and archaeometrist specializing in Islamic manuscripts. Her current research focuses on writing supports and inks in Egypt during the early centuries of Islam.

Marina Creydt studied food chemistry at the Hamburg School of Food Science, where she wrote a thesis on food profiling using high-resolution mass spectrometry. Since April 2021 she has been the principal investigator of the research project 'Mass Spectrometric Proteome Analysis of Written Artefacts' in the Cluster of Excellence 'Understanding Written Artefacts' (CSMC).

Nuria de Castilla is Professor of History and Codicology of the Manuscript Book in the Islamicate World at the École Pratique des Hautes Études, PSL (Paris). She has published on the history of the manuscript book, on written culture in early modern Islamic Spain, and on the production and transmission of the Qur'an in the Islamic West.

François Déroche is a professor at the Collège de France in Paris, where he teaches the history of the Qur'an. He is a specialist in Arabic manuscripts, with a particular interest in the history of the written transmission of the Qur'an and in the history of the book in the Islamic world. He has published on codicology and early Qur'anic manuscripts.

Markus Fischer is the Director of the Institute of Food Chemistry at the Universität Hamburg and founder of the Hamburg School of Food Science. He has been the spokesperson for the Competence Network Food Profiling since 2016 and the spokesperson for the natural science section 'Artefact Profiling' in the Cluster of Excellence 'Understanding Written Artefacts' (CSMC) since 2019.

Max Jakob Fölster is a coordinator and researcher at the Max Weber Foundation, China Branch Office in Beijing. He is affiliated with the CSMC, Universität Hamburg, where he obtained a PhD in 2017. Along with the broad fields of philology and manuscript studies, he is interested in the history of libraries and book collecting throughout Chinese history.

Camillo A. Formigatti studied Classics, Indology, Sanskrit, and Tibetan. He worked as a research associate for the project 'In the Margins of the Text: Annotated Manuscripts from Northern India and Nepal', in Hamburg, as well as for the Sanskrit Manuscripts Project in

Cambridge, and he is currently a librarian and information analyst for Oriental manuscripts at the Bodleian Libraries in Oxford.

Markus Friedrich is Professor of Early Modern European History at the Universität Hamburg. He has worked widely on European archives and paper-based scholarly practices.

Imre Galambos is a specialist in Chinese manuscripts and palaeography, and has worked on writing habits in both early and medieval China. He is particularly interested in the orthography of non-standard character forms and their spread throughout East and Central Asia.

Jost Gippert is Chair of Comparative Linguistics at Goethe-Universität, Frankfurt, and since 2020, a visiting professor at the CMSC, Universität Hamburg; he has made extensive studies of palimpsests (Georgian, Armenian, Caucasian-Albanian) and other manuscripts (Tocharian, Avestan, Maldivian, etc.).

Uwe Golle studied the restoration and conservation of books, archival materials, and cultural assets in Berlin. He now heads the Graphics Restoration Department at the Klassik Stiftung Weimar with a special focus on the Eastern European avant-garde and the Bauhaus.

Volker Grabowsky is Professor of Thai Studies at the Universität Hamburg. He is (co-)author of several books on the history and culture of Tai ethnic groups, including the translation and analysis of Tai Lü chronicles, and has directed various projects pertaining to the manuscript cultures of the Tai peoples in the Upper Mekong Valley.

Michael Grünbart is Professor of Byzantine Studies at the Westfälische Wilhelms-Universität Münster. His main areas of research are Byzantine epistolography, material culture, cultural history, religion and politics, and rituals. He recently published an introduction to Byzantine auxiliary disciplines.

Oliver Hahn studied chemistry and art history and worked at the Department for Restoration and Conservation at the Cologne University of Applied Sciences. He is now head of the 'Analysis of Artefacts and Cultural Assets' unit at the Bundesanstalt für Materialforschung und -prüfung (BAM) and, since 2014, professor at the Universität Hamburg, Faculty of Humanities.

Kaja Harter-Uibopuu is Professor of Ancient History at the Universität Hamburg. Her research focuses on Greek epigraphy, especially in Hellenistic and imperial Greece and Asia Minor, as well as on the history of ancient law.

Marco Heiles is a postdoctoral researcher in medieval German literature at the Rheinisch-Westfälische Technische Hochschule Aachen. He is an expert in late medieval German manuscript culture with a special interest in text collections, practical literature, and discourses of exclusion.

Felix Heinzer was Professor of Medieval Latin at the Universität Freiburg (Germany) and curator of the Manuscript Department at the Württembergische Landesbibliothek in Stuttgart; he is currently a senior professor at the CSMC, Universität Hamburg, specializing in western medieval books and libraries.

Agnieszka Helman-Ważny is a historian of paper and books at the Universität Hamburg and the University of Warsaw. She has published monographs and articles on the history of regional production and the use of paper and books in Tibet and Central Asia.

David Holm is Professor Emeritus in the Department of Ethnology at National Chengchi University, Taipei. He has published a number of works on the traditional language and culture of the Zhuang, a Tai-speaking people indigenous to southern China.

Oliver Huck is Professor of Musicology at the Universität Hamburg (since 2006) and Director of the Graduate School at the CSMC (since 2011).

Kyle Ann Huskin is a multispectral imaging technician at the CSMC in the Cluster of Excellence 'Understanding Written Artefacts', Universität Hamburg. Her research focuses on late medieval French, English, and Latin texts, issues of gender and authority, and manuscript studies.

Matthieu Husson (CNRS SYRTE-Observatoire de Paris PSL) is a researcher in the history of late medieval astronomy in Europe and is the principal investigator of the ERC project ALFA, based at the Paris Observatory.

Silpsupa Jaengsawang is a postdoctoral researcher at the CSMC. She received a PhD from the Universität Hamburg (2019) with a comparative study of the Lan Na and Lao traditions. Her ongoing research concerns Anisong manuscripts and printing technologies since the late nineteenth century.

Andreas Janke studied historical musicology and Italian literature in Hamburg and Pavia (Italy). He is a principal investigator for the Cluster of Excellence 'Understanding Written Artefacts' (CSMC), and his research focuses on polyphonic music in manuscripts from *c*. 1350 to 1425.

Shamil Jeppie teaches in the Department of Historical Studies at the University of Cape Town where he also directs the Tombouctou Manuscripts Project. He has written extensively about manuscript collecting in West Africa and other aspects of manuscript culture in the region.

Janina Karolewski is working on the social history and manuscript culture of Alevi villages in Anatolia. She is interested in the development of Alevi groups, with a focus on their written transmission, social and religious hierarchies, and relationships to non-Alevi communities and institutions.

Sabine Kienitz is Professor of Empirische Kulturwissenschaft / Anthropological Studies in Culture and History at the Universität Hamburg and a member of the CSMC. Her research interests cover material culture and anthropological studies in the history of crime, law, and the judiciary.

Michael Kohs is a postdoctoral research associate at the CSMC, Universität Hamburg, where he is working on Jewish magic and Hebrew manuscripts. His dissertation project examined the typology of magical texts from the Cairo Geniza.

Uta Lauer is an affiliated researcher at the Universität Hamburg and senior fellow at the China Academy of Art in Hangzhou. Publications focus on Chinese calligraphy, seals, painting, and iconography.

Domenico Laurenza studied history of science at the Scuola Superiore di Studi Storici (San Marino). He is an expert in the history of anatomy and anatomical illustrations, the history of geology, visual culture, and especially in the scientific illustration of Leonardo's anatomic drawings. He is currently a research fellow at the Museo Galileo in Florence.

Lothar Ledderose is Senior Professor of East Asian Art History at the Universität Heidelberg. He is a member of the Heidelberger Akademie der Wissenschaften, of the British Academy, and of the China Center of Visual Studies 視覺中國研究院 at the China Academy of Art 中國美術學院, Hangzhou 杭州.

Zhenzhen Lu is Assistant Professor of Chinese at Bates College (Maine, USA). She received a PhD in premodern Chinese literature from the University of Pennsylvania and was a researcher at the CSMC for the period 2017–2019.

Marilena Maniaci is Professor of Codicology at the Università degli Studi di Cassino e del Lazio Meridionale. Her research concentrates on the history of Greek and Latin manuscripts (including statistical approaches), their materials and manufacturing techniques, the development of theoretical models for understanding the structure of complex codices, as well as the codicology of the Latin Bible and of Greek and Latin liturgical rolls.

Charles Melville is Professor Emeritus of Persian History at the University of Cambridge (Pembroke College) and currently president of the British Institute of Persian Studies (British Academy). He has published extensively on the history and culture of Iran in the Mongol to Safavid periods, the illustration of Persian manuscripts, and the epic *Shahnama* of Firdausi.

Piotr Michalowski is the George G. Cameron Professor Emeritus of Ancient Near Eastern Civilizations at the University of Michigan. He is the author of numerous studies on the literary history, poetics, magic, religion, history, historiography, linguistics, epigraphy, and other aspects of ancient Mesopotamian manuscript cultures.

Cécile Michel is a senior researcher at the CNRS, Archéologies et Sciences de l'Antiquité – Histoire et Archéologie de l'Orient Cunéiforme, Nanterre, and a professor at the Universität Hamburg, CSMC. As an Assyriologist, she studies cuneiform tablets from Turkey, Syria, and Iraq and, through experimentation, conducts research on the palaeography and shaping of clay tablets and envelopes.

Boriana Mihailova received a PhD in physics from the Bulgarian Academy of Sciences in 1997. Since 2005, she has been Professor of Crystallography at the Universität Hamburg. Her main research interests are solid-state spectroscopy, phase transitions, ferroelectrics, complex hydrous silicates, disordered silicates, biomaterials, and novel methods for non-destructive mineral characterization.

Ralf Möller is Professor of Computer Science and heads the Institute of Information Systems at the Universität zu Lübeck. His main research areas include: data management and artificial intelligence, in particular knowledge representation and database technologies for information systems; machine learning and data mining for decision making; and probabilistic relational modelling for multi-agent systems.

Luigi Orlandi, formerly a member of the Graduate School at the CSMC, is currently a researcher at the Berlin-Brandenburgische Akademie der Wissenschaften. His main scholarly interests lie in the field of textual criticism and Greek palaeography, with particular focus on scribes and scholars of the fifteenth century.

Jürgen Paul is Professor Emeritus of Islamic Studies and specializes in the medieval and early modern history of Central Asia and Iran. He has written extensively on local and imperial power. He joined the CSMC in 2017 as a senior professor, and has since then rekindled his interest in Islamic manuscript culture.

Jörg B. Quenzer is Professor of Japanese Studies at the Universität Hamburg. His research focuses on premodern Japanese literature, especially aspects of mediality, and the relationship between Japanese literature and Buddhism. He also served as vice spokesperson for the Sonderforschungsbereich 950 'Manuscript Cultures in Asia, Africa, and Europe', Universität Hamburg (2011–2019).

Ira Rabin studied chemistry at the Hebrew University of Jerusalem and the Freie Universität Berlin and researched nanomaterials at the Fritz-Haber-Institut der Max-Planck-Gesellschaft. Since 2003, her research has been dedicated to history of black inks, papyrus, and parchment manuscripts, particularly the Dead Sea Scrolls, at the Bundesanstalt für Materialforschung und -prüfung (BAM) in Berlin and at the Universität Hamburg.

Charles Ramble is Directeur d'études in the History and Philology Section of the École Pratique des Hautes Études, PSL University, Paris, and the director of the Tibetan Studies research team at the Centre for Research on East Asian Civilisations (CRCAO). His publications include several books and over a hundred articles on the religion, anthropology, and history of Tibet and the Himalaya.

Bruno Reudenbach was Professor of Art History at the Universität Hamburg and a member of the Sonderforschungsbereich 950 'Manuscript Cultures in Asia, Africa and Europe'. Since 2019 he has been a senior professor at the Cluster of Excellence 'Understanding Written Artefacts' (CSMC). His research focuses on medieval art, especially early medieval manuscript culture.

Martin Jörg Schäfer is Professor of Modern German Literature and Theatre Studies at the Universität Hamburg. His research interests include: the relationship between text, performance, and the respective written artefacts in theatre; narratives of cultural crises and transformation; problems of literary translation as well as theories of representation; and theatricality and literary aesthetics.

Jochen Schlüter has been the curator and director of the Mineralogical Museum, Center of Natural History (CeNak) at the Universität Hamburg since 1988 and Professor of Mineralogy there since 2008. His main research interests are new mineral species, gemstones, and meteorites.

Tilman Seidensticker is Professor of Arabic and Islamic Studies at the Universität Jena (since 1995) and a senior professor at the Universität Hamburg. He became the head of the Arabic manuscripts section of the project Katalogisierung der Orientalischen Handschriften in Deutschland (KOHD) in 1997 and head of the KOHD project in 2013.

Ivan Shevchuk is an imaging technician at the CSMC, Universität Hamburg and a member of the Cluster of Excellence 'Understanding Written Artefacts'. His background is mechanical engineering, and his specialization is multispectral imaging and image processing. His current work focusses on operating and improving imaging equipment and image-processing methods.

Ondřej Škrabal is a research associate at the CSMC, Universität Hamburg. A historian of ancient China, his recent research focuses on the sociocultural and political underpinnings of epigraphic production.

Thies Staack is a principal investigator at the CSMC, Universität Hamburg. His research interests lie in the manuscript cultures of early and late imperial China, ancient Chinese law and administration, as well as Chinese medical literature.

Barend ter Haar is Professor of Chinese Studies at the Universität Hamburg; he has published extensively on Chinese religious, social, and cultural history.

Stefan Thiemann is head of the Centre for Sustainable Research Data Management at the Universität Hamburg and principal investigator in the Research Unit 'Data Linking' of the Cluster of Excellence 'Understanding Written Artefacts' (CSMC). He studied meteorology and information science. Since 2000 he has worked as an IT expert at the Asien-Afrika-Institut of the Universität Hamburg, and he participated in the project 'Informationinfrastructure' of the Sonderforschunsgbereich 950.

Stefano Valente is, since 2011, the Scientific Coordinator for the project 'Etymologika' (Universität Hamburg / Akademie der Wissenschaften in Hamburg). His main fields of expertise are Greek manuscript studies, Greek and Byzantine scholarship and lexicography, and Aristotle's reception in Byzantium.

Dick van der Meij studied Indonesian languages and cultures at Leiden University. At present he is Liaison Officer and Academic Advisor of the Digital Repository of Endangered and Affected Manuscripts in Southeast Asia (DREAMSEA) at the Universität Hamburg. He has published extensively in the fields of Indonesian, Javanese, and Balinese manuscripts, literature, and culture.

Giuseppe Veltri is Professor of Jewish Philosophy and Religion, Director of the Maimonides Centre for Advanced Studies, and the Director of the Academy of World Religions at the Universität Hamburg. His publications cover various areas of Judaic Studies and the philosophy of religion. In the field of Jewish magic, his publications include the monograph *Magie und Halakha*.

Eva Wilden is Professor of Tamil and Manuscript Studies at the Universität Hamburg. She was a researcher at the École Française d'Extrême-Orient (EFEO) from 2003 to 2017, working on the critical re-edition and transmission history of the Tamil Caṅkam corpus. From 2014 to 2019 she directed the ERC project 'NETamil: Going from Hand to Hand – Networks of Intellectual Exchange in the Tamil Learned Traditions', jointly hosted by the Universität Hamburg and the EFEO.

Hanna Wimmer is a Junior Professor in the Department of Art History at the Universität Hamburg and a member of the CSMC. Her research focusses on European medieval manuscripts and printed books, with a particular interest in the role of their visual organization in the communication and transmission of knowledge.

Carsten Wintermann studied restoration and conservation science at the Department for Restoration and Conservation at the Cologne University of Applied Sciences. He is now working in the Graphics Restoration Department at the Klassik Stiftung Weimar with a special focus on the non-invasive scientific investigation of drawings.

Indices

Two indices are provided. The first includes the main written artefacts (such as manuscripts, archival documents, or inscribed objects) that are discussed in the book. Page numbers with an asterisk refer to illustrations.

The second index reports things, concepts, and geographical names that are of cross-disciplinary interest and that may help orient the reader to the book. Terms that are overly general or whose meaning is too ambiguous, such as 'author', 'document', or 'content', have not been included. Because the book contains so many contributions and deals with so many different cultures, to provide a printed list of names or to include terms that are of interest only to the specialist in one field does not seem useful. For such purposes, we refer the reader to the PDF version of the book. The general index was made with the help of Jost Gippert, to whom we are very grateful.

Caroline Macé, Jörg B. Quenzer and Laurence Tuerlinckx

Index of Manuscripts and Other Written Artefacts

General Index