

Annemie D.G. Leemans

# Contextualizing Practical Knowledge in Early Modern Europe

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The topic of this book is practical knowledge in early modern Europe, interpreted widely as recipes containing art procedures or medical panaceas between 1400 and 1700. In this book, the 1) origin or creation, 2) transmission or dissemination, and 3) use or consumption are key subjects for understanding the place of practical knowledge in early modern European society. After a historiographical and theoretical approach, this book applies Deleuze and Guattari's rhizome metaphor to art technological literature. The first part ends with a study about medical practitioners and mediators who disseminate practical knowledge through the printing press. The second part of the book is entirely dedicated to the booklet *A Very Proper Treatise* (1573), using a microhistory approach to study it.

### The Author

Annemie D.G. Leemans is an art historian from the University of Bologna. She obtained her PhD in interdisciplinary history at the University of Kent and University of Porto through the Erasmus Mundus Joint Degree known as TEEME. Currently, she is a researcher in the Transdisciplinary Research Centre "Culture, Space and Memory" (CITCEM) at the University of Porto.

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## Contextualizing Practical Knowledge in Early Modern Europe

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Annemie D.G. Leemans

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Dedicated to Eloise Eleonor*





# Preface

*Writing long books is a laborious and impoverishing act of foolishness: expanding in five hundred pages an idea that could be perfectly explained in a few minutes. A better procedure is to pretend that those books already exist and to offer a summary, a commentary.*

Jorge Luis Borges<sup>1</sup>

In light of the quoted wisdom of Argentinian writer Jorge Luis Borges (1899–1944), this introduction shall be short, offering a summary of this book. During the course of my studies and, later on, my PhD program, I learned that unnecessarily lengthy and detailed descriptions do not necessarily serve their purpose. I shall therefore try to introduce my topic, sources, method, structure, and underlying ideas only briefly in order to facilitate their reading.

This book was built on the PhD thesis I wrote for the joint Erasmus Mundus program TEEME, an acronym for Text and Event in Early Modern Europe. I had the great pleasure to work together with Amelia Polónia at the Universidade do Porto in Portugal and Catherine Richardson at the University of Kent in the UK. The other two universities forming part of this international collaboration were Freie Universität Berlin and Charles University of Prague.

The way this book is structured is twofold. It investigates practical knowledge in a general sense across early modern Europe, and alongside this, it contains a case study of technological knowledge of art in early modern Europe. Both parts consist of three symmetrical chapters: the first chapter of each respective part investigates the origin or genesis of practical knowledge; the second chapter the transmission dynamics; and the third chapter assesses the consumers and consumption of practical knowledge.<sup>2</sup>

The overarching topic of this book is practical knowledge in early modern Europe. Practical knowledge is the know-how people have in order to make something, do something, or obtain something. Textually speaking, this knowledge presents itself as a prescription, recipe, secret, or formula. The areas of interest of practical knowledge are very wide. This can be illustrated by the variety of examples such as recipes

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- 1 Cary 2014, p. 102. The quote comes from the introduction to Jorge Luis Borges' collection of short stories *El Jardín de senderos que se bifurcan*, published in 1941.
  - 2 Inspiration for this structure started growing after I enjoyed the teaching and guidance of professor Jan Van der Stock.

to make a perfume, to make ink, to make gunpowder, to dye leather, cure a cancer, remove grease from parchment, discover the sex of an unborn child, make snail water, cure bed-wetting, make almond butter, and many more.

These often interesting, curious, or odd types are textual variants of practical knowledge. The real essence of knowledge or knowing is a feature specific to the brain. Knowing is a mental comprehension of information. This means that the actual knowledge principally existed inside the brains of people. As you may imagine, getting information from the brains of the long dead is a complicated matter. Happily, for various needs and purposes, these owners of practical knowledge left written documents. It is these textual witnesses that provide the primary sources for this book. The repertoire of sources examined is largely early modern. When relevant, sources outside of the early modern timeframe (ca. 1400–ca. 1700) are consulted and referred to. Going outside the prescribed timeframe might not be very problematic considering the nature of texts containing practical knowledge: a lot of the texts that circulated in early modern Europe were copies of older texts. Some of the copied recipes go back to antiquity.<sup>3</sup> Texts were copied and recopied, used and re-used, kept identical, or adapted and changed (for transmission principles see Part I, Chapter 2). This is why texts with practical knowledge could have a long lifespan. That is the reason why the boundaries of the early modern period can and should be crossed.

In order to maintain a dynamic picture of practical knowledge, a good range of commonly used recipes and recipe books and previously unconsidered material were selected. In order to maintain a European dimension, sources in several languages and from several geographical areas were considered.<sup>4</sup> Hence, the sources used come from several European and a few North American libraries and institutions. The largest number of recipe books consulted came from British libraries, such as the Wellcome Library, the British Library, and the Bodleian Library. Other libraries consulted in the UK were the National Art Library, the Caird Library of the National Maritime Museum London, the library of the Society of Antiquaries of London, Corpus Christi College Oxford, Magdalen College Oxford, the Chetham's Library Manchester, the John Rylands University Library

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3 Long 2001.

4 The languages are: English, Italian, French, Portuguese, Spanish, Dutch, German, and Latin. Generally, one might state that the geographical areas coincide with the languages that appear in the recipe books, but this is not entirely true. For example, instances of Spanish and Portuguese recipes appear in an English recipe book Cf. London, Wellcome Library: Wellcome MS 7113). Also, Latin, not being among the targets of this book, can be seen as a way to cross boundaries.

of Manchester, the Sydney Jones University Library of Liverpool, the University Library of Glasgow, the University Library of Birmingham, and the University Library of Cambridge. In other European countries several libraries proved suitable for this research: Trinity College Dublin (TCD), Bibliothèque National de France (BnF), the library and archive of the Plantin-Moretus museum at Antwerp, the library of Rubenianum at Antwerp, the heritage library Hendrik Conscience at Antwerp, the university library of Antwerp, the university library of Bologna, the Biblioteca comunale dell'Archiginnasio at Bologna, and finally, the private library of Giovanni Mazzaferro at Bologna. In North America the Library of Congress and the Folger Shakespeare Library, both in Washington D.C., have been helpful. Furthermore, digital or paper reproductions of recipe books through other library systems, distant orders, or exchange with other scholars have proven profitable.

Most of the recipe books consulted for this work come from the first three libraries mentioned: the Wellcome, the BL and the Bodleian. In these libraries the search for recipe books within the set time frame and languages aimed for completeness, as far as possible. Languages considered here are English, Dutch, Italian, French, and German. But occasionally these recipe books introduced other languages, such as Latin, Spanish, and Portuguese. Other libraries were used for specific purposes: for example, the NAL contains a small number of interesting art technological recipe books. Even though the study behind this book contains a lot of work with primary sources, not all were taken up through the reference system. Some recipe books are more adaptable for use than others. This book makes frequent use of MS Wellcome 7113, because it is a very nice example of a seventeenth century recipe book. A lot can be said about this particular manuscript. However, the majority of studied sources are left unmentioned simply for reasons of selection and the legibility of this book.

There is a great deal of diversity and complexity in the contexts of recipe books. Generally, this book will speak about recipe books, but written recipes may appear almost anywhere: letters, diaries, various accounts, etc. With respect to the producers of the sources: they came from different social backgrounds and all genders. Sources may have produced for personal consumption, for a known or unknown patron or for divulgation, which entailed a specific or non-specific audience. This book tries to glean some general truths about textual and bookish practical knowledge.

The various methods applied here are those used by book historians: mainly a textual and material analysis. A book historian's point of view is particularly convenient for the study of practical knowledge, because the remaining sources are mainly textual. Texts, which are the communicative vehicles of ideas and knowledge, are intrinsically connected to their material vehicles: books. It is

obvious that all kinds of surfaces could be used to write down ideas. People could carve information into a church pillar or scribble a quick note on the butcher's wrapping paper, but the common denominator for the sources used here is "books": parchment books, paper books, thick books, thin books, handwritten books, printed books, specialist books, miscellaneous books, clean books, severely damaged books, parts of books, reassembled books, and many more. Books are the vehicles that contain texts; texts have agency – they embody the intellectual expression of information, interpreted here as practical knowledge disclosed in recipes. Throughout the whole of this work a distinction is made between books and texts, the first being a material vehicle, while the second is an intellectual vehicle that reflects ideas or information. A further distinction to be made is between work and text, because not every text is a literary work, such as the case of instructive literature. The use of 'book title' refers to the title of a book, meaning all individual copies of one or more editions. A copy is an individual, material book.

The lifespan of books hardly ever equals the lifespan of a text. Also, both books and texts are hardly ever fixed products. Both books and texts are subject to changes: texts change while being narrated or copied; books change through subsequent users. Books endure changes over time by multiple users who add (or remove) text or materially mutate the book. A combined textual and material analysis offers the best understanding of the sources. Through this method transmission dynamics are unveiled, and this method also sheds light on the manuscript – print rate.

This book frequently deals with secrets. Secrets have the literary form of a recipe and principally convey the same kind of information. The words 'secret' and 'recipe' are used interchangeably. The complex case of Alessio Piemontese could be interesting in the light it sheds on the various uses of the word secret. When talking about the secrets of Alessio Piemontese, what is meant is his collection of recipes as a whole including all the publications and manuscript copies that ever existed, whereas talking about the *Secrets* by Alessio Piemontese, refers to the English edition first published in 1558. When talking about the *Secreti* (1555) by Alessio Piemontese, the very first publication of the secrets of Alessio Piemontese is indicated. So 'secrets' indicate the content of the work, while '*Secrets*' indicates the title of a publication.

With regard to the Low Countries, three terminologies are used to identify the linguistic and cultural situation: Flemish, Dutch, and Netherlandish. While being fully aware that the terminology Netherlandish is most commonly used in art history; it nevertheless proves to be suitable for book history. When something concerns only Bruges, the inclination is to refer to the case as Flemish,

while, when it concerns Amsterdam, it will be addressed as Dutch. When referring to a language product or identity issue that concerns both regions, the term *Nederlandish* will be applied. The same reasoning can be used about English and British for instance.

Other than terminologies, this publication contains a lot of non-referenced biographical information, such as the dates of birth and death of people and other biographical details. For these matters, this current study made use of existing databases, unless otherwise stated. For English subjects, the online database of the Oxford Dictionary of National Biography, also known as the ODNB, was used.<sup>5</sup> For Italian subjects the online encyclopedia about Italian culture Treccani was consulted.<sup>6</sup> For subjects from the Low Countries *Biographisch woordenboek der Nederlanden*<sup>7</sup> and the *digitale bibliotheek voor de Nederlandse letteren*, also known as the dbnl, were used.<sup>8</sup> The main source for arts- and craftsmen was the database of Oxford Art Online.<sup>9</sup> For subjects who do not enter in one of these categories, data came from other secondary literature, was disregarded in cases of doubt or controversy, or, became the subject of research.

In referencing certain art technological recipe books, a conventional system was used, as prescribed in the literature about Cennini. There are many translations of *Il libro dell'arte* by Cennino Cennini, which started to appear as early as the nineteenth century. The transcription of the Italian text was only recently published.<sup>10</sup> Lara Broecke published the Italian original with an accurate English translation. Unfortunately, the expectation of examining Cennini's original text in this book proved impractical within this research, but this publication is an absolute must-have in one's personal library.

Another way to facilitate the reading of this book is by shedding light on its structure. Part I of this publication will contribute to an understanding of the overall setup of practical knowledge. Part II of this publication emphasizes practical knowledge in the arts, hereafter called art technical knowledge. Part I is dedicated to practical knowledge in general whereas Part II addresses art technical knowledge in a precise context. This publication is conceived in two parts, each containing three chapters. The three chapters of both parts are organized

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5 [www.oxforddnb.com](http://www.oxforddnb.com).

6 [www.treccani.it](http://www.treccani.it).

7 van der Aa 1852–1878.

8 [www.dbnl.org](http://www.dbnl.org).

9 [www.oxfordartonline.com](http://www.oxfordartonline.com).

10 Lara Broecke, *Cennino Cennini's Il Libro dell'Arte: A New English Translation and Commentary with Italian Transcription* (London: Archetype Publications, 2015).

**Tab. 1:** Schematic overview

<b>PART I</b>	<b>TOPIC</b>	<b>PART II</b>
<b>The study of texts: practical knowledge</b>	<b>Contextualization</b>	<b><i>A very proper treatise: the case study of an art technological printed book</i></b>
Chapter 1 The construction of practical knowledge	Creation	Chapter 1 <i>A very proper treatise</i> (1573) as a literary product, reflecting art technological knowledge
Chapter 2 The transmission of practical knowledge	Dissemination	Chapter 2 Selling secrets. The print business as a mediator in the dissemination of art technological knowledge
Chapter 3 The early modern users of practical knowledge	Consumption	Chapter 3 Buying secrets. The audience and the consumption of art technological literature

in a symmetric way, meaning that the main topics correspond to the scheme outlined above.

The main aim of this interdisciplinary study is to contextualize practical knowledge. What is meant by ‘contextualizing’ is the studying of different topics that are intrinsically intertwined with the subject. In this book the origin or creation, transmission or dissemination, and use or consumption are key subjects for understanding the place of practical knowledge in early modern European society. As seen in the grid above, both parts of this publication evolve along these three topics.

The most suitable debut to any topic is an introduction to the topic. For this reason, the first chapter of Part I will be an introduction to the whole thesis. A working definition, historiography or state of the arts, and theorization are included in this chapter. For the historiography the reader is taken on a journey where various terminologies that align with or cover the concept of practical knowledge are touched on. This chapter theorizes the textual aspects of knowledge production. This first chapter acts not only as an introduction to Part I, but also to the whole book. Talking about practical knowledge without addressing transmission dynamics is a hard task. Transmission, dissemination, circulation, and knowledge transfer are a significant part of the nature and behavior

of knowledge. Theory and exemplary studies will be addressed in the second chapter of Part I. Another way to contextualize practical knowledge is through the study of its producers and consumers. In the third chapter of Part I some key functions that people can exercise while they are dealing with practical knowledge are delineated.

Part II of this book takes a micro approach. In this part, the study of the early English print, *A Very Proper Treatise* (1573), finds its legitimate place. Ad Stijnman describes 'art technology' as 'knowledge concerning the production methods of works of art or craft, i.e. knowledge concerning materials, tools, machines, techniques and sites used in making objects with a certain cultural value/from cultural heritage'.<sup>11</sup> This means that Part II narrows down the topic from a broader concept (practical knowledge) to a more precise concept (art technical knowledge). The *Treatise* will be examined through the same three lenses used in Part I: creation, dissemination, and consumption. The big methodological difference between the two parts lies in the nature of the sources, Part I uses a variety of primary sources side by side with a significant corpus of bibliography while Part II focuses on a single source. The focus in Part I is mainly textual, while in Part II the material book is considered along with the text. There is a chronological order in the three chapters, which runs parallel to the three key topics. In the first chapter the origin of the text of the book is examined. The following chapter examines the making or origin of the material book. This finds its legitimate place in the second chapter about dissemination, because it was the introduction of print, that facilitated the dissemination of knowledge out into wider circulation. In this chapter it is argued that the book is a printer's compilation. Finally, the consumption and consumers of the book will be studied in the third and last chapter.

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11 Stijnman 2015.





## Foreword

The interest in practical knowledge in this work is focused on an early modern European setting. However, I recognize that practical knowledge is timeless. In fact, today it is still a burning issue. Practical knowledge has flourished on social media. The Internet is overflowing with instructions in the form of videos, podcasts, slideshows, apps, wikihow and such like. “How-to” headlines seem to be successful and sexy.

During the summer of 2015, I started to interview my terminally-ill grandfather about trade secrets. My grandfather grew up within the context of a family business in luxury hand-made furniture. One of his responsibilities was to experiment with substances and procedures in order to manipulate the color of wood. I learned a lot during this encounter, in both a micro and macro sense. I learned about which substances and materials woodworkers used in the fifties and early sixties in the Belgian ‘Westhoek’.<sup>12</sup> I learned about interesting misconceptions about wood. And more importantly, I learned about the context of practical knowledge and secrecy, applied in an actual lucrative family business. A talk with my grandfather could easily lift the mysterious veil associated with secrecy, and this is an underlying concept of this book.

My grandfather assured me that creating and manipulating the color of furniture could keep him at work for several days and nights. He said that he learned everything through experiment; through trial and error. He added that these things could not be done in the kitchen, because they were ‘vuiligheid’ or filthy tasks. Long before a factory was built for family business, my grandfather’s great-grandfather placed furniture in the cowshed. The urine of cows contains ammonia, a substance present in the cowshed that makes beech lighter, and oak darker. My grandfather was aware of this information and used little quantities of bought ammonia to color furniture. Since he did not have a cowshed, he locked the furniture in the aeration room of the company’s independent electricity unit. He also used *caligène*, an aggressive substance that caused skin loss from his hands and arms the first time he experimented with it. He also used bister, a substance diluted in water. In order to give bistre, a brown wood-soot pigment, a more intense color, he would boil it rather than just diluting it. Finally, his favorite personal recipe was adding chicory to colors for furniture.

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12 The ‘Westhoek’ or ‘Maritime Flanders’ is the southern part of the coastal area of Flanders and its hinterland.

His ‘inventions’ were personal but were used within the company. This kind of information was not readily exchanged, as illustrated by my grandfather’s exclamation that ‘the Malines people didn’t tell us how they colored their furniture either’. One of the challenges my grandfather faced, was conducting experiments without an organized system of record. He took no notes during the various phases of experimenting. Afterwards, if a procedure seemed to be successful, he did not have exact measurements. He would have to repeat it all over again to discover what the exact combinations and quantities were. Measurements were often decided upon, in my grandfather’s words, ‘by eye’, which in any case would lead to imprecise descriptions of ‘a little of this’ and ‘a lot of that’. But sometimes it was rather easier, such as with *caligène*, which he diluted with 50 % water. Another of the company’s secret procedures was the hiring of a painter. Sometimes parts of the wood were not responsive to the coloring agents. Because the coloring procedure happened after the furniture was made, this was problematic, so the painter would paint a fake knot on the affected areas. According to my grandfather, their painter always did impeccable work; nobody ever noticed any painted areas on the furniture.

The secrets described above are procedures based on actual practice, often by trial and error. Secrecy was meant to keep the business or trade running. Practical knowledge can occasionally leave the professional environment and go into wider circulation. This also happened with my grandfather’s practical knowledge and secrets. The family business is no longer operating and has not been for many years, but the circumstances of this book and my personal interest resulted in the secrets leaving their original environment. Through this book, a certain number of people will read about them, so the knowledge will be passed on. If other scholars quote it or reference it, the potential for dissemination will increase significantly.

I would say that this book is like an early modern recipe book: eclectic. It is built from several kinds of practical knowledge. Early modern recipe books were also the product of collecting all kinds of practical knowledge, coming from different sources. A central idea of this book is that recipe books are assembled. Recipe books are rarely the product of a single person, because practical knowledge is always built on knowledge acquired previously by different persons.

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Finally, I would like to thank my inner family circle and friends for bearing with me in times of need, for providing laughter and precious moments, for endless Skype calls, and cheering from the side-line.



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## List of abbreviations

BnF	Bibliothèque National de France
EEBO	Early English Books Online
ESTC	The English Short Title Catalogue
OCLC WorldCat	Online Computer Library Center World Catalogue
ODNB	Oxford Dictionary of National Biography
OED	Oxford English Dictionary
SP	State Papers
TCD	Trinity College Dublin
Treccani	Enciclopedia Italiana di Scienze, Lettere ed Arti iniziata dall'Istituto Giovanni Treccani
USTC	The Universal Short Title Catalogue



## **Part I The study of texts: practical knowledge**



# Introduction

*Nemo artifex nascitur*

Jacoba van Veen

The opening quote of the introduction, *Nemo artifex nascitur*, is borrowed from Jacoba van Veen (1635–1687/1694), a remarkable seventeenth century Dutch lady. Her manuscript with recipes is kept at the Royal Library in The Hague (reference 135 K 44). What Jacoba van Veen probably intended with this certainly-not-unique motto is that nobody is born an artist. The essence of this motto is that one becomes an artist through a *métier* that has been taught. This stands diametrically opposed to a still prevalent idea of the innate talent of the artist, which Vasari promoted in his *Vite* (1550).<sup>13</sup> This thesis does not ignore the aspect of talent, but stresses the knowledge, experience and practices involved. Teachings or transfers of knowledge can occur in a variety of ways. The most common are explained in Fernando Bouza's 'communicative trinity'. The communication of information is like the three Trinitarian personalities: the oral, the visual and the written.<sup>14</sup> These are three common ways or media by which information, here practical knowledge, finds its way from one person or group to another. The focus in this publication lies with the transfer of written knowledge, however the oral and visual or demonstrational aspects are not excluded from this work, since they are related to each other.

Models for the transmission of knowledge or information are plenty. This publication modifies a basic model for knowledge transmission proposed in Kusukawa and Maclean's *Transmitting Knowledge* (2006), which is based on the model Roman Jakobson proposed in 1960:<sup>15</sup>



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13 Hicks 2015.

14 Bouza 2004, p. 11.

15 Kusukawa and Maclean 2006, p.5.

We changed one of the parameters in order to better express the concept and the status of the recipient of the knowledge in question. The ‘receiver’ is being replaced by the word ‘user’. A receiver points to a passive function, while this book conceives of the user as active and open to new interpretations. The user can be the creator of the information or knowledge; the user can be both the writer and the reader.

	CONTEXT	
CONTENT		USER
	MEDIUM	

Essential to this project is the use of the concept of ‘user’ instead of ‘receiver’ or ‘reader’.<sup>16</sup> Another equivalent for user that will be applied in this book is ‘consumer’. Both ‘user’ and ‘consumer’ indicate that they interact in an active way with practical knowledge. The minimum action a reader would perform is the action of reading. The concept of ‘user’ can imply numerous actions such as reading, copying, adding, omitting, and putting it into practice. Practical knowledge is practice-based and thus users can be reproducers of their experiences. The term reader does not imply reproduction of knowledge. The experimenter is the creator of knowledge, but the receiver can also be actively involved in knowledge production and transmission by writing it down, by passing it on to others, and/or by experimenting and improving or adapting it. The act of writing one recipe (the nucleus of the transmission of practical knowledge) is commonly done by one person, although exceptions exist. The so-called author of a recipe book is a deceptive concept, as recipes books are compilations, either compiled by multiple authors or copied by one person, but are still a result of multiple sources at the root. In this research, texts were used to study practical knowledge, but users are central to the whole process of producing and reproducing.

The first chapter will function as an introductory chapter around how knowledge was created in early modern Europe. This chapter will give the state of the art or *status quaestionis* of the umbrella term ‘practical knowledge’ and the various knowledge types it covers. Classifying practical knowledge is thus a complex task and any taxonomy an open field for debate. This chapter will reflect on this complexity and will try to assert the basic taxonomy used in this publication. This chapter works towards a definition of practical knowledge. It relies on what

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16 A further elaboration of the terminologies ‘users’ versus ‘readers’ takes place in Part II of this publication.



has been said earlier about the subject and it provides evidence from the findings of our research. This chapter gives the premises of knowledge, it contextualizes practical knowledge and, finally, it theorizes recipes. Recipes are conceived here as the basic units to convey practical knowledge.

The second chapter gives insights into the transmission dynamics of practical knowledge. This chapter will argue that the transmission of practical knowledge proceeds along complex patterns. It will compare these dynamics to a subterranean root of irregular growth: the rhizome, which has been theorized by Deleuze and Guattari.<sup>17</sup> The rhizome offers a suitable metaphor for addressing the complexity of practical knowledge transfers, because rhizomes are a multiple ramification system that can acquire multiple forms and have irregular growing intervals. Practical knowledge in early modern Europe travelled like rhizomes. This second chapter of Part I is a continuation of the first chapter, and often potentially overlaps it, because the creation of knowledge is intrinsically connected with the transmission of knowledge.

The third chapter also has a strong connection to the first chapter. It discusses the profile of the users or interactors with practical knowledge. Furthermore, this chapter builds on the previous one, because knowledge transmission occurs through actions of the human species. Textual transmission is taken into account in the second chapter, but in the third chapter, human interaction creates the context for the transmission. Books are written by groups, or by individuals. This chapter concentrates on individuals with a mediating function in the process of knowledge transmission.

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17 I thank both Martin Procházka and Carlo Ginzburg for this suggestion; following my conference paper 'Adapting Common Knowledge: A Case Study of the Art of Limning', presented at the 2014 TEEME conference *Between Words and Worlds: Texts and Contexts in the Early Modern Period* in Prague. Cf. Leemans 2014a.



# 1 The construction of practical knowledge

**Abstract:** This chapter counts as a general introductory chapter about knowledge theory. The main questions that take the lead in this opening chapter are: What is practical knowledge? How does it exist and how is it created? Various early modern practices are seen in the light of terminology.

**Keywords:** Practical knowledge, creation, theory, terminology, secrecy, technology

*The Breviarie of Health [...] Now newly corrected and amended, with some approved medicines that never were in print before this impression, & are aptly placed in their proper chapters, by men skillfull in phisicke and chirurgerie*

Andrew Boorde, 1587

## 1 The premise of knowledge: placing practical knowledge

The title of this book defines ‘practical knowledge’ as its main topic, moreover, practical knowledge in recipes books. As mentioned above in the introduction, knowledge is located in the brain. Practical knowledge is knowing how to do something, or how to obtain something. This type of knowledge dealt with practical daily things in the early modern European setting. Typical subjects were the treating of worms in children, or the making of ink, for instance. When this knowledge is transmitted from one person to another, the text takes the instructive form, whether in a conversation, a class, a letter, or a recipe book. This book takes recipe books as a means of getting to the instructive literature or recipes.

The quote above from Boorde briefly contextualizes recipe books and their worlds. The quote is taken from the title page of a later edition of *The Breviarie of Health* (1587). One of the general truths about recipes books here is that recipe books were assembled. *The Breviarie of Health* (1587) recognizes this status in its title. The book was written by Andrew Boorde, who recognized that he took recipes from other sources (‘men skillfull in phisicke and chirurgerie’). Another truth about printed recipe books is that the knowledge often previously circulated in manuscript form (‘medicines that never were in print before this impression’). Another truth is that there is a relationship between practical knowledge and the exercising of this knowledge (‘approved medicines’). Even in writing this book, knowledge is subjected to an editing process. Practical knowledge can be

known through the study of recipe books, and these are the main focus of this publication.

### 1.1 Shared bodies of knowledge and malleable categories

The range of subjects that could fall into the category of practical knowledge is extensive. Practical knowledge is a very broad category. Practical knowledge can be incorporated in all kinds of bodies of knowledge: medicine, cosmetics, the arts, alchemy, cuisine, gardening, husbandry, and many more. However, this way of categorical thinking is very specific to contemporary reasoning. This publication argues that in an early modern context there was more coherence between various disciplines and bodies of knowledge. The coherence between various disciplines and subjects will be seen as shared bodies of knowledge. The concept of shared bodies of knowledge indicates that certain information, procedures or materials are relevant for different disciplines. Daniel Garber referred to this as the ‘interconnectedness of knowledge’.<sup>18</sup> Here the idea of interconnectivity will be seen as something shared. The simple reason for this shift in terminology is because of the origin of the observations arising from the current study, which is different from Garber’s. Garber investigated the origins of the understanding of the physical world in the early modern period; the current observations are connected to the study of recipe books. For instance, cooking books often contain medical, artistic and general-purpose recipes. The concept of shared knowledge is that one part is apportioned to various recipients or branches of knowledge.

The following two examples will shed light on the concrete living conditions of practical knowledge. The first will demonstrate how one particular ingredient can have multiple uses, crossing various disciplines. The second will show that practical knowledge co-existed with other branches of knowledge. For the first case, a small introduction to the tree resin dragonsblood is required. This helps to demonstrate how the different branches of knowledge in early modern Europe were connected. Dragonsblood is a raw material that contains a red pigment or coloring substance. Pigments are used to give color to paint, ink, dyes, and cosmetics. In the case of dragonsblood, the red pigment was also used to color medicines. It was freely available at the apothecary, but not just used for its pigment. Dragonsblood can be seen in recipes for oral hygiene for royalty and also in-home obstetrics.<sup>19</sup> Ingredients with mythical origins are often dismissed

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<sup>18</sup> Garber 2006, p. 21.

<sup>19</sup> New York, The New York Academy of Medicine: MS 1; London, Wellcome Library: Wellcome MS 7113, fol. 35r.

as quack cures. The legend goes that dragonsblood was formed out of a battle between an elephant and a dragon.<sup>20</sup> But here we see that what was a pigment for the painter, was a medicinal component for an apothecary or doctor. In line with early modern thinking about the substance, current research still confirms the possible curative character of dragonsblood.<sup>21</sup> Knowledge about a procedure or a material was applicable in various disciplines in the early modern context.

The second case will show two things. First, it will show that instructions from various disciplines can appear in a single recipe book and second, that practical knowledge can co-exist with other types of knowledge in the same book or manuscript. As an example, Wellcome MS 425 is examined; a manuscript which gives a slightly more complex, but certainly realistic idea about the living conditions of practical knowledge in manuscripts. It contains two identified texts and three collections of secrets and recipes. The first identified text is a copy of *Pronosticatio* of Johan Lichtenberger. Lichtenberger was a 'certain learned mathematician'<sup>22</sup> who started to write horoscopes for several noblemen in the 1470s. *Pronosticatio* gives long-term predictions, up to the year 1567.<sup>23</sup> The importance of this work is the combining of two traditions: astrology and prophecy.<sup>24</sup> It was first published in 1488 in Heidelberg both in Latin and German. The Italian vernacular version followed soon after in 1490, and was printed in Modena.<sup>25</sup>

The second identified text of MS 425 is *Le Régime du corps* by Aldrobrandino da Siena. Aldrobrandino (died before 1287) was a court doctor and writer at the court of Beatrice of Savoie (thirteenth century), for whom he made the compilation of *Le Régime du corps*. This French medical text has four parts: the first treatise deals with hygiene, the second with different parts of the body, the third with alimentation and the fourth with physiognomy. This fourth and last part is missing from MS 425. The original text finds its importance mainly in the linguistic area, because it is the first known medieval medical text in French vernacular. The current manuscript contains an Italian copy of this text.<sup>26</sup>

The third part of MS 425 consists of three collections of recipes, secrets, and formulas. The first collection contains medical and kitchen recipes, the second contains art technological recipes, and finally the third collection gathers more

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20 Murphy 2004, pp. 2–3.

21 Gupta 2008, pp. 361–380; Ran 2014, pp. 427–431.

22 Description from the 1490s by Wolfgang Aytinger, see Green 2012, p. 44.

23 This date is contested.

24 Green 2012, pp. 39; 44.

25 Del Savio 2009, p. 3.

26 See Bisson 2002, pp. 117–130.

magical formulas. This collection of art technological recipes is pervaded with all kinds of other branches of knowledge. Prominently present are medical recipes that at times carry a strong religious character. Furthermore, recipes about beauty and hygiene also appear.

Wellcome MS 425 contains writings of different kinds. A prophetic text appears next to a medical text and they are followed by prescribed practical knowledge of different interests. A clear separation appears between the three parts of the book where the two authored texts are followed by recipes. But the separation of the recipes is not clear-cut: there is a strong overlap in the areas of interest. In this case the separation of knowledge is not strictly divided into well-defined categories. Wellcome MS 425 offers an example of the co-existence of practical knowledge with other writings, and it also shows the co-existence of practical knowledge of different kinds.

The early modern sense of practical knowledge transcends our understanding of categories and goes beyond our sense of categorical thinking. Categories existed in early modern Europe, but in the case of practical knowledge they were more related to the genre of writing than with the content or topic. Instructive writings, such as recipes, provide fertile soil for practical knowledge. Recipes are grouped and form collections, despite their topic. Even if recipes appear sporadically in the margins or in a letter, the category of practical knowledge can still be applied. The coherence of secrets for salves and savouries for early modern people might have lain in the fact that they took the literary form of a recipe. This publication argues that practical knowledge is a suitable category for discussing the wide range of knowledge disciplines that find their place in instructive writings. This argument posits practical knowledge as a category on its own.

## 1.2 Interdependent branches of knowledge

The connectivity, interdependency, and interconnectivity of various branches of knowledge was a fact in early modern culture. In the 2011 a conference on the transmission of artists' knowledge took place in Brussels, where Pietro Roccaseca brought a study of the Florentine *Accademia del Disegno*, which taught mathematics because of the study of perspective. At the Italian universities mathematics was used as a tool for astrology, which, in turn served medicine.<sup>27</sup> Connections between the arts, the medical world and the pharmaceutical world have already been brought to light in today's scholarship. The second chapter will demonstrate transmission dynamics, which reveal the coexistence

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<sup>27</sup> Clarke, De Munck and Dupré 2012, p. 13.

of various subjects in recipe books. How this coexistence was part of the early modern mind will be discussed below.

The application of various interdependent disciplines was a topic of discussion in early modern society. Leonardo Fioravanti (ca. 1517 – post 1583), a popular writer and medical doctor, said that surgeons had to know the art of woodcutting because they needed to be capable of making sticks for broken bones and crutches. They had to know the art of carpentry, because they needed to know how to make chirurgical instruments. They also needed to know the art of perfumery because they needed to make salves. And finally, they needed to know the art of alchemy because they needed to distil medicines.<sup>28</sup>

Another testimony can be found in *De re metallica* of Georgius Agricola (1494–1555).<sup>29</sup> Agricola was a German-born literary personage with a wide range of interests who enjoyed education in philosophical, medical, and natural sciences in various cities in Italy. Agricola begins his massive work with the reflection that he considers the ‘metallic arts a whole’, just as he considers the human body as a whole. He continues the analogy saying that the various parts of the subject are like the various members of the body. This statement shows the coherence of the discipline itself.<sup>30</sup> Later on he goes on to say that there are many misconceptions about miners as low-skilled workers. Agricola defends the miners and the mining industry with a knowledge-based argument. He sheds light on the various knowledge-related aspects of the work of a miner. The miner must be familiar with the geographical setting of a place, he must understand the rocks, soils, stones, veins, metals, underground, etc. Furthermore, he must have knowledge of assaying (experimenting) and smelting. Finally, there are ‘many arts and sciences of which a miner should not be ignorant’. These arts and sciences are medicine, astronomy, arithmetical sciences, architecture, and law. Agricola describes the miner as a well-rounded person who is at

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28 Eamon 2014, p. 169.

29 *De re Metallica* is an atypical source for our selection of works. It is written fully in Latin. It combines descriptive and instructive practical knowledge about mining. But even the instructive parts are quite different from normal instructions where the imperative is used. However, it is a very rich source for the current research as it contains several inputs about the nature of practical knowledge. The author recognizes that his publication is largely descriptive. He also announces that he hired illustrators for the images. The style changes during the course of the book are probably due to the long period of realization, 20 years before it was finished. See introduction to: Agricola 1950 [1556].

30 Agricola 1950 [1556], p. xxv.

ease with various disciplines.<sup>31</sup> A further contextualization about daily work is offered: Agricola says that in daily practice you will find that each miner has his or her specialization.<sup>32</sup>

What Agricola communicates is that one needs various disciplines, and knowledge of various subjects, in order to perform one single art. In Agricola's analogy, a single art is a complete body, and every related or subordinated discipline is a part of the same body. A valid conclusion here is that in the early modern society there was a high degree of coherence between various knowledge branches.

## 2 Defining practical knowledge

The precise terminology 'practical knowledge' carries a specific meaning. There are several other terminologies covering knowledge of a practical nature such as: secret knowledge, technical knowledge, practice-based knowledge, silent or tacit knowledge, useful knowledge and common knowledge. What these have in common is that this kind of knowledge has a prescriptive or instructive nature. Different in nature to instruction and prescription is description.<sup>33</sup> Descriptive texts have a different scope to that of instructive and prescriptive texts. Description is more theoretical and therefore descriptive texts are not the target of this publication. For example, manuals used in universities describe a topic; recipe books give instructions on how to do something. An example is the treatment of plants. In a descriptive work like a herbarium, the habitat and characteristics of a plant will be described and an illustrative picture will be given. A plant in a recipe book is just an ingredient that will be used in order to make something else. Prescriptive texts prescribe how things should ideally be in order to obtain the desired result. The common form for prescriptive or instructive texts is recipes and secrets, which will be discussed later in this chapter in more detail. In what follows, equivalent terminologies and subgenres of practical knowledge will be developed, while exploring the possibilities and limits of the indicated fields.

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31 Agricola 1950 [1556], pp. 1–3.

32 The gendered twist to this phrase is entirely ours. Concerning female miners see Christina Vanja, *Mining Women in Early Modern European Society*, in Thomas Max Safley and Leonard N. Rosenband (eds.), *The Workplace before the Factory. Artisans and Proletarians, 1500–1800* (New York: Cornell University Press, 1993), pp. 110–117.

33 Eamon 1994, p. 131.



## 2.1 Practice-based knowledge

### 2.1.1 *Experience and experiment*

Steven Shapin stated that ‘knowledge [...] does not stand outside of practical activity: it is made and sustained through situated practical activity.’<sup>34</sup> In this publication practical knowledge is seen as practice-based knowledge, which touches the basics of scientific knowledge. Practical knowledge is built or constructed through practice and experience. Experience is defined in the OED as: 1) ‘The action of putting to the test; trial’ and ‘a tentative procedure; an operation performed in order to ascertain or illustrate some truth; an experiment’. 2) ‘Proof by actual trial; practical demonstration. to put in experience: to fulfil in practice.’ 3) ‘The actual observation of facts or events, considered as a source of knowledge.’<sup>35</sup>

Closely related to ‘experience’ is ‘experiment’. It is generally accepted by contemporary research that ‘experience’ and ‘experiment’ are interchangeably used in early modern texts.<sup>36</sup> The OED says that an experiment is a tentative procedure, or an operation performed in order to ascertain or illustrate some truth. According to the OED the etymology of ‘experiment’ can be traced back through the Old French ‘experiment’ to the Latin ‘experimentum’, coming from ‘experiri’, which means ‘to try’. Peter Dear suggests that both categories are related to the Latin ‘peritus’, which stands for ‘skilled’ or ‘experienced’. Dear adds that ‘peritus’ in its turn would be related to ‘periculum’, which carries the meaning of ‘trial’ or ‘test’. This would have been a practice in the mathematical sciences, which began to be used at the beginning of the seventeenth century. It was meant to indicate that an experiment was going to be carried out.<sup>37</sup>

William Eamon rightfully points out that the word ‘experiment’ is a problematic concept in an early modern context. He also noted the interchangeable use of both terminologies.<sup>38</sup> The corpus of texts studied for this publication contains ample material to illustrate Eamon’s statement. For instance, Eraclius tells that he learned to lay gold by experiment. Eraclius’s writings are known through the compilation Jehan Le Begue made of art technical writings in 1431. The idea of

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34 Shapin 1994, p. xxix.

35 Quotes taken from the OED. The OED entry for experience contains eight explanations, of which we selected those most relevant for this argument.

36 Dear 2006, p. 106; Eamon 2011, p. 30, n.18.

37 Unfortunately, Dear left the connotation to ‘periculum’ or ‘peril’ untouched in his work. Dear 2006, p. 106.

38 Eamon 2011, p. 30, n.18.

‘experiment’ looks more like our use of ‘experience’. Eamon argues that authors did not expect their public to do actual experiments.<sup>39</sup> This is in line with the remarks made in this piece, that the word ‘experiment’ has the value of ‘experience’. Eamon also notes that the words ‘experience’ and ‘experiment’ were used to indicate that they had been tried out. These words, among others were used to make a claim. The actual trying out or putting into action of a recipe is one of the key topics of practical knowledge. Intrinsically related are the truthfulness of the knowledge itself and the belief or the trust people had in them.

The position of ‘experience’ in recipe books will be illustrated through MS number 2861 of the University Library of Bologna, hereafter referred to as the Bolognese manuscript.<sup>40</sup> The writer of the Bolognese manuscript is concerned with distinguishing artificial from naturally-occurring azure. One of the recipes is created to provide the reader with a procedure to test the azure. The first way is to test the color of the ashes of the azure. If the ashes do not change color it is an azure of excellent quality. If it turns black it is of poor quality, if it turns whitish it is artificially made. The other way to find out about the status of the azure is ‘per experientiam’. One should rub azure between the fingers when applying clean water to it. When the azure immediately sets into the cracks of your hands, then it is very good azure.<sup>41</sup> In the Bolognese manuscript the word ‘experience’ indicates an ‘operation performed in order to ascertain or illustrate some truth’, conforming to the OED definition. Another recipe in the Bolognese manuscript to distinguish ultramarine azure from the artificial one, announces in the recipe title that one can determine ‘per experientiam et examen’ or through experience and examination. Clearly in early modern recipes books the word ‘experience’ is used as a procedure where the knowledge is executed.

Another dimension of ‘experience’ in early modern practical knowledge is often underexposed in secondary literature. Experience can be used in the sense of gaining a larger familiarity. This of course is the consequence of putting practical knowledge into action. One becomes an experienced person by testing out practical knowledge, one time or multiple times. To understand if experience also indicates familiarity with a recipe, the role of the consumer should be studied. Secondary studies rarely study the consumer of recipes as the subject who has to gain experience. A sixteenth century Venetian manuscript with glass and crystal recipes may come to our aid here. One of the recipes for crystal

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39 Eamon 2011, p. 29.

40 Bologna, University Library, MS 2861.

41 Merrifield 1999 [1849], pp. 384–385.

points in the direction of the consumer by giving the advice that ‘actual practice is everything, because there are no quantities or rules.’<sup>42</sup> This rich piece of information is of use in the current book to address various questions. The context of this phrase is to be understood as supplementary information to the practice of adding manganese to previously melted glass. This is done to subtract color from the glass. The advice is precisely to add manganese ‘at your discretion,’ ‘little by little’ and ‘not too much.’ Too much of manganese will turn the melted glass purple, the recipe explains. To add something at one’s discretion means that the consumer must judge the right quantity. Then there follows a word on the method of adding manganese: not all at once, but by adding the desired quantity in reduced amounts and at various or distinct moments: ‘little by little.’

The interesting part of this recipe for crystal lies in its admonition that ‘actual practice is everything.’ This offers support to the somewhat imprecise instructions of the recipe. The recipe maintains that through practice or experience one is able to judge properly. Practice, here, is the consequence of experience or trial. It signifies a larger set of experiments and experiences. Practice brings the consumer a larger familiarity with the execution of procedures. The nature of practical knowledge is such that it can be put into practice. Primary sources contain information about the putting into practice of written procedures or written knowledge. Practical knowledge is practice-based. Words and claims about experience and practice, both understood as belonging to the author and the consumer, form a bridge between the textual dimension and the dimension of concrete life.

### 2.1.2 *Theory and practice*

It is a commonly held belief that theory and practice are opposite types of knowledge. For a long period of time, even contemporary scholars operated affirming this notion. A common approach would be to study theoretical and experimental/practical aspects of a discipline completely separately. (Einstein the theorist, Rutherford the experimentalist, for example.) But in the latter part of the 20th century, that began to change; in 1970, for example, Edgar Zilsel argued that modern science was in fact only made possible by collaboration between scholars and craftsmen: a fusion of theory and practice.<sup>43</sup> According to Steve Walton, the Dominican Robert Kilwardby (ca.1215–1279) was the first medieval scholar to deny the difference between theory and practice, implying

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42 Wheeler 2009, p. 16.

43 Eamon 1994, p. 8

that during the Middle Ages theory and practice would go hand in hand.<sup>44</sup> It is only more recently that the interconnectedness of theory and practice has been recognized again.

Even during the early modern period, the separation between theory and practice was not sharply divided. Pamela O. Long, in her article on trading zones, identified several writers of technical manuals who did not disconnect theory and practice. For instance, the Italian shipwright Vettor Fausto (ca. 1480–ca. 1546) was appointed public lecturer of Greek in Venice and he constructed a replica of a Greek fighting ship called a *quinquereme*.<sup>45</sup> He seemed to be in full possession of his technical and theoretical skills. The writings of the astronomer and physician Galileo Galilei (1564–1642) also dealt with the practical challenges of constructing large galleys for instance.<sup>46</sup> Among the other writers Long discusses is Niccolò Fontana Tartaglia, a teacher of mathematics and author of *Nova scientia* (1537) and *Quesiti et inventioni diverse* (1546), in which he works out both practical and theoretical issues.<sup>47</sup> Long concludes that the exchange between workshop-trained practitioners and university-trained theoreticians and their writings proliferated trade zones in the sixteenth century. These trade zones were arenas with room for influence, where the learned taught the skilled and the skilled taught the learned.<sup>48</sup>

## 2.2 Secret knowledge

*Everyone loves a secret and everyone has a secret,  
which is why books of secrets continue to fascinate us.*

William Eamon<sup>49</sup>

### 2.2.1 Books of secrets: a frequent literary genre of practical knowledge

Practical knowledge in early modern Europe found expression in different kinds of textual genres such as treatises, instruction manuals, recipe books, commonplace books, books of knowledge, and closet books.<sup>50</sup> One particular

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44 Walton 2003.

45 Long 2012, p. 13.

46 Renn and Valleriani 2001, pp. 481–503.

47 Long 2012, p. 13.

48 Long 2012, pp. 19–20.

49 Quote from Eamon 2011, p. 46.

50 These last two terms are terminologies used by Allison Kavey, whose work will be introduced shortly.

genre was the book of secrets, which contains practical information in the form of recipes or secrets. It could be argued that printed books of secrets became increasingly popular in the second part of the sixteenth century.<sup>51</sup> Eamon argues that books of secrets appeared for the upper and middle class, but also for the common reader.<sup>52</sup> Books of secrets contained different branches of knowledge, such as technical information about alchemy, dyeing, metallurgy, making beauty products, household, and medical information, etc.<sup>53</sup> Most of the main scholars of books of secrets have only studied the printed versions: the possibility of also analyzing manuscripts in this regard will be discussed later in this book.

One of the first scholars, if not the first, who defined the concept of a book of secrets is John Ferguson (1838–1916), a professor in Chemistry at the University of Glasgow.<sup>54</sup> Ferguson's interest sprang from his work on the history of science in Britain. He published several articles on the histories of inventions and books of secrets, which were collected in an eponymous edition, for the *Transactions of the Glasgow Archaeological Society*. Although the subject is quite clear in these articles, his approach evolves during the different articles. The first article of 1896 focuses on 'books of technical receipts, or so-called secrets', which he classifies in five groups, retaining these subdivisions as an imperfect classification system. Ferguson distinguishes 1) secrets of nature or natural history; 2) natural magic; 3) chemical, pharmaceutical, and medical secrets; 4) physiological secrets, and finally 5) technical or art secrets.<sup>55</sup> In his last publication for the *Glasgow Archaeological Society* in 1914, he entitled the article 'Books of Secrets', using the terminology more confidently. He describes books of secrets as having diverse sorts of subjects, appearing in all languages, sizes, qualities of paper and binding and having a wide public. He further rationalizes that secrets denote receipts containing personalized skills and knowledge. Ferguson notes that books of secrets were infrequently put into print before the sixteenth century.<sup>56</sup> Ferguson's greatest contributions were related to the defining of books of secrets as a distinct genre and listing book titles.<sup>57</sup> Ferguson's definition and description

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51 Eamon 1994, pp. 10.

52 Eamon 1994, p. 234.

53 Eamon 2000, pp. 145–146.

54 Weston 2004.

55 Ferguson 2005 [1896–1914], pp. 1–6.

56 Ferguson 2005 [1896–1914], pp. 5–8.

57 In contemporary scholarship, John Ferguson is often recognized as the first scholar writing about books of secrets. In his own writing, Ferguson declares that no work had been done in English on the subject. However, he recognized predecessors, German and French scholars, who had written about the subject. In the footnotes of his first article he

of books of secrets was a process, which was completed by the end of his life during the 1920s.

However, it would take eighty more years for the subject to be properly discussed.<sup>58</sup> With his 1994 publication *Science and the Secrets of Nature, Books of Secrets in Medieval and Early Modern Culture* and several articles on the topic, William Eamon is now the main authority on books of secrets. Eamon sees books of secrets as a genre of scientific writing belonging to a more popular category of science. He describes them as ‘how-to books’. Secrets in his work are ‘private experiments of individual practitioners.’<sup>59</sup> Books of secrets are thus the recording and communicating of these experiments. Eamon interprets books of secrets as a missing link between the medieval form of experimenting and the Baconian method of experimentation.

Vernacular printed publications peaked in the sixteenth century. For this reason, Eamon refers to this period as the ‘century of how-to’.<sup>60</sup> The method Eamon applies while studying this specific type of literature can be divided in three pillars: the content, the authors and the audience of books of secrets. Eamon benefits from the work of Elizabeth Eisenstein regarding printing and popular culture and from that of Thomas Kuhn regarding the scientific revolution(s).<sup>61</sup> In later writing Eamon distinguishes books of secrets from household recipe books by the proportion of alchemy present, which is larger in books of secrets.<sup>62</sup>

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refers to Backmann’s *Beyträge zur Geschicthe der Erfindungen*, published in five volumes between 1786 and 1805; the work of Antoine Yves Goguet entitled *Origine des loix, des arts, des sciences, et de leur progrès chez les anciens peuples*, which was published in 1758; the work of Johann Poppe, entitled *Geschichte der Technologie*, published in three volumes between 1807 and 1811, and finally the work of Karl Karmarsch, *Geschichte der Technologie* of 1872. Cf. Ferguson 2005 [1896–1914], p. 4.

58 The precise terminology was used in the period but remained without further theorizing. To illustrate that this term was of common use we rely on an example of an early twentieth-century publication in the field of bibliography. The first chapter of the book *Bibliography of Books in the English Language Related to the Art and History of Engraving and the Collecting of Prints* (1912) is entitled *Books of Secrets and Mysteries*. The main aim of this publication was the description of rare books concerning engravings. Since this is a bibliographical study, it mostly discusses the physical characteristics of prints. In this work there is little room for theorizing on the genre of books of secrets. Cf. Levis 1912.

59 Eamon 1994, p. 9.

60 Eamon 1994, pp. 126–133.

61 Eamon 1994, p. 6.

62 Eamon 2011, p. 35.

Eamon's publication of the *Science and Secrets of Nature* triggered a new field of study and as a consequence many more publications on its topics. A notable publication is *Books of Secrets. Natural Philosophy in England, 1550–1600* from Allison Kavey. Kavey finds it compelling that recipes are common to books of secrets. She retains the form of the recipe ideal 'for books of secrets because they packaged unfamiliar and exotic materials and ideas in a familiar and accessible form.'<sup>63</sup> Kavey's research covers the second half of the sixteenth century, and she notes a decline in the market position of books of secrets during the seventeenth century. Where Eamon sees the books of secrets as a bridge between medieval secrecy literature and the literature produced by the scientific revolution, Kavey proposes that books of secrets were replaced by two other genres: books of knowledge and closet books. Books of knowledge are inexpensive books that pretend to predict and explain the secrets of nature. Kavey describes closet books as a genre that flourished in the seventeenth century that is oriented to 'cultural expectations and personal conduct'. She points out that the link between books of secrets and closet books can be found in Richard Jones' 1573 print *The Treasure of commocious Conceits, and hidden Secrets and may be called, The Huswives closet, of healthfull provision*. Where books of secrets address merely practical knowledge about nature, closet books deal with personal conduct as well.<sup>64</sup>

As stated before, this research involves books of secrets, as they were a consistent genre of books containing practical knowledge. However, both manuscripts as well as printed books are explicitly addressed. The time frame extends past the second half of the sixteenth century. To date, no definition of books of secrets that includes manuscripts has been encountered, although this would not be inconceivable. The contribution of this book is its expansion of the book of secrets genre, to include both the printed and handwritten versions. Books of secrets are compilations of secrets, recipes, and formulas. The printed examples emerge from a manuscript tradition. In terms of content and form, there are a lot of similarities between printed books of secrets and manuscripts containing all-purpose recipes. Ideally a printed book of secrets is a collection of recipes with a title page and a concluding section. Often manuscripts present a work in progress; they can be left uncompleted. They often have an index that is open for further

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63 Kavey 2007, p. 98.

64 Kavey 2007, pp. 156–160. Our question is if closet books were simply books of secrets in a different jacket. We wonder if the recipes are not the same and if the difference lies in the packaging of the content. Perhaps the title and preface to the reader has a shift, but this is the topic of another research.

entries when the manuscript receives new recipes. In the case of manuscripts, the definition needs to be open to variations.

Printed books of secrets form a significant part of this research, but the formulation of practical knowledge includes a broader basis of primary sources, involving both handwritten and printed material. For example, theoretical manuscripts might contain practical information in the margins or on a fly leaf. Since the aim is practical knowledge, these kinds of scribbles can be included as they fit perfectly in the rationale of this publication, which includes the consumption of and interactions with practical knowledge.

### 2.2.2 *A taxonomy of secrets*

Books of secrets present themselves as books containing secrets. But what precisely is a secret? The word secret comes from the Latin noun *secretum* which indicates something hidden or set apart. *Secretum* is the past participle of the Latin verb *secernere*, which mean ‘to sift apart or separate with a sieve’ or ‘to divide.’<sup>65</sup> The early modern significance of a secret is close to today’s common use of the word. When we use it, we indicate information that has been withheld from one or more people. Elaine Leong and Alisha Rankin who edited the volume *Secrets and Knowledge in Medicine and Science, 1500–1800* note that the use of the word ‘secret’ or *segreto* in early modern Italy seems to equal the word ‘recipe’ or *ricetta*.<sup>66</sup> Eamon notes that while a secret is somebody’s personal property, a recipe does not belong to anyone.<sup>67</sup> A recipe is common property. A recipe is a textually useful form for the communication of knowledge. Passing a recipe from one person to another means that a new person will engage with it and try his or her hand at it. The contemporary use of the words ‘secret’ and ‘recipe’ do not mean the same thing, however, in early modern instructive literature they might be used interchangeably. In daily use, the words ‘secret’ and ‘recipe’ were certainly interchangeable. The conclusion is that in the early modern context the words ‘recipe’ and ‘secret’ assumed the same meaning.

As already explained, a secret could indicate withheld information, or it could be used for a recipe. The word secret has multiple meanings. Eamon developed a taxonomy of secrecy. He distinguishes three types of secrets. The first two types of secrets are typical for a medieval setting: 1) epistemological and 2) social

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65 OED; Long 2001, p. 7.

66 Leong and Rankin 2001, p. 9.

67 Eamon 1994, p. 360.



secrets. The third type of secret that Eamon distinguishes is an epistemic one and is closely connected to the sixteenth century: 3) epistemic secrets.<sup>68</sup>

First, epistemological secrets are the secrets of nature. It was believed that they are a fact in the order of nature, and they are essentially impenetrable. Books of secrets under medieval norms were referred to as *libri secretorum* (books of secrets) and they contained compilations of recipes of various kinds, from practical medical wisdom to magical formulas.<sup>69</sup> A very good example of this branch of medieval literature is the *Secretum secretorum* [the book of the secret of secrets]. This is the pseudo-Aristotelian work *Kitab Sirr al-Asrar*, which according to Lynn Thorndike was ‘the most popular book in the Middle Ages.’<sup>70</sup> It was a standard encyclopedic work containing subjects such as medicine, astrology, physiognomy, alchemy, numerology and magic.<sup>71</sup> The *Secretum secretorum* discusses the state of knowledge and, moreover the existence of public and secret knowledge:

[...] one of them is evident and apparent, and the other is secret and mysterious. With the former I have already acquainted you [...] The secret means is one peculiar to the saints and sages whom God has chosen from amongst His creatures and endowed with His own knowledge. And I shall impart to you this secret as well as others in certain chapters of this book, which is outwardly a treasure of wisdom and golden rules, and inwardly the cherished object itself. So when you have studied its contents and understood its secrets you will thereby achieve your highest desires and fulfill your loftiest expectations.<sup>72</sup>

This piece demonstrates that secret knowledge was esoteric knowledge or knowledge revealed by God to a select group of people that had to carefully guard this information. Making secret knowledge public signified breaking the celestial seal.<sup>73</sup> The *Secretum secretorum* is a prime example of medieval epistemological secrecy. During the early modern period epistemological secrets or secrets of nature declined. Among the investigated sources is the medieval compilation *De diversis artibus* (On Divers Arts), attributed to Theophilus. The medieval compilation *De diversis artibus* was still successful in the early modern period. Several of its recipes appeared in early modern printed and handwritten sources.<sup>74</sup> The

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68 Eamon 1994, p. 11.

69 Eamon 1994, p. 16.

70 Citation from Thorndike 1922, pp. 248–249.

71 Eamon 1994, p. 45.

72 Citation taken from Eamon 1994, p. 46.

73 Eamon 1994, p. 48.

74 Gearthart 2010, pp. 256–263; 331.

Viennese manuscript of Theophilus's writing contains a seventeenth-century title page describing the author as a monk of the Benedictine order. But the same page contains another seventeenth century inscription saying: 'Qui et Rogerus'. It is believed that this inscription may refer to Rogerus von Helmarshausen, a historical metalworker who flourished around the turn of the twelfth century.<sup>75</sup> This manuscript is interesting to study because it reflects medieval knowledge circulating in the early modern era. In fact, it contains an instance of epistemological secrecy in its introduction:

'whoever are you, dearest son, whose heart God has inspired to investigate the vast field of the divers arts and to apply your mind and attention to gather from it whatever please you'<sup>76</sup>

The godly aspect in recipes appears in early modern manuscripts, but most often in manuscripts in the same condition as *De Diversis Artibus*, meaning that the knowledge was copied over many generations.

The second type of secrets Eamon distinguishes are social secrets, which are man made. A social secret purposefully suppresses information for protectionist reasons. Again, the *Secretum secretorum* contains textual evidence that illustrates conventional social secret keeping:

'I am revealing my secrets to you figuratively, speaking with enigmatic examples and signs, because I greatly fear that the present book might fall into the hands of infidels and arrogant powers, whereby they, whom God on high has deemed undeserving and unworthy, might arrive at that ultimate good and divine mystery. I would then surely be a transgressor of divine grace and a violator of the heavenly secret and occult revelation. Because of this, I expose this sacrament to you in the manner in which it was revealed to me, under the seal of divine justice. Know therefore that whoever betrays these secrets and reveals these mysteries to the unworthy shall not be safe from the misfortune that shall soon befall him.'<sup>77</sup>

In this extract, the Pseudo-Aristotelian writer declares that the persons selected by God to receive these secrets, should hold on to them and not make them public. An extrinsic motivation is given: that of fearing misfortune. This episode is not isolated from the divine atmosphere, but the urge to keep secret information within a certain circle is quite clear. This same attitude is found in early modern communications about secrets. For instance, the German Electress Anna of Saxony (1544–1577) communicated in early January 1563 some of her

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75 Theophilus 2013 [1963], p. xv–xvi.

76 Theophilus 2013 [1963], p. 12.

77 Eamon 1994, p. 47.

medical secrets to the Duchess Anna of Bavaria. In her letter she expresses some concern:

‘Now that we have trustingly given Your Dearest nearly all of our most secret arts [...] we ask that [...] if You Dearest knows anything particular and special, that she not keep it from us [...] and we will preserve it for ourselves alone in all secrecy. [...] your dearest not make the [secrets] she has received from us common.’<sup>78</sup>

In this case the secrecy is a human convention, outside of the realm of the divine. The information given is information dear to the consumer; the request that follows underlines the protectionist attitude to this knowledge. These attitudes started long before medieval times and, for the most part, survive the early modern period. Social secrecy is timeless.

The third type of secrets Eamon distinguishes is the group of epistemic secrets. According to Eamon, these secrets arose in the sixteenth century. The sixteenth century is characterized by a hunt for secrets, a topic that will be discussed in the third chapter of Part I of this book. In this setting secrets and experimentation are turned into commodities. He goes beyond the boundaries of academia, the scientific revolution and even beyond the boundaries of a so-called ‘revolution from below’ or from common people or lower classes in society.<sup>79</sup>

For Eamon, the year 1555 is a key year for traditions of literary secrecy. In this year, the Latin *Secretum secretorum* was published for the last time, in Naples, by the editor Francesco Storella. Eamon takes this last publication as the closing of the epistemological tradition of books of secrets. In the same year the vernacular *Secreti del reverend donno Alessio Piemontese* appeared for the first time.<sup>80</sup> This work would be the starting point for the tradition of epistemic secrets. This tradition of secrecy involves vernacular publications for a broad public.

### 2.2.3 Professional secrets

Eamon’s taxonomy is a very interesting scheme to reflect about secrets. However, some terminologies might not immediately find a position within the threefold scheme. The terminology ‘trade secrets’ or ‘craft secrecy’ is a very good example. A lot of secondary literature addresses this group of professional secrets when dealing with practical knowledge. This publication argues that Eamon’s taxonomy could be enlarged with the addition of professional secrecy.

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78 Citation taken from Leong and Rankin 2001, p. 2.

79 Eamon 1994, p. 11.

80 Eamon 1994, p. 134.

Trade secrets are instructions or sets of procedures that are known to a select group of people, connected through their trade or craft. The secrecy or hidden aspect of this knowledge can be explained in two ways. First, the essence of this knowledge was the expertise and technical know-how. Second, in order to protect the craft and trade, one had to guard the knowledge that lead to successes in the trade. The profession's livelihood fell or stood with certain secrets.<sup>81</sup> The reason why trade secrets fall outside of Eamon's taxonomy is because trade secrets are professional secrets, which is a more timeless category. Professional secrets could be subcategorized to social secrets, but they are certainly not exclusively medieval, and they have a precise professional scope. Protecting a trade gives an economic factor, or even value, to secrecy. The level of protectionism for trade secrets of all times could be considerably high. Jo Wheeler expresses the idea that perhaps the real secret lay not in the textual recipes but rather in the expertise of the workers.<sup>82</sup> Examples of the importance of expertise can be found in the history of Venetian glass and crystal production. Venice was famous for its glass and crystal; the latter being perfected around the middle of the 15th century and known as Venice's showpiece. Research demonstrated that in the glass-and crystal-producing professional environment, actions were taken in order to protect the knowledge of these precious procedures. The following example will illustrate this idea.

Ferdinand II, Archduke of Austria (1529–1595), was interested in having glass production at his court. The glasshouse was part of Ferdinand's castle Schloss Ambras. For this enterprise he appointed an Italian glassmaker from the province of Liguria to be undercover merchant in Venice in order to steal secret information.<sup>83</sup> The need to send a spy tells something about the availability of specialist information. The Venetian guild for glassworkers prohibited its workmen to work outside of the Venetian dominion.<sup>84</sup> They secured their market position by keeping the specific expertise isolated. The transfer of knowledge was a punishable offense. Guild regulations fined or temporarily banned craftsmen who worked in other cities.<sup>85</sup> Four Venetian glassmakers who, through De' Medici employment, defected to ply their trade in Florence, ended up in jail and were condemned to the galleys.<sup>86</sup> The protection of expertise is an indication

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81 Wheeler 2009, p. 7.

82 Wheeler 2009, p. 17.

83 Wheeler 2009, p. 7.

84 Eamon 1994, p. 82.

85 Long, 2001, pp. 90–91.

86 Wheeler 2009, p. 17.

for the existence of trade secrecy. Here trade knowledge or professional secrets are categorized under secret knowledge. As mentioned in the opening of this part, all the denominations discussed here have some sort of connection. The study of the glassmakers' business connects several types of knowledge. As discussed in this section, glassmakers had possession of trade secrets, but the nature of their trade was mainly technical. This will be discussed further in the following section.

### 2.3 Technical and technological knowledge

Building on the previous example of glassmakers, one can point out that the knowledge they used was mainly technical, such as the glass blowing procedure. This technical knowledge has an affinity with practical knowledge, because the procedure is both technical and practical. Practical and technical knowledge have been considered to be related for a very long time. In Antiquity, there were four types of knowledge: *episteme*, *techne*, *metis* and *gnosis*.<sup>87</sup> *Techne* or *τέχνη* is practical expertise and is used in an instrumental way; it was often confused with manual labour.<sup>88</sup> Brooke Hindle wrote that 'technology seeks means for making and doing things'.<sup>89</sup> Technological knowledge is the kind of knowledge that contains information about the techniques to make or obtain something which is practical in nature. In many instances, the denominators 'technical' and 'technological' knowledge are used interchangeably. Scholars of technological knowledge use different schemes for analysis. Two somewhat dated publications offer, nonetheless, some interesting insights into how to categorize technological knowledge.

The first method discussed here will be that of Walter Vincenti, who introduced the idea of dividing technological knowledge into categories. He distinguishes three forms of technological knowledge: 1) descriptive, 2) prescriptive, and 3) silent knowledge.<sup>90</sup> First, descriptive knowledge communicates factual information about the materials and tools, and gives technical information. It offers a framework for conducting a certain action. Of these three types of knowledge described by Vincenti, descriptive knowledge is closest to scientific knowledge. However, descriptive knowledge is different from scientific knowledge because

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87 NDHI 2005, p. 1199.

88 NDHI 2005, pp. 956; 1199.

89 Hindle 1966, pp. 4–5.

90 The category of silent knowledge will be discussed separately as a potential characteristic of practical knowledge, i.e. practical knowledge can be silent.

of its underdeveloped theoretical framework.<sup>91</sup> Second, prescriptive knowledge would be closely related to experience-based efforts to achieve greater effectiveness. Third and last: tacit knowledge is implicit knowledge, which is often based on personal judgment and therefore difficult to communicate. Both prescriptive and tacit knowledge are related because they are experience based.<sup>92</sup>

A second way of categorizing technological knowledge is that used by scholar R.E. Frey. According to Frey, four different levels of technological knowledge should be emphasized. The first basic level would be a non-discourse level of technological knowledge. It involves demonstration, observation, imitation, and trial and error. This is the level where the putting knowledge into action through demonstration is the way to make it more explicit. The next level requires reason, technical maxims, rules, recipes, and procedures. Further on come the descriptive laws and finally the last level is placing these laws into a framework.<sup>93</sup> The level of discourse increases together with the level of technological knowledge. This means that for Frey, discourse is a signifier in the hierarchy of technology. In this publication, the study of practical knowledge is channeled through the study of recipes. Only rarely are recipes substantiated with theoretical discourse. In fact, this publication focuses on the two initial phases as described by Frey: the practical part and the part where the practice is disseminated, through the written form of the recipe.

## 2.4 Silent or tacit knowledge

The concept of tacit knowledge was introduced by scientist and philosopher Michael Polanyi in his work *Personal Knowledge* (1958). His famous formulation ‘we can know more than we can tell’ became exemplar of the concept. Polanyi argues that all knowledge is either tacit or rooted in tacit knowledge.<sup>94</sup> An important characteristic of tacit knowledge is that it cannot easily be communicated in words. Tacit knowledge is knowledge that is not easily transferred in a textual way. This goes hand in hand with the experience aspect of practical knowledge. A prime example is the learning of a language. One might perfectly master a language’s grammar and vocabulary through the study of texts only, but certain things will be lacking, such as pronunciation, intonation, and the body language

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91 Herschbach 1995, pp. 34–35.

92 Herschbach 1995, p. 35.

93 Herschbach 1995, pp. 36–37.

94 Polanyi 1966, p. 4.

that goes together with the language. These things are to be seen and heard in real life: they cannot easily be transmitted through texts.

A lot of recipes that appear to be dysfunctional could be impracticable due to silent knowledge.<sup>95</sup> A specialist might be able to perform the instruction based on previously acquired knowledge and experiences. A person who is new in the field might not be able to successfully perform the instruction and will not obtain the desired end result.

Silent knowledge is a very interesting phenomenon for instructive literature. Silent knowledge is existing knowledge that remains unregistered and unspoken. Silent knowledge is as ephemeral as the oral way of transmitting knowledge. But there is a big difference between both. Silent knowledge fills in where the oral method of transmission cannot reach. Silent knowledge can become more explicit through demonstrations or through other visual means. Cennino Cennini wrote that you learn through looking.<sup>96</sup> This is a way in which silent knowledge can be transmitted.

Occasionally recipe books contain a written approximation of silent knowledge. Sometimes a procedure is given an extra dimension through careful descriptions. Because this exact knowledge is missing in other similar recipes, one could talk of silent knowledge being made explicit. When knowledge is explicit, it is no longer silent. We can only conclude that this exact information could potentially be silent in comparison with equivalent recipes where this same information is repeatedly missing.

Pamela H. Smith published on the tricks of the trade of metal workers. She concludes that all five senses were used in service of the measurements in the recipes. To identify vitriol or rock alum, one has to taste it. Vitriol should be sharp and pungent to the tongue and rock alum should be bitter with a certain 'unctuous saltiness'. Or, one should hear a cuttlefish bone 'cry' when put close to the fire as a sign of being dry.

Silent knowledge is a dimension of practical knowledge that should always be kept in consideration when dealing with it. It is at play in the transmission of practical knowledge because it is principally communicated without words. For this reason, silent knowledge might explain certain irregularities or lack of information in recipes.

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<sup>95</sup> The functionality and dysfunctionality of recipes will be discussed in part three of the current chapter.

<sup>96</sup> Cennini LXXI.

## 2.5 Useful knowledge

The umbrella term ‘practical knowledge’ covers what, in scholarly research is currently called ‘useful knowledge’. In the last decade, the concept of useful knowledge has been used in an academic context, where economic growth and technological change are studied. The main scholars who adhere to this point of view are Simon Kuznets, Joel Mokyr, Larry Epstein, and Ian Inkster. Epstein determines useful knowledge as experiential knowledge. Mokyr subdivides useful knowledge into propositional and experiential knowledge. Inkster identifies useful knowledge as reliable knowledge.<sup>97</sup>

According to the OED, things, actions, or practices are useful when they are ‘capable of being put to good use; suitable for use; advantageous, profitable, beneficial’. There are implications for the use of this terminology; it points to the correctness, effectiveness, and reliability of information. For instance, Karel Davids explicitly excludes ‘fraudulent recipes’ in his writings about useful knowledge.<sup>98</sup>

Two interesting questions turn up in the studies of useful knowledge. First, Karel Davids poses the question ‘Who defined ‘useful knowledge’ in Early Modern Times?’ and defines the gatekeepers of knowledge. Gatekeepers dealt with an enormous flux of knowledge; meaning they went through procedures of ‘selecting, translating and focusing’. This could happen, both on a formal or informal level; and with a two-ways dynamic: inside information flows out and outside information flows in. In his article Davids focuses on three categories of people offering a broader and ‘a more inclusive view of usefulness’ that ‘ceased to matter as gatekeepers of knowledge’ by or during the eighteenth century: women, clergymen, and virtuosi. This was due to changes on both the micro and macro level of social support for knowledge.<sup>99</sup>

Davids argues that between the mid-sixteenth century and the end of the eighteenth century there is a ‘slimming-down’ of the concept of usefulness, which makes it less broad and more specific. During the first half of the eighteenth century, there is a tendency to produce knowledge for humanitarian and useful purposes rather than for an elite intellectual class and truth.<sup>100</sup> Second, in the conference *The Making of Useful Knowledge*, Jonathan Harwood’s paper was entitled: ‘Useful Knowledge but for whom?’, in which he discusses the impact of an agricultural model in Southern Germany between 1890–1920.<sup>101</sup>

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97 Inkster 2012, p. 1.

98 Davids 2012.

99 Davids 2012, pp. 73–76; 80.

100 Davids 2012, pp. 71–72.

101 Harwood 2014.



He concludes paradoxically that claims of usefulness are not always critically used. Knowledge becomes non-useful, for instance, when there is a failure in communication.

William Eamon writes about the usefulness of books of secrets. He determines that their usefulness for the early modern reader was connected to the actual use of the books. His 'useful' refers to how people used books of secrets. He concludes that books were useful to people because they were actually used; their usage is testified to by the many worn out copies or by marginal commentaries. Another way in which books of secrets were useful is that they required people to experiment themselves, even against the advice of the author. But these books also offered specialist knowledge to a wide public and their secrets guaranteed the predictability of nature. Eamon takes a large section of the spectrum of modes of use as the reason why and how printed books of secrets were useful to the early modern public.

Useful knowledge is a subset of practical knowledge. It has been understood as individual units of knowledge that are useful or serve a purpose, but useful has also been understood as how a genre can be useful to its public.

## 2.6 Common knowledge

The word 'common' has a broad range of meanings. Raymond Williams points out that 'common can be used to affirm something shared or to describe something ordinary'. This definition is particularly useful for the concept of common knowledge, which would be knowledge belonging to an extremely large group of people. Common knowledge can be practical in nature, even though it can appear with different characteristics. Common knowledge is simply things that everybody knows. Applied to practical knowledge it has to be said that not all practical knowledge is common knowledge. Not all practical knowledge is common to a larger group of people from the same society. We have seen that a niche of practical knowledge is specialist knowledge, meaning that it should be highly specialized and therefore not common to a larger group of people. Furthermore, it has to be noted that there is an overlap between common knowledge and silent knowledge. Some general truths are so common they are left unspoken.

Common knowledge can be practical in nature and needs to be kept in mind when dealing with the topic. Practical knowledge can be highly specialized and secret, but it can also be knowledge that belongs to all people. The second chapter of Part I will explain that highly specialized knowledge in non-professional environments gets wider circulation.

### 3 Theorizing practical knowledge<sup>102</sup>

To study practical knowledge this publication focuses on recipes, smaller nuclei from which practical knowledge is built. Recipes or instructions are discursive manifestations.<sup>103</sup> To study the rhetoric of recipes, one studies the art of how this language phenomenon is used. It comes with rules, conventions, and compositional techniques in order to effectively persuade or influence the other.<sup>104</sup> As will be discussed in this chapter, the 'other' is a non-conventional concept in the world of recipes, as the author and consumer can be one and the same. For research today, the study of recipes puts the user at the centre. Users can be authors, writers, readers, practitioners, and consumers at the same time. In the following, a few items of practical knowledge will be discussed, such as the origin of practical knowledge and its written quality, the form and convention of those writings, and finally the function of the writings.

#### 3.1 Knowledge (re) production

This section will concentrate on the initial phase of knowledge production. Practical knowledge is experienced based, as discussed earlier. The creation of practical knowledge is a process that involves experience-based standards and a transmission process. As shown in the introduction, Bouza determined the communicative trinity. The information flow passes from one person to another in oral, visual, or written form. This section will focus on the recipe as a written text.

##### 3.1.1 *Why write?*

Another aspect that will be left to the second chapter is the modalities of transmission, described by Fernando Bouza as the 'communicative trinity'.<sup>105</sup> This triangle of oral, visual, and written communication is perfectly adaptable to the transmission of practical knowledge. The subject of this research is textual practical knowledge, which finds its ways through written recipes. However, knowledge or recipes can be explained in words or conveyed visually by demonstration. The question here is, why would people write recipes down?

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102 I thank TEEME professor Martin Procházka for his suggestion to see recipes as discourse.

103 Greimas 1979, p. 2.

104 OED.

105 Bouza 2004, p. 11.

Pamela H. Smith, one of the authorities on books of secrets, asks this very question in her correspondingly entitled article: Why write a book? Through the study of recipe books, she discovered in response that around 1400 habits changed for a knowledge-keeping group, when they finally started to write down their knowledge, or what she calls the 'practical moment'. This is presented as a historical phase where the self-consciousness of the artisan starts to be expressed. This is manifested in self-portraits or writings, for instance. She finds the reason to write in the dedicatory passages of the writings of Michael of Rhodes and Cennino Cennini. Writing a book was an 'attempt to move up the intellectual and social hierarchy'. This fits in the historical context where rulers needed artisans for military technologies and representations of power.<sup>106</sup> But in both cases, the manuscripts claim authorship and have a dedication. This is not representative of all technical writings.

However, the class-related nature of writing down practical knowledge is also raised in theorizing about eating and cookery. The practice of registering cooking procedures became common later in the 15th century. It was not meant for the cook of a household, but rather for the master or mistress of the household. In short, an elitist product, more a library product than a kitchen product. The specifications of a certain dish, such as quantities or the process, were things a cook learned through apprenticeship.<sup>107</sup> The need to start writing and producing recipe books is seen as class-bound in food studies.

Here, the focus lies on what the early modern authors and writers of recipe books themselves have to say about this. Why textually record technical knowledge? Why write? To answer these questions, not just recipe books but also other early modern literature will be used. For instance, the Spanish friar Pedro de Vega said in 1602 'that writing was invented to support and restore our memory'.<sup>108</sup> Yates found that 'memory was raised to the category of a true art that enabled one's own access to knowledge and permitted transmission to others'.<sup>109</sup> Memory is a concept that can serve the actual author or writer, as it can serve the next generation or generations. Memory can indicate a short term, but also a long term continuum of knowledge transmission. One can write it down to consult it in two years time, but one can also write it down for one's apprentice. In the second

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106 Smith 2010, pp. 26; 28–30; 33; 35; 39; 47.

107 McIver 2015, pp. 19–20; also in Scully 1995, p. 8.

108 In: Pedro de Vega, *Segunda parte de la declaración de los siete salmos penitenciales* (Madrid, 1602); see Bouza 2004, p. 2.

109 Bouza 2004, p. 2.

chapter an example of the latter, in which a master painter left his apprentices a recipe book, will be further explored. A more explicit use of memory is the intention to immortalize knowledge. This is the case for Georgius Agricola when he starts his *De re metallica* (1555) with: ‘I became afraid that I might die before I should understand its [metallic arts] full extent, much less before I could immortalise it in writing.’<sup>110</sup> The immortalization of knowledge reaches far beyond the next generation, and aims at the eternity of the written word.

Memory was certainly at stake in Cennino Cennini’s *Il libro dell’arte*, which is a manual for the novice painter. But in this publication, he introduces a reason for writing something, which is related to the experience of pleasure. In a long recipe on how to gild stone figures, he affirms that he will explain one of his public recipes ‘not because it is usual, but because I have relished it’. This says two things about recording recipes in books. One: that it was normal procedure to record commonly-used procedures. The procedures that one needed to know were the procedures that had survived to that time. Thus, writing his *Libro dell’arte*, Cennini contributes to preserving this memory. Two: that there were other reasons for writing. Standardized procedures were worthy of being transmitted, but so too were rarer procedures which were fun to do. Smith’s answer to ‘why write books?’ is correct. Cennini needed to make a living; he needed a patron, hence his dedicatory. But this could be called an extrinsic motivation. His intrinsic motivation was the education of the next generation of artists. The type of knowledge that Cennini selected to write down was primarily in service of this purpose. And here, another factor comes in: the joy of doing. Personal delight becomes a reason for writing, something that had previously been more commonly associated with creative writing than with practical writing.

### 3.1.2 *Issues of authorship and practical writings*

This publication takes textual recipes as units of practical knowledge. These recipes are written text. Text is always written by somebody, and this person is most often referred to as the author, but here ‘writer’ is more accurate. This brings us to the topic of authorship of recipes. Here, staying with Cennini, the problematic of authorship will be introduced. Cennino Cennini is often thought of as the ‘author’ of *Il Libro dell’arte*. In a way, the book claims authorship: ‘Here begins the craftsman’s handbook, made and composed by Cennino of Colle.’<sup>111</sup> The so-called ‘author’ leaves no doubt about his actual contribution to the book: he

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110 Agricola 1950 [1556], p. xxv.

111 Cennini 1960, p. 1.

'made' the book; he 'composed' the book. In his introduction he states: 'I will make note of what was taught me by the aforesaid Agnolo, my master'.<sup>112</sup> One can also discover this sense of compilation within the recipes themselves. For instance, in the recipe for gilding panels with terre-verte, Cennini proposes to 'do also as our forefathers used to'.<sup>113</sup> Thus, acknowledging that this procedure is not his own invention but stems from a long tradition. His method for the creating the book consisted of a carefully selection of procedures, which he brought together in one manuscript; Cennini took the role of a compiler.

The concept of an author as the sole creative instigator and creator of a text is an eighteenth-century creation, deconstructed in the 1960s by Roland Barthes and Michel Foucault.<sup>114</sup> Through their work, the final creator of textual meaning got shifted from the author to the common reader. This idea is recognizable in Elaine Leong's method. Leong studies recipe books as a collaborative product, where reading texts leads to note-taking. Note-taking is an act of knowledge transmission and therefore an act of knowledge production. It is implied in this project, that the reader of practical knowledge becomes a creator of practical knowledge. The emphasis lies more with the consumer of practical knowledge than the actual 'author', a consequence of the 1960s' 'death of the author'. But what is the value of an actual 'author' of practical knowledge? Recipe books are mostly compilations. Some recipes are the textual remains of actual practice. The various stages of the cycle from idea to recipe could be the following: a person has a problem and needs to find a solution. He or she comes up with a strategy and proceeds accordingly. By trial and error, the procedure's results are found to be positive. The person then decides to write the procedure down. The most important stages of this cycle of thinking, doing, and writing are the practical and executive parts. The practical side of practical knowledge is superior to the textual side of practical knowledge. The textual side of practical knowledge is important for this publication because it is the testament of practical knowledge and its practical side.

Another approach to authorship of recipe books is found in the work of Michelle DiMeo who discusses the concept of authorship for seventeenth-century English recipe books as a mechanism of attributions. Most seventeenth-century English recipe books contain attributions for the recipes. The case of Wellcome MS 7113 is an interesting one. Often, the recipes have two names

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112 Cennini 1960, p. 2.

113 Cennini CXXXIII.

114 Finkelstein and McCleery 2006, p. 275; Long 2001, p. 8.

written next to them. One name indicates the source, which is the person the recipe comes from. The second name is often Lady Ann Fanshawe, or the owner of the recipe. In DiMeo's view, both names give a sense of authorship. Goldstein links the increasing attribution of recipes over time, to the rising merchant classes, who applied the practice more scrupulously than the gentry or aristocracy. Furthermore, these attributions are interesting because they situate the collector of recipes in a social network of knowledge-exchanging people or co-contributors.<sup>115</sup>

Not all authors and writers are the same. Being an expert is different from being a professional writer. For example, Georgius Agricola (1494–1555) wrote the impressive compilation about metalworking *De re metallica* (1556). Agricola was not a specialist in the metallurgical field and his work is not of any practical value. It took him 20 years to write the book. Even though this work was not published until after his death, Agricola was a professional writer during his lifetime. He wrote for money and wrote about subjects without being involved in their practice, as in the case of *De re metallica* (1556). The specialization of professional writers was to gather knowledge for publication; regardless of the precise content of that knowledge. They are often referred to as authors, but essentially they compiled and edited texts.

Concerning authorship and the material conditions of writing, Wendy Wall differentiates between professional and amateur writing.<sup>116</sup> But, to get a better idea of the characteristics and identity of a recipe book writer, Wall's categories need to be extended. Whether or not the person is paid to write a recipe book is a relevant question. Someone who writes for money is not the same as someone who writes for pleasure or personal use. A writer has a public in mind. When a writer is producing a manuscript, he or she might only write it for their own or their family's use.<sup>117</sup> In these cases the involvement of a payment is very unlikely.

In other situations, writers were seeking to publish their work, or were looking for a patron. In both cases there is a need for financial support. When talking about a professional writer, there should be a further definition of his or her professionalism. A writer can be also a scribe, who is copying a work in order to sell it. To get a fuller idea of the writer, two other questions should be asked: 'What is their level of experience and what is the level of expertise involved?' A writer

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115 DiMeo and Pennell 2013, pp. 42–43; Goldstein 2013, pp. 145–153.

116 Wall 1999, p. 72.

117 The probability of a print culture merely for the self would be very small, if not non-existent.

can be an expert who writes down recipes he or she has tried out personally, but often things are far more complex than that. Even in the hands of experts, you find a lot of compiled recipe books. This is the case of *De diversis artibus*, generally attributed to Theophilus; but more probably written by a person who was a practicing artisan who may or may not have been called Theophilus.<sup>118</sup> In its section on the art of the painter, there is a varnish recipe that proposes a second procedure for a varnish. This second recipe contains a clear textual indication that the recipe was copied, as it starts: ‘the same by another hand’.<sup>119</sup>

In contrast to the case of Cennini, who wrote an introductory manual for potential patrons, is the case of a master painter, an expert with experience, who writes down recipes to educate his apprentices, but will not earn money through the writing. However, through this, the master painter may further the longevity of his workshop and preserve his living by maintaining the educational cycle in his workshop. Additionally, there are non-experts who try out procedures to make something and then write them down. The possibilities of who writes and what is written are many. The criteria involved are paired: professional writer vs. amateur writer; expert vs. non-expert, and experience vs. non-experience. These categories will be further examined in the third chapter of Part I of this publication.

### 3.2 Form and conventions of practical knowledge

In this book the unit of measurement for practical knowledge is the recipe. A recipe is a literary form. On a practical level it communicates instructions to enact something. What makes a recipe a recipe is the typical literary form and the use of the imperative. The word ‘recipe’ comes from the Latin verb ‘recipere’ which mean ‘to receive’. It seems to have come into English in the fifteenth century, and had an initial medical usage to indicate physicians’ prescriptions. Before the word ‘recipe’ was associated with kitchen practices, the word ‘receipt’ was used to indicate instructions for food preparation. A receipt is ‘a formula or preparation made according to a formula’ with a medical or other application.<sup>120</sup> From the fourteenth century until the end of the fifteenth century, recipes were known as ‘nyms’. The word ‘nym’ literally means ‘take’. Recipes would most often use the terminology ‘nym a pound of’. The word ‘nym’ underwent a short revival in kitchen literature in the seventeenth century.<sup>121</sup>

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118 Hawthorne and Smith 2013, pp. xv–xvii.

119 Theophilus 1961, p. 19.

120 OED.

121 Morton 2004, pp. 209; 254–255.

### 3.2.1 *The form of the recipe*

In this part, the recipe is considered as a piece of text with a literary form. Literary forms correspond to a set of conventions in order to communicate something. In the case of recipes one can state that they are prescriptions of procedures. It is generally accepted that prescription and description are opposing formats, but for Howard Levis, one does not exclude the other; he sees recipes as descriptions of procedures.<sup>122</sup> The contemporary form of the recipe contains a heading naming the dish, a list of ingredients, and a body of text with the instructions. The early modern recipe corresponds more or less to the form of a contemporary recipe.

As said before, early modern recipes are textual units of practical knowledge. Before discussing the components of recipes, an introduction about how these units are organized in the early modern setting is in place. Bear in mind that the considered recipes are those within the context of a recipe book. Of course, recipes can appear in many other contexts, such as in account books, in a letter or on a random piece of paper.<sup>123</sup> The clearest visual way to organize recipes is through the use of space. Recipes can be distinguished by a blank before or after the textual unit. Some recipe books add lines or other beautifying elements to the separating space. Another way to recognize the beginning of a new recipe is through the use of a title. Occasionally distinct titles may be missing; this can happen, for example, in a running text. In this case new recipes can commence with the word 'item', which is Latin for 'also'. New recipes can also be distinguished through the use of other markers, such as punctuation or color. In early modern print, the use of color in recipes seems to be inexistent or at least infrequent, unlike manuscript recipes.

Recipe titles have two functions. First, titles are a means to distinguish individual recipes. They often appear centered or indented, underlined, colored or in a more elaborate script. Second, titles contribute to the organization of the unity of the recipe itself. A title announces what the recipe will do, or alludes to the outcome of the recipe. The title often starts with 'to make', 'for the making of', 'an excellent way to make' or it can simply announce the desired end product, for instance 'A diet drinke'.

Early modern titles have broadly the same function as today, but ingredient lists serve a different purpose. Today we know recipes as a set of instructions containing a separate list of ingredients, often at the beginning. Modern

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<sup>122</sup> Levis 1912, p. 1.

<sup>123</sup> We will refer to recipes in recipe books and will forego the discussion of recipes as page filler in other accounts.



ingredient lists make mention of the required quantity of each ingredient, and generally list one ingredient per line or list ingredients in columns. In the surviving early modern recipe culture, ingredient lists do not exactly follow contemporary standards. Early modern lists of ingredients and materials are not necessarily connected to one single recipe, or to any recipe at all. The art technical recipe book NAL 86.EE.69 contains various lists of colors. One of the lists shows how to temper certain colors, for instance with water or with oil. Another list shows which colors and pigments can pass as the colors for coats of arms. Another list of colors is accompanied by the market price.<sup>124</sup> In this recipe book lists are not directly connected to a recipe. Some recipe books create an overview of food linked to their season. Wellcome MS 8097 is a cookbook with a squared grid that lists foods according to their month of consumption.<sup>125</sup> A recipe for 'the wound drinke and for the kings evill' lists all herbs to be gathered in May before describing the actual procedures.<sup>126</sup> Early modern listing happens in a categorical rather than a functional way. They rarely serve one single recipe.

Early modern recipes commonly include the mentioning of ingredients and additional remarks directly in the procedure description. For instance, a recipe 'to make white inke' proceeds as follows: 'Take chalke and grind it small & temper it with gome water & for let it stand.'<sup>127</sup> The procedure description includes the ingredients. If one wants to make white ink, one needs chalk and gum water. There is no separate listing of the ingredients, one discovers that the chalk needs to be grinded before it has to be tempered or mixed with the gum water. In early modern recipe culture most of the times the procedure coincides with the mentioning of necessary ingredients.

The body of the text may also include additional remarks, such as the application, storage or prescriptions for use. The Fanshawe 'diet drink' concludes the recipes with information about the period during which it should be consumed and the precise function of the drink: 'You may drinke of it 6 or 7 days. This is an excelente drinke for any rheumatick body that is inclined to dropsie.'<sup>128</sup> The conclusion of a recipe, if there is any, provides extra information. In his article on the convention of genre, Francisco Alonso-Almeida focuses on two of the

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124 London, National Art Library: NAL MS 86.EE.69.

125 London, Wellcome Library: Wellcome MS 8097, fols 81v-87r.

126 London, Wellcome Library: Wellcome MS 7113, fol. 7v.

127 Oxford, Bodleian Library: MS B Rawlinson D. 1025, fol. 30r.

128 London, Wellcome Library: Wellcome MS 7113, fol. 7r.

less-described stages of the recipe, ‘expiry date’ and ‘virtues’, which often appear at the end of a recipe.<sup>129</sup>

Early modern recipes communicate further information in addition to those specifically mentioned above. Another important aspect of recipes is the communication of provenance and ownership. A fascinating example for this topic is the ‘Booke of Receipts of Physickes, Salues, Waters, Cordialls, Preserues and Cookery’ by Lady Ann Fanshawe, which is Wellcome MS 7113. There are two kinds of recipe attributions in this manuscript. The first type is provenance. These are attributions of where a recipe comes from, such as ‘Lady Butlers’ or ‘My mother’. The second type of attribution is that of ownership, and in the case of Wellcome MS 7113 the recipes most often belong to Ann Fanshawe. The manuscript registers transactions of knowledge; it registers who recipes have come from and who they have gone to. David Goldstein argues that the convention of attributing is a seventeenth-century usage.<sup>130</sup> The recipe book attributes almost 100 % of its recipes. The names in the margins register the social network of Ann Fanshawe. Many of them belong to her extended family. Recipes not only provide a summary in the form of a title and instructions; they can also provide information about the networks in which they circulated.

### 3.2.2 *Recipes and narrations: mechanisms of persuasion*

Apart from provenance and ownership, still more information can be extracted from a recipe. Some recipes are peppered with anecdotes.<sup>131</sup> Information about the context of provenance and/or usage may shine through the recipe at the anecdotal level. The word anecdote comes from Greek *anekdota* and means ‘things unpublished’. Anecdotes are ‘secret, private, or hitherto unpublished narratives or details of history.’<sup>132</sup> This description fits for anecdotes in recipes.<sup>133</sup> Wellcome MS 425 contains an interesting piece of plague writing. Two recipes, one being a cure based on onions and one a protection based on oil, are accompanied by an extra layer of information. The recipes came from a certain respected Sir ‘Messer

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129 Alonso-Almeida 2013, pp. 72, 80–82.

130 Goldstein 2013, pp. 143–147.

131 I thank Martin Procházka for his suggestion to see anecdotes as a strategic means in recipes. Procházka investigates the relationship between anecdotes and historical narratives in his *Ruins in the New World* (2012).

132 OED.

133 Other characteristics of the anecdote, such as humorous twists or gossip-like reporting is missing in these particular plague recipes. OED; <http://www.dbnl.org/>.

Lugio' of Siena who 'was killed in Florence by people from Siena and died at the Florentine prison *Carcere delle Stinche* and was put to death by a young person from Siena for money; he was promised 1000 florins.'<sup>134</sup> Why was this information written down? What is the extra value of this piece of information? In what way could the details of the murder serve the recipe? The narration of these facts does not directly contribute to the functionality of the recipes. The consumer principally receives information about the provenance of the recipes. However, as seen before in the piece about experience-based knowledge, the issues of authority and credibility are relevant for practical knowledge. In fact, the writer of this recipe stresses in three different parts of the plague writing that the recipes have been approved and that they work. He concludes by saying that he has personally witnessed their effectiveness. The sensational character of the narrative serves as an eye catcher for the reader, and the repetition of the testimony serves as a guarantee of the effectiveness of the recipe. In this way an anecdote and a claim can serve a recipe by fulfilling the rhetorical function of persuasion.

### 3.2.3 *Conventions of measurements: quantifying time*

When one talks about recipes, one also talks about quantifying units. A significant part of the instructions is about the amount of time certain actions should take. In fact, the timing of a recipe is a crucial and essential part of successfully executing the recipe. Often in early modern recipes a precise time indication is missing. This might be due to the fact that the actual author knows how long something needs to boil. Some recipes call explicitly on the experience of the user. For instance, the Bolognese manuscript says if you want to use verzino to dye a thread red, boil verzino 'as long as you think sufficient'.<sup>135</sup> In some cases a precise time is given, and in others it is approximate. Sometimes the material conditions of substances are described. For instance, the recipe to make amber varnish in the Paduan Manuscript says: 'Take common turpentine, make it to boil for a quarter of an hour, add to it some amber well powdered on the marble, boil it for half an hour until the amber is liquefied, and take it from the fire'.<sup>136</sup> First it states that the substance has to be boiled for a quarter of an hour. When it has to be boiled again, the user has to rely on two complementary instructions: either the substance has to be boiled for half an hour, or the substance has to be boiled until it reaches a liquid state. This second instruction is an explanation of the

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134 Freely translated from London, Wellcome Library: Wellcome MS 425, f. 135v.

135 Translation from Italian, citation taken from Merrifield 1999 [1849], p. 588.

136 Translation from Italian, citation taken from Merrifield 1999 [1849], p. 688.

condition the substance should attain before being taken off the fire, in case a 30 minutes time frame is not sufficient.

Little scholarly attention has been paid to other systems of time management in early modern recipes. It is not unusual to encounter prescriptions to boil something for the duration of an Our Father. This publication argues that in early modern Europe, prayers were used to control the duration of actions in recipes.<sup>137</sup> In this way, religious knowledge was used for practical purposes. Due to the nature of the transmission of practical knowledge, these measurements largely survived beyond the invention of the clock. The mechanism used in Europe's first clock (at least the first we know of) was weight-driven. The weight-driven clock was probably introduced into Europe at the end of the thirteenth century. There was no mention of a visual indication of the hour on the clocks at that time, but a bell was struck every hour. During the fourteenth century, astronomical clocks appeared across Europe and during the fifteenth century automata or spring-driven clocks began to appear.<sup>138</sup> Minutes as a sexagesimal fraction of an hour were introduced much later. For a long time, the length of a minute was variable, but it often referred to 1/10 of an hour.<sup>139</sup>

A clock is a piece of information technology; it communicates the time of the day. Herbert Ohlman states that information technologies are 'extensions of human sensory-motor capabilities'<sup>140</sup> and he proposes five fundamental questions to study their evolution:

1. How much of our life is affected by a certain invention?
2. How much of our income is spent on using an invention?
3. What percentage of the population owns the invention?
4. What would be the effect on society if we had to do without the invention?
5. How many people are employed world-wide in industries which have developed from electrical or electronic inventions?<sup>141</sup>

These questions allow the contemporary application of technological innovations to be measured. However, the last question is date specific; as it makes no sense to talk about electricity industries before Benjamin Franklin's experiments and observations concerning electricity. The four remaining questions on the other hand can easily be applied to the early modern setting.

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137 We have not come across any work that theorizes or discusses this matter profoundly.

138 Jagger 2012; Ohlman 1990, pp. 695–696.

139 OED.

140 Citation from Ohlman 1990, p. 686.

141 Ohlman 1990, pp. 690–691.

First, how much of early modern life was affected by the invention of the clock? Jacques Le Goff argues in his impressive work on medieval society that during the fourteenth century there were changes in the measurement of time.<sup>142</sup> Church time was replaced by clock time. Communal clocks were instruments that ran daily life and divided the workday into fixed units in order to advance a working schedule. These instruments were superposed by merchants and hence formed the basis of a further economic reasoning about time.<sup>143</sup> The technology was often imprecise, so an escapement system was built into clocks, which enabled a mathematical sense to underpin the division of days in hours. But even after this correction was calculated, time remained a problematic topic for many centuries. At the time of the Dutch inventor of the pendulum clock, Christiaan Huygens (1629–1695), clocks were often fragile and irregular.<sup>144</sup> The clock had an enormous influence in the daily life of people from the fourteenth century. In recipe books this influence of the clock is not always present. For instance, Cennino Cennini (ca. 1360–ca. 1427) has a recipe to keep a mordant good ‘from one vesper to the other’.<sup>145</sup> The duration of a day is here indicated using church time. This is a clear example of the transmission and persistence of time measurement patterns from the past.

Second, how much of people’s income is spent on using a clock? And third, what percentage of the early modern population owned a clock? With the coming of new techniques, the clock was no longer necessarily a public object but could also be a private instrument. For a long time, the presence of clocks was solely public or semi-public. There is a debate about the earliest presence of domestic clocks. Ohlman dates it back to the late fourteenth century.<sup>146</sup> Jagger, on the other hand, situates the earliest reference one century later. Jagger found that the first reference to a domestic clock goes back to 1469 and is found in one of the Paston letters. The description of this ‘lytell klokke’ says exactly what it was, a miniature version of a tower clock. Furthermore, Jagger dates the first portable clock back to 1482.<sup>147</sup> There might be a difference in the approach of the two scholars, Ohlman referring to concrete artefacts and Jagger referring to textual indications. However, the modest number of clock makers might indicate that clocks were far from omnipresent. During the sixteenth century, France had five

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142 Le Goff 1980, p. 44.

143 Le Goff 1980, pp. 35–36.

144 Le Goff 1980, p. 49.

145 Translation ours, Cennini CLII.

146 Ohlman 1990, p. 695.

147 Jagger 2012.

known clock makers, of which two were royal clock makers.<sup>148</sup> Taking into account that, in the best case, each clock maker had a series of workers, helpers and apprentices and that some clock makers might not have been registered, we still are dealing with a very small number of people producing clocks in the whole of France. A comparison with the number of sixteenth-century French painters will not be broached, but suffice to say that the number of active and registered painters was many times greater. Most probably the concept and use of the clock was more established than actually keeping a private clock.

Fourth, what would have been the effect on society if early modern society had to do without the invention? Without a clock, working days would have been irregular and the timing of the church would provide the dominant pattern of the day. Without clocks, recipes would have had to call upon the ecclesiastical apparatus for timing. Instead of using the clock time as a reference for duration, prayers would have been used. In fact, J.B. Oosterhout published a study of independent Flemish rhymed prayers from medieval Bruges. He distinguished the textual form of the prayer from the religious act of the prayer.<sup>149</sup> This distinction might not be as contemporary as we may think. Prayers in early modern recipes books would be understood in terms of time or duration, meaning the time it takes to say the prayer. Each prayer has its own length and takes a certain amount of time to say. The most common prayers encountered in early modern recipes are:

1. Our Father
2. Hail Mary
3. Miserere

The texts of these three prayers are borrowed from the bible. The Our Father or paternoster, also referred to as the Lord's Prayer in English, comes from Mt 6:9–13.<sup>150</sup> The Hail Mary or Ave Maria comes from Lk 1:28,42. And finally the miserere is a penitential psalm, Psalm 51. In all the investigated recipes, these three prayers are only mentioned by name, never written out completely. Prayers were part of common knowledge. Prayers were a common good that also served

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148 Jagger 2012.

149 Oosterman 1995, p. 17.

150 Paternoster is understood as Our Father or the Lord's Prayer and not as the series of prayers one prays with the aid of a rosary, which in Dutch is called paternoster. The large beads of a rosary are reserved for the paternoster, in some languages this refers to the whole of the prayer cord or string with prayer beads.

as indications of time. Recipes report that a substance has to soak, boil or rest for the 'space' of a number of prayers.

Converting prayer time to clock time is an almost impossible task. An accurate estimate is difficult to obtain because there are several coinciding variables. There are the problems related to the text and there are problems related to the saying or reading of the prayer. The first issue is that of text fixity. Even today, the Our Father has not reached an absolute form of text fixity, meaning that the various Christian churches use different translations with various degrees of differences. The variability of the texts of prayers was certainly an early modern phenomenon too. Before the printing of prayer translations in the vernacular, it is difficult to know which language was used and which translation. With a Latin recipe book, one might believe that the paternoster was actually intended to be said in Latin. But with the Bolognese manuscript, for instance, this becomes a matter for debate, as the whole manuscript uses Latin, Italian and a mixture of the two. And what can be said about the Flemish *Tbouck van wondre* (1513)? Dutch or Flemish speaking users might have very well applied a Flemish version of the paternoster. The research on the textual and material side of *A Very Proper Treatise* (1573), which is the main focus of Part II of this publication, brought a sixteenth century Flemish version of the Our Father to light.<sup>151</sup> The prayer appears in a volume that binds together several works of different interests. In the order of appearance:

1. Anonymous, *A Very Proper Treatise* (1573)
2. A fly leaf with English writing
3. A single leaf with Latin writings, a Dutch Our Father, and several drawn figures
4. *Alphabetum monachi fratris Thome Kempis ordinis regularium* [The alphabet of the monk brother Thomas à Kempis of the order of canons regular]
5. *Alphabetum pauperis monachi in schola humilis fratris Thome de Kempis* [The alphabet of the poor monk in the school of the humble brother Thomas à Kempis]
6. A model book by Guilielmus Middelborch, dated 1578

There is material evidence to support the thesis that all the items were bound together around 1825 by bookbinder William Pratt, on orders from the eccentric collector John Bellingham Inglis (1780–1870). According to these findings, the

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151 The work is catalogued as S.M. 1161 at the University Library of Glasgow.

book can be divided into two chronological parts, which correspond to the two media used. The first book is a sixteenth-century print; the other four parts are handwritten documents from the fifteenth century. Because the handwritten documents are partly in Middelborch's hand and partly the models he used for copying, one can conclude that Middelborch had the written documents to hand. Middelborch's interest was in letters, as was Inglis, at least for this volume. In this particular volume Inglis bound *A Very Proper Treatise (...) which teacheth the order in drawing & tracing of letters* to other documents. The main protagonists in this collection are letters and alphabets.

The Flemish version of the Our Father in the Glasgow binding does not correspond at all to the contemporary or biblical version. This text is very different in length, content, and form. The Our Father has seven petitions (and an eventual doxology at the end). The prayer does not use rhyme. The Middle Dutch prayer has 28 verses, divided into seven stanzas and uses the rhyme scheme AABB CCDD, etc. The first line of each of the stanzas contains one of the petitions of the biblical Our Father. The Middle Dutch prayer keeps all the criteria for a 'good' prayer. Among the characteristics for prayers, Oosterman lists confession, humility and unworthiness, preparedness for death and fear of a sudden death, thanksgiving and the asking for mercy and grace.<sup>152</sup> These are the aspects the believer wants to communicate to God in his or her prayer. A humility *topos* case in this prayer is 'we poor children made of mud', which gives a representative example of the tone of the prayer. Glasgow MS SM 1161 contains a Dutch variation of the Our Father, which proves that text fixity for prayers is unstable and therefore it is difficult to determine the exact length of a certain prayer.

The other problem that impedes our understanding of the precise timing of a prayer concerns the way the prayer is said. The modality of praying can vary considerably depending on the circumstances. A prayer could be read aloud, or it could be memorized and said silently in one's mind. The purposes of these prayers had to serve practical, daily issues. One might assume that a stiffly ceremonial cadence would not be used, but rather a swift and fluent style. The most precise indication of how to say a prayer for practical use is found in Sir Kenelm Digby's (1603–1665) closet. A Jesuit who came from China in 1664 brought a way to make tea with eggs: stir two yolks with fine sugar and pour tea upon it, stir well and drink hot. Mr. Waller's way to make tea with eggs is slightly different: 'The water is to remain upon it, no longer then whiles you can say the Miserere Psalm very leisurely. Then pour it upon the sugar, or sugar and eggs.'

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152 Oosterman 1995, pp. 23–34.



The psalm has to be said 'leisurely' or without haste. This would be more like the ceremonial speed. The question is whether this was the usual way or if it was an exception. The answer might lie in the last part of the recipe, where a clarification follows: 'thus you have only the spiritual part of the tea.' Here the spiritual dimension of the prayer becomes involved, and this would be reflected in the tea. Saying a prayer as an act of belief and, consequently, obtaining tea with a spiritual dimension goes hand in hand with the ceremonial convention of the length of prayers. However, here it is thought likely that this prayer was originally used for its practical purpose, and that it gained an extra layer through transmission and personal adaptation. Thanks to this example, it can be concluded that in this type of daily use, the saying of prayers must have been 'practical' and not ceremonial.

Thus, this section argues that prayers were used as time units for practical knowledge. This habit goes back to a time before the invention of the clock, a time when the church dominated the rhythm of daily life, in the work place and in the recipe book. Religious knowledge was used in a practical way. Prayers were allocated a practical significance. This means that religious knowledge could be subordinate to technical knowledge.

### **3.3 Functionality and *raison d'être* of recipes**

#### *3.3.1 Implication of instruction*

The communication of practical knowledge proceeds along certain conventions. The form in which practical knowledge is communicated is commonly a recipe. Early modern recipes are often just a means of enhancing the memory of the user. This aspect will be discussed below. Early modern recipes often have a haphazard and incomplete character. Recipes could be written down for the writer's own use, or written down in a more standardized way to make copying and further dissemination possible. Eventually, the idea of a recipe follows literary conventions that serve the communication of information – or in this case, practical knowledge.

A recipe is a literary genre that conveys information or practical knowledge. In this publication the recipe is understood as a unit of measurement of practical knowledge. Both William Eamon and Allison Kavey attribute the significance of recipes to their communicative aspect. Kavey sees recipes as a 'means of conveying natural knowledge.'<sup>153</sup> Eamon refers to recipes as the 'conventional format

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153 Kavey 2007, p. 8.

for recording technical processes in the early modern how-to books' and stresses the utilitarian character of recipes.<sup>154</sup> Eamon points out the implicit contractual nature of recipes. They are prescriptions for experiments, and they use the imperative. This establishes a bond between the reader and the text. The recipe prescribes an action; the completion is the trial itself.<sup>155</sup>

### 3.3.2 *Function and dysfunction of early modern recipes*

The function and the dysfunction of early modern recipes touch upon various aspects that define practical knowledge. Practical knowledge dwells in discourses of truthfulness, usefulness, reliability, practicability, secrecy versus commonly known, a tacit vein, etc. Dysfunctional recipes are non-executable or implausible recipes and therefore they are a *contradictio in terminis*. Dysfunctional recipes have been described in various terminologies: fraudulent recipes, false recipes, uneasy recipes, impossible recipes, lies, etc. The functionality of a recipe is the communication of information in order to obtain something, *ergo*, with a dysfunction recipe, something will go wrong further down the line. Some of them are known only to the specialist's eye. Although in some cases today's readers of medieval and early modern recipes might end up frowning when facing some curious recipes. Wellcome MS 425 contains an odd recipe for a 'cosa mirabile' [admirable thing]. The description of the recipes is as follows: the user is advised to take an egg, perforate it and insert human blood until it is full. The opening of the eggshell has to be closed with wax and the egg has to be replaced under the chicken. When the chicks are born, the user has to take the same egg and break it. The substance inside will take the form of a creature that will make a good powder for 'great things'. The user must commit to silence concerning this procedure. The recipe concludes that, alternatively, one could add human sperm instead of human blood.<sup>156</sup> By our standards, this mysterious recipe has a highly improbable outcome.

A lot of early modern recipes have problems with their execution and/or outcome. Here they are described as dysfunctional recipes; meaning that they are not functional and are not directly applicable, or simply, their entire successful execution is questioned. Some recipes are actually dangerous and noxious. A fine example of scholarly awareness can be found in the health and safety warning clause in Mark Clarke's edition of the Montpellier *Liber diversarum arcium*

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154 Eamon 1994, pp. 4; 131.

155 Eamon 1994, p. 131. Eamon refers to Greimas 1979, p. 7.

156 London, Wellcome Library: Wellcome MS 525, f. 141r.

[Book of divers arts]. Here, the reader is advised that ‘mediaeval standards of health and safety at work were considerably laxer than those of today. Many of the materials and processes described in the present volume are dangerous. Any attempt to reconstruct any of the materials or processes described in this volume should always be preceded by a risk assessment, especially with respect to the use of materials that can be toxic by touch or inhalation.’<sup>157</sup> In other words the warning echoes the phrase: don’t try this at home.

The functionality of recipes was already being questioned in the early modern period. In his *Piazza universale di tutte le professioni del mondo* (1583) [Universal marketplace of all the professions of the world] Tommaso Garzoni calls improbable secrets ‘ridicoli & vani’ [ridiculous and in vain]. Isabella Cortese, the presumed author of *I secreti de la signora Isabella Cortese* (*The secrets of lady Isabella Cortese*, 1561), copied from Fratello Benedetto who warns the reader about thirteenth and fourteenth century masters such as Geber (Jabir Ibn Hayyan), Raimondo (Ramon Llull), Arnaldo (Arnaldus de Villa Nova) and ‘other philosophers.’<sup>158</sup> The reason why one should not follow medieval alchemists is because ‘non hanno detto verità’ [they did not tell the truth]. The writer adds that for more than 30 years he has read, reread, and studied their works and found nothing but fables and chitter-chatter. He advises the reader not to spend a lifetime on these works, as he did. He touches upon another point, the economic aspect of getting involved in the pursuit of alchemy. The writer confesses that he has not only lost a lifetime, but also a lot of money. He encourages his reader to follow what he says and writes. Furthermore, he recommends following the personalized ten commandments. Fra Benedetto also gives an example of incongruent recipes with the various masters, but the overall critique is related to the major and lesser names of earlier alchemists.

A case study from contemporary secondary literature on the topic of dysfunctional recipes is a metallurgic recipe for Spanish gold from the medieval *De diversis artibus*.<sup>159</sup> To obtain Spanish gold one needs red copper, basilisk powder, human blood, and vinegar. The recipe provides instructions for the creation of the basilisk.<sup>160</sup>

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157 Quotation taken from Clarke 2011b, p. xiii.

158 More on the authorship of Cortese’s *Secreti* in the third chapter of the first part of this publication where we argue that what we read in the second chapter is not Cortese’s voice, but that of fra Benedetto.

159 Attributed to Theophilus, as discussed above.

160 Note the similarity with the recipe of Wellcome MS 425 (London, Wellcome Library). A basilisk is a chicken-like animal and in both cases human blood has an important impact.

‘The Gentiles, whose skilfulness in this art is probable, make basilisks in this manner. They have, underground, a house walled with stones everywhere, above and below, with two very small windows, so narrow that scarcely any light can appear through them; in this house they place two old cocks of twelve or fifteen years and they give them plenty of food. When these have become fat, through the heat of their good condition, they agree together and lay eggs. Which being laid the cocks are taken out and toads are placed in, which may hatch the eggs, and to which bread is given for food. The eggs being hatched, chickens issue out, like hens’ chickens, to which after seven days grow the tails of serpents, and immediately, if there were not a stone pavement to the house, they would enter the earth. Guarding against which, their masters have round brass vessels of large size, perforated all over, the mouths of which are narrow, in which they place these chickens, and close the mouths with copper coverings and inter them underground, and they are nourished with the fine earth entering through the holes for six months. After this they uncover them and apply a copious fire, until the animals inside are completely burnt. Which done, when they have become cold, they are taken out and carefully ground, adding to them a third part of the blood of a red man, which blood has been dried and ground. These two compositions are tempered with sharp acid<sup>161</sup> in a clean vessel; they then take very thin sheets of the purest red copper, and anoint this composition over them on both sides, and place them in the fire. And when they have become glowing, they take them out and quench and wash them in the same confection; and they do this for a long time, until this composition eats through the copper, and it takes the colour of gold. This gold is proper for all work.’<sup>162</sup>

This recipe is exemplary in current scholarship that deals with ‘uneasy recipes’. Various ways of reading this have been proposed. Robert Halleux attributes this particular recipe to an Arabic alchemical tradition. The translation of Arab alchemical texts comes with specific problems, which might make us doubt the authenticity of these translations. However, Halleux proposes that this particular recipe for Spanish gold contains alchemical codes. The code for a red-haired man is decoded as mercury, extracted from cinnabar.<sup>163</sup> Arie Wallert continues the quest for the meaning of some of the ingredients. Wallert uses the terminology ‘cover name’ for names of ingredients that only insiders understand. He interprets sulphur for blood and mercury for basilisk ash.<sup>164</sup> In this same line of interpretation Pamela Smith proposes that lizard might be another cover name for mercury. In this context she cites a recipe for mosaic gold painting pigment in

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161 In some translations the word ‘vinegar’ is used instead of ‘acid’. The Latin version of the texts says ‘aceto’.

162 Translation from Latin taken from Theophilus 1847, p. 267.

163 Halleux 1996, p. 887.

164 Wallert 1990, p. 161.

*Rechter Gebrauch der Alchimei* (1531).<sup>165</sup> The unreliability of recipes can depend on coded words in recipes.

In a similar case study, Spike Bucklow offers another dimension to the study of what he calls ‘impossible recipes’.<sup>166</sup> Bucklow’s case study concerns a recipe for polishing gems, another recipe from *De diversis artibus*. In his article Bucklow refers to one of the remarkable passages of this hideously long recipe:

‘But should you wish to sculp crystal, taking a goat of the age of two or three years and binding his feet, cut an opening between his breast and stomach, in the position of the heart, and lay in the crystal, so that it may lie in its blood until it grow warm. Taking it out directly, cut what you please in it, as long as the heat lasts, and when it has begun to grow cold and to harden, replace it again in the blood of the goat, and being made warm anew, take it out and cut it, and do thus until you complete the sculpture; at the last, being made warm and taken out, you will rub it with a linen cloth so that with the same blood you can procure a lustre for it.’<sup>167</sup>

Bucklow correctly states that this prescription probably did not attract a great following in medieval and later workshops because of its impractical, expensive and time-consuming procedures. Bucklow argues that the procedure to cut a gem is presented in a mythical way, which has its own logic, and that the writer of the recipes did not have literal intentions. The crystal gem is a hard material, in order to cut it one needs heat. The goat’s blood symbolized the component fire; a goat was considered a hot-tempered animal. The goat’s heart is considered a solar organ. This kind of reasoning makes part of medieval hylomorphism or ‘the scientific doctrine that everything is composed of some mater, “hyle”, in some form, “morph”’.<sup>168</sup>

The following somewhat ‘mild’ but still doubtful recipe appears in Hugh Plat’s *The Jewel House of Art and Nature* (1594):

‘Howe to knowe when the Moone is at the full by a glasse of salt water. It hath beene crediblie reported unto me, that if an ordinarie drinking glasse bee filled brim full, a little before the full of the Moone, that, even at that instant when the Moone commeth to the full, the water will presently boile over.’<sup>169</sup>

165 Smith 2009, p. 46.

166 In short, impossible recipes can cause complications because there is a problem with either the ingredients or the instructions. For instance, the content can be speculative. Or there can be a problem with the descriptive terms the author used; what for the author seems ‘necessary and sufficient’ may look quite different to the users. Bucklow 2009, pp. 18–19.

167 Translation taken from Theophilus 1847, p. 387.

168 Bucklow 2009, p. 20.

169 Plat 1594, p. 80.

Already the Greeks and Arabs used instruments to study celestial bodies.<sup>170</sup> Today, if somebody is interested in gaining knowledge about the state of the moon, there are two simple and obvious procedures to follow. One can consult an institution that keeps track of celestial bodies such as NASA for instance.<sup>171</sup> Or simply one can look outside and make a judgment based on proper experience. Filling a glass of salt water in order to receive information about the moon is no longer considered a valid option. One does not need a science degree to understand that this recipe will not obtain the desired result once executed. A glass of salt water can be emptied through a natural principle: vaporization. Vaporization is the process whereby water is converted into vapor, a gas that can no longer be contained by the glass which held it in liquid form. This is a rather slow process, which depends on the temperature of the environment. In the case of the full moon, there is no possibility of it boiling or any other sudden reaction to the full moon. Kavey has argued that 'failed recipes' could mean a 'shift in the natural order' or a break with what was considered the normal functional supernatural order of life.<sup>172</sup>

Another category of dysfunctional recipes is that of the fraudulent recipes. These are recipes that have been wrongly constructed on purpose. The author acts with bad intention. The reasons for disseminating false knowledge can be linked to motives of secrecy for instance. It may be hard to know when this was the case, but complaints can be found in early modern sources. In the *Jewel House of Art and Nature* (1594) Sir Hugh Plat published a recipe for portable ink or powder ink. This recipe contains a comment about other ink for recipes:

'I could here set down some other sorts of inkes that be not common, whereof some will fall from the paper in a few daies, and others would corrode or fret the paper in peeces, but because I know but one good use of them all, and for that I feare so many bad uses, or rather abuses, would follow if they were known and made common, I will rather seeme ignorant of them, then become an author or helper unto badde men in their bad purposes.'<sup>173</sup>

The accusation is clear; people who spread recipes with bad uses are bad men with bad purposes. The author questions the utility of other author's ink recipes. This might partially be because he needs to sell his own product rather than those of others. But since copying from others was not a problem, this would not

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170 Ohlman 1990, p. 694.

171 A good example one can encounter here: <http://moon.nasa.gov/home.cfm>.

172 Kavey 2007, p. 180: n7.

173 Plat 1594, p. 37.

have been an issue. At that time, determining that another recipe was bad, might contain a reflection of an actual situation. The question is no longer whether Plat was trying to sell his own recipe but rather whether the bad men with bad purposes did actually have bad intentions and produced fraudulent recipes willingly. Whatever the case, Plat's recipe for portable ink demonstrated that intentional fraud in recipes was a topic in early modern culture. Fraudulent recipes belong to the wide range of recipes whose actual functionality can be questioned.

### 3.3.3 *The promise of truth and control*

Recipes tell the truth. Recipes promise procedures which work, which are do-able. The disturbing fact about dysfunctional recipes is that their outcome is not what it promises, hence the functionality of the recipe is disputable. One of the reasons that instructions offer security is because they are based on the experience of another person. This becomes very clear when confronted with one of the recipes to make azure in Jehan Le Begue's manuscript. It says: 'I have nothing very certain to say' and lists goat milk, mother's milk, and egg white as possible binders.<sup>174</sup> This might mean that the recipe was not based on first hand experience or it may also mean that writers are primarily compilers.<sup>175</sup> This recipe is not dysfunctional, but it certainly makes the reader aware of its relative trustworthiness. Again, more conventionally, recipes promote their truthfulness.

Recipes offer a sense of control. A recipe transmits knowledge about certain techniques to obtain something. This something, in a larger sense, we could call nature. When one makes a pudding, one manipulates or controls the state of the egg, sugar, milk, and flour in order to get a pudding. The manipulation of natural phenomena goes way beyond simple kitchen actions. For instance, healing a horse with a prayer is the dominion of reality or nature through spiritual means. There are many more recipes of this genre, such as the controlling of the weather through spiritual means.

According to John Hale the Renaissance was a period where human control over natural phenomena became more intense.<sup>176</sup> People felt an increasing need to control the world and life. Collecting and buying recipe books, almanacs, and other sources could help them in controlling and predicting life. And here lies

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174 Merrifield 1999 [1849], p. 134.

175 The position of compilers is elaborated in the third chapter of Part I and also in the second chapter of Part II.

176 Hale 1993, pp. 509–542.

the reason for the success of books of secrets and recipe books; they give a sense of predictability.

### 3.3.4 *Truth and trust*

Another dimension of truth in early modern Europe is connected to trust. The topics of truth and trust are explored in *The Social History of Truth* by Steven Shapin, the major exponent of this topic. Shapin is interested in a body of knowledge that makes claims on truth, namely science. Shapin sees truth as a social institution. Truth never belongs to others, but to 'us' and 'we'. This implies that there are multiple truths and that a truth can reign in a local setting. There is a strong local- and group-related character to truth. Truth also has an eternal aspect; it is never supposed to change over time.<sup>177</sup>

Shapin distinguishes an amoral from a moral sense of truth. The amoral kind does not refer to a specific person, but rather to general truth; nobody is blamed if the expectation does not come true. For instance, we believe summer to be warm and nobody is held responsible if it is not a warm summer. A moral form of trust is based on interpersonal relationships with a system of expectations. Shapin's work focuses on this second variation of trust; trust in specific people.<sup>178</sup>

Peter Dear points out that trust in science is the faith or confidence somebody has in the testimony of another person.<sup>179</sup> The meaning of trust can become clear by showing the opposite. For an exemplar case of missing trust, one can turn to Hugh Plat's recipe for powder ink, which was cited and discussed above in the context of dysfunctional knowledge.<sup>180</sup> In his recipe, Plat, the writer of *The Jewel House of Art and Nature*, judges 'bad men'.<sup>181</sup> Plat published this recipe that he claimed produced a good ink. He states that he is aware of other recipes in circulation but, because of their bad quality, he prefers to appear ignorant rather than spread information he distrusts. Plat makes a moral judgment of the originators of these recipes. But it is questionable whether these so-called 'badde men' actually had 'bad purposes' in mind when creating or copying their recipes. This is

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177 Shapin 1994, pp. 3–5.

178 Shapin 1994, pp. 7–8.

179 Dear 2006, p. 109.

180 See: 3.3.2 Function and dysfunction of early modern recipes. See: Plat 1594, p. 37.

181 Both Shapin and Dear are interested in a scientific body of knowledge. An ink recipe would belong to the prescientific knowledge such as in the view of Eamon. This book of secrets outdates the typical period, but because of the nature of transmission, which will be studied in the second chapter, this belongs to the normality.



not what is at stake here; we will presuppose that other writers of unsuccessful ink recipes did not have bad intentions. Plat maintains a relation of distrust of those people because they have spread unsuccessful ink recipes.

Shapin's discourse about unreliability is very much concentrated on gender and social rank. Then there is the aspect of deliberately spreading false information, which was considered an art by Henry Mason. Mason published *The New Art of Lying* in 1620. The tenor of this work is set in a religious context, when Jesuit values were under attack. As previously seen in Plat's judgment, one can conclude that the relation of trust and the desire for truth go beyond the religious realm. In daily practical knowledge, the desire for truth is at stake.

### 3.3.5 *Claims of authority*

In Shapin's findings, truth telling is linked to genteel status. The identity of a gentleman in the early modern period was marked by three pillars: wealth, birth, and virtue.<sup>182</sup> Shapin writes that 'gentility was a massively powerful instrument in the recognition, constitution, and protection of truth.'<sup>183</sup> Writings of practical knowledge do not entirely foresee this aspect of gentility, but there are other more frequent techniques used to claim that written knowledge is true. When a person is in a position to determine the truth, makes this known through certain communication channels and is listened to, this is what is referred to as authority. It is irrelevant whether the communicated instruction works or not; what is relevant here is that the consumer interacts with the position of claimed authority. The word 'interact' is used intentionally because both accepting or rejecting authorship says something about the positioning of the knowledge and its claimer.

A very interesting claim for authority appears in Isabella Cortese's *Secreti*. In this work the author appeals to arguments of experience and the religious realm. Issues around Isabella Cortese's authorship are examined in the third chapter of Part I. It is important to know here that the author of the *Secreti* copied from a certain abbot from Cologne, named Chirico. The authority-related arguments come from this copied section. Chirico's plea to accept his authority is preceded by anticipatory arguments, starting with that of experience. The abbot presents himself as a person who had studied the great masters for over thirty years. The striking thing is that he didn't find anything useful in their writings. He also shows himself to have mastered the economical aspect of practical knowledge.

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182 Shapin 1994, p. 43.

183 Shapin 1994, p. 42.

His experience is not only textual, but also practical in this sense. In two instances the abbot silently indicates himself as an authority. Twice he argues that the user needs to follow exactly what is written down. The following of the text needs to be completed: ‘non levare ne scemare cosa alcuna, ma farai quel che dico e scrivo’ [don’t remove, nor neglect anything, but you will do what I say and write].<sup>184</sup> Also, the user has to follow his ten commandments. Following what is written serves the purpose of not failing. Finally, the user is promised to receive God’s grace if he or she proceeds as prescribed.<sup>185</sup> The advice the abbot Chirico gives is quite compelling. He makes his recipes count.

A subtler way for a writer to solicit greater credibility from consumers can be found in *Il Libro dell’arte* of Cennino Cennini, which is considered the first artistic tract in Italian vernacular. In his first chapter, Cennini introduces his recipe book as a work containing information that he tried out himself: ‘quello che con mia mano ho provato’.<sup>186</sup> Cennini testifies that he tried out the recipes himself and thus increases his credibility for practical knowledge. Many recipes across early modern Europe bulge with being ‘proven’ in one way or another. The claim usually appears in the title or at the very end of the recipe. The information is not directly relevant to the practical steps of an instruction, but it enhances the credibility or authority of the author. The invitation to consider the authority is implicit and therefore not imperative. Cennini also acknowledges his own knowledge and know-how, but he proceeds in quite a different way. Cennini accredits his masters in painting. He was taught for twelve years by Angolo di Taddeo of Florence, who in turn was a pupil of his father Taddeo, who in turn was a pupil of the famous master Giotto di Bondone (ca. 1267–1337).<sup>187</sup>

Cennini differs from the abbot Chirico, by placing himself in an artistic tradition. Chirico turned away from longstanding traditions in Alchemy. Central to the difference is that Cennini was taught by a living person, while Chirico claims to have studied from texts. Cennini received knowledge directly, through the standard workshop education. The knowledge Chirico received from the long-dead masters came through textual transmission. Both methods and both contexts are part of the realm of authority in practical knowledge. In both cases their authority is based on a claim of actual practice.

184 Cortese 1565, p. 20. Translation ours.

185 Cortese 1565, pp. 19–20.

186 Milanese and Milanese 1859, p. 3. Presumably not all the recipes were tried by Cennini himself. Cennini announces in the same paragraph that information in his book is also coming from his master Agnolo di Taddeo.

187 Milanese and Milanese 1859, p. 2.

### 3.3.4 *Practical knowledge and the spiritual dimension*

Practical knowledge can come with a religious component. The religious sphere of early modern life in Europe was intensely intertwined with many other layers of life. Earlier in this chapter we argue that religious prayers were used to indicate timings in recipes, which brings together the practical, recipes, and the religious, prayers.<sup>188</sup> But the connections between (and the coexistence of) the practical and the religious or spiritual goes further than just this. We will now look at how religious and spiritual matters are connected to practical knowledge.

Recipe books are often compilations containing other types of texts. It should come as no surprise that some collections of recipes appear in books with theological information. Manuscript 506 of the Wellcome Library provides an example of recipes and theological matters coexisting. The miscellaneous volume was written between 1462 and 1470 by a certain F[rate] Sebastianum de Verona.<sup>189</sup> The practical recipes for dyes and colors appear in various parts of the volume, in between texts on subjects such as papal bulls, prophetic writings and sermons. There is no direct relationship between the religious and technical information. The reason for their coexistence in the same volume is due to material conditions of writing. When things had to be written down, people needed a surface to write the information on, which in this case, was the paper of a manuscript. Some recipe books are more organized than others. Even in more organized cases, such as Lady Ann Fanshawe's, who had a separate volume for the biography of her family, there are different kinds of practical recipes to make perfumes and medicines in her cookbook, by definition a book containing exclusively kitchen recipes.

Occasionally practical knowledge sustains religious culture. A clear and frequently recurring example is the recipe for the making of paternosters. Wellcome MS 425 contains a recipe to make prayer beads of 'yellow amber'. Yellow amber is a fossilized tree resin, and therefore this recipe aims to make imitation yellow amber. The yellow color is obtained by masticot, a yellow lead pigment, and saffron. The masticot is added to beaten egg whites. This mixture is stored in a glass container and kept in the sun for eight days, hereafter the saffron is added. Subsequently the mass is stored in a bladder wrapped in a wet towel and kept warm. The bladder has to be broken to reach the substance, which, after boiling, is ready to be turned into handmade beads, perforated, and oiled with linseed oil. Finally, before use the beads have to dry in the sun.<sup>190</sup>

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188 See 3.2.3: Conventions of measurements: quantifying time.

189 London, Wellcome Library: Wellcome MS 506, fol. 50r.

190 London, Wellcome Library: Wellcome MS 425, fol. 126v-127r.

The reason why this practical knowledge sustains religious culture is because it names a possible purpose for the imitation amber. This purpose is the making of a paternoster, but the actual recipe aims to make the prayer beads. Imitation amber could be used for many other things, such as jewellery, to name just one. But the recipe's title puts the paternoster in first line. A paternoster belongs to a particular religious culture. Several religions use prayer beads, as it is an aid for prayers, and prayers, in turn, lead to spiritual life. So, the paternoster, a material object, belongs to a culture sustaining religion and spirituality. Due to the transmission of this recipe, one can easily find recipes for the making of a paternoster in early modern recipe books, an example of practical knowledge sustaining religious culture.

A different level of interference between the religious and the practical is when the writer of a book uses religious knowledge to sustain an argument. Both Cennini and Theophilus open their work talking about Genesis and the origin of man, as an image of God. Here the writers call upon religious texts. Religious texts were the written source of religion and gave spiritual meaning to life. The reason for opening with a link to religious culture is for justification. Practical knowledge within the borders of art recipe books is seen as a revelation of God. It was believed that God created reality and nature as a mystery, and it was God who decided whether or not this information was revealed.<sup>191</sup> In this way the writers certified their knowledge as legitimate. In the particular case of Cennini, the way the righteousness of knowledge is stressed is three-fold. Cennini situates himself in a determined setting in the opening of *Il libro dell'arte*. He says he made and composed this current book 'in the reverence of God, and (...) of all the Saints of God; and in the reverence of Giotto, of Taddeo and of Agnolo, Cennino's master'.<sup>192</sup> Giotto uses God as his reference on one side, and on the other, a lineage of his authoritative masters. These are two ways of justifying the knowledge.

Finally, the third one is when the history of creation is being evoked to make a connection between the creation of man and the issuing of knowledge, and the current recipe book. After the expulsion from paradise, Adam 'started with the spade, and Eve, with spinning. Man afterward pursued many useful occupations (...) and this is an occupation known as painting, which calls for imagination, and skill of hand, in order to discover things not seen, hiding themselves under the shadow of natural objects, and to fix them with the hand, presenting to plain

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191 Eamon 2006, p. 223.

192 Cennini I.

sight what does not actually exist'.<sup>193</sup> Cennini claims that painting was one of the first useful occupations of man, making use of biblical culture. Evoking the presence of God creates the legitimate divine atmosphere for specialist artistic knowledge, which was meant for a limited public.

A more intense level where religious and practical knowledge meet is when both find their way into practical applications. One can distinguish two variations. The first is when it is said that a prayer should anticipate or accompany the practical procedure in order for it to come to a good end. Cennini for instance, advises the reader to call upon the 'Most Holy Trinity' and the 'Glorious Virgin Mary' before starting work on a panel.<sup>194</sup> Cennini's text indicates that, at a certain moment, communication with higher forces is proper or desirable. It is unclear whether this is a habit or an act of belief. This is partly answered by medical recipes. Manuscript 425 of the Wellcome Library offers a procedure to remove an iron rod or bar from a wound. The recipe prescribes a sequence of prayers turned to face to the sun: five paternosters and five Hail Mary's worshipping the five pains of Christ. After the three paternosters and three Hail Mary's worshipping the Holy Trinity. And then one has to pray that Christ will make the rod come out entirely. Finally, one has to take the iron bar between two fingers and pull so that it can come out.<sup>195</sup> In this procedure the prayers are clearly an act of faith. But it is still a case where the religious accompanies or guides the practical.

The second type is when the religious knowledge becomes practical knowledge, or when the religious knowledge is used as an act of faith for practical purposes. Manuscript 425 of the Wellcome Library also offers plenty of material on this. When a horse is in pain, the procedure prescribes that one should say three paternosters and three 'avemarie' in the ear of the horse, repeated three times; this is how the horse will be liberated from pain.<sup>196</sup> In this recipe the practical procedure is saying and repeating the prayers. The action undertaken by human intervention will find its completion in divine intervention. The practical part of acting and the spiritual part of healing are closely intertwined in this recipe. This marvellous recipe gives instructions for a medical problem, and draws on the spiritual segment of life as a solution; the epitome of intertwining the religious and the practical.

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193 Cennini I.

194 Cennini CIII.

195 London, Wellcome Library: Wellcome MS 425, f. 122v.

196 London, Wellcome Library: Wellcome MS 425, f. 137v.

## 4 Conclusion

Practical knowledge can exist in different ways: oral, visual, and textual transfers of information, which Bouza calls the communication trinity. This publication concentrates on the textual aspect of practical knowledge. Practical knowledge or experience-based knowledge can be found in a wide range of texts. For instance, in botanical catalogues, which define and describe plants, the descriptions come with practical knowledge. Here, recipes or instructions are taken as the textual unit of practical knowledge.

This chapter starts from a premise of knowledge in the early modern period. During this period, knowledge in general, and certainly practical knowledge is not easily categorized, because of the interdependence of the various disciplines of knowledge. In addition, this chapter situates practical knowledge. It provides an insight into the state of the arts of practical knowledge and phenomena that more or less cover the same area, such as secret or common knowledge. Finally, there is a theoretical consideration of the form and characteristics of written recipes.

In the next chapter, we will move on to the mechanisms and dynamics by which practical knowledge circulated in early modern Europe. This topic is closely intertwined with the first chapter, and it has been challenging to draw a precise dividing line.

## 2 The transmission of practical knowledge

**Abstract:** This chapter examines the complex practical knowledge transmission dynamics, making use of the rhizome theory of Deleuze and Guattari. This finds an application on books of secrets and their divulgation in the early modern European setting.

**Keywords:** Deleuze, rhizome, books of secrets, painter's workshop, laboratories

*Every scribe who is instructed into the kingdom  
of heaven is like a householder who brings out of his  
storeroom things both new and old*

Mt 13:52

### 1 Transmission dynamics and the metaphor of rhizome

This chapter will argue that the transmission of practical knowledge proceeds along complex patterns. To illustrate these transmission patterns, a metaphor, known as the root rhizome, will be introduced.<sup>197</sup> The rhizome provides a metaphor suitable for addressing the complexity of practical knowledge transfers, because the rhizome is a multiple-ramification system that can acquire multiple forms with irregular growing intervals. Practical knowledge in early modern Europe travelled through rhizomatic networks. The term 'transmission' will be used to indicate the travelling or passing on of knowledge. A wide variety of different words are used to describe knowledge in motion; some common ones are: transmission, dissemination, diffusion, spread, and circulation. This

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197 I thank both Martin Procházka and Carlo Ginzburg for this suggestion; following my conference paper 'Adapting Common Knowledge: A Case Study of the Art of Limning,' presented at the 2014 TEEME conference *Between Words and Worlds: Texts and Contexts in the Early Modern Period* in Prague. Cf. Leemans 2014a. Deleuze and Guattari's concept of rhizome has been frequently used in interdisciplinary fields of study, at times being appropriated. See Jones and Roffe 2009, p. 2. Frohmann reports that the concept has even been 'over-used'. See Frohmann 2008. The rhizome has often been found suitable to use in context of hypertext and hyperlinked information. See Robinson and Maguire 2009. A good example of textual criticism that makes use of rhizome: Eschrich, Gabriella, 'Reading the Afterlife of Isabella di Morra's Poetry,' *Tulsa Studies in Women's Literature*, 34 (2015), 271–304.

publication will primarily use ‘transmission’ and ‘dissemination’. To avoid becoming repetitive, other terms, such as ‘circulation’ will be employed.<sup>198</sup>

This chapter contextualizes the transmission of practical knowledge within its physical space. Two early modern environments where practical knowledge was created, applied, and transmitted will be used: the artist’s studio, and the laboratory. The artist’s workshop is seen as a professional environment for knowledge creation, application, and dissemination. It was a concrete environment in which artists’ recipe books were used. It will be shown that the copying of textual sources in a specialist environment was common practice, in addition to the oral and demonstrative transmission of practical knowledge. To achieve this, a fictitious but didactical dialogue between two assistants will be analyzed. It will be argued that it is precisely through texts that practical and applicable knowledge was able to leave the professional environment and enter other circulation channels.

The second example is the laboratory, associated with early modern academies and secret societies. At the center of this, Girolamo Ruscelli’s description of the *Accademia Secreta* will be studied. The description appears in the *Secreti nuovi* (1567), which is a recipe book that claims to be by Girolamo Ruscelli,

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198 We single out the term ‘circulation’ for further discussion because of its ambiguity. Because the core significance of the word ‘circulation’ is circle, we will elaborate the idea of the circle. The movement that is expressed with the word ‘circulation’ is that of a circular movement. Now circles are known to be perfectly round. Here the story of the ‘O’ of Giotto might come to help. Giorgio Vasari wrote in his *Vite* that Giotto showed his artistic capacity through the simple gesture of drawing a line. The line was not a straight line but a perfect circle, drawn without compass. A circle is a line with no end and no beginning. The only end and beginning one could indicate is when one follows the procedure of the making or drawing of the circle. But in a perfect drawing this beginning and end should be united perfectly, without distinction. The circle offers another metaphor to talk about knowledge transmission, but it is opposite to the rhizome, which is variable and complex, as shall be seen further in this chapter. Using the term ‘circulation’ for the transmission of knowledge is quite determining as it might unwillingly imply a closed circle of knowledge transmission, such as in a limited high elitist circle or professional environment with professional secrecy. The other thing the circular movement implies it that the same knowledge would return to where it comes from. Both ideas do not correspond with reality, as knowledge often travelled outside of its original environment and knowledge within a certain environment is subject to change. Nevertheless, despite the ambiguous meaning of the term ‘circulation’, it is commonly used to address information transfer of which this publication will make use occasionally, without the intention of a circular and closed knowledge transfer.



which would be the real name of the writer who earlier used the pseudonym Alessio Piemontese, according to the book itself.

The description in the *Accademia Secreta* is most probably, just like the Volpato dialogue, a literary product. Nevertheless, it is still eligible as an object for studying the transmission of practical knowledge, because it describes an ideal model of a laboratory. The idea of the laboratory in this text, needed to seem realistic to the reader, and therefore it embraces an ideal. The purpose of portraying a laboratory and secret society could have been part of Ruscelli's plan to win people's trust. People were aware of the fact that recipes could potentially lead to failure rather than success. Therefore, the writer of a printed recipe book needed to justify his claim of knowledge. Printed and handwritten recipe books often contain 'safety' clauses in the individual recipes, and occasionally in the introduction. Most often these are variations of 'I have proved this', coming from the Latin recipe book dictum 'ipse probavi', 'I tested this myself'.<sup>199</sup> In the case of Ruscelli's *Secreti nuovi* (1567), the writer constructed a narrative meant to convince the reader of the truthfulness of the recipe. According to the introduction, a whole scientific board and specialist workers collaborated and supervised the re-enactment of each of the recipes three times. It can be reasonably argued that probably no actual testing took place, but what is of interest here is the purpose and ideal of the narrative.

The study of practical knowledge transmission in the professional environment of a workshop provides an example of the concrete, physical context, as well as the modalities and dynamics of practical knowledge transmission. The study of the secret society of an academy of natural philosophy gives an example of the idealized physical context, modalities and dynamics of practical knowledge transmission. In this publication the concept of a rhizome is most suitable to study the phenomenon of the transmission of practical knowledge. In what follows, light will be shed on the concept of a rhizome. This theory will be combined with an example of early modern art technological books in a wider European setting. The existence of textual variants, related to the early modern modes of transmission by copying and oral transmission, will be discussed. This will study the way recipes were copied across the European continent, and compare it to the irregular growth of a rhizome. After this concrete example we will discuss the transmission modes associated with their physical environment. This presents a context for highly specialized recipe books that were created and used in that environment, and to more general recipe books that borrowed material

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199 This concrete example comes from Eraclius, cf. Merrifield 1999 [1849], p. 185.

from the more specialized ones. The understanding of how the space worked in the making and using of books with practical knowledge is key to the understanding of these sources.

Textual criticism investigates the correspondence or interdependence between sources. A frequently-used model to represent connections is the tree structure, which is easily translated into a tree diagram. The tree model is long established and is used by several disciplines. For example, in the mid nineteenth century Charles Darwin (1809–1882) used the tree diagram in his *On the Origin of Species*.<sup>200</sup> But the tree model was already being employed in the early eighteenth century ‘by textual critics who were concerned to determine the lineages of biblical and classical manuscripts.’<sup>201</sup> A noted example of a scholar using this approach is Karl Lachmann (1793–1851), who showed in his comments that three manuscripts of the text *Lucretius*, of which he published the transcription in 1850, all derived from a single archetype.<sup>202</sup> This method is based on the idea that at the origin of every text lays a unique flawless text. This hypothesis is not sustainable for recipe books for the following reasons: 1) recipe books borrow from multiple sources, 2) the sources of recipe books may be oral, demonstrational, or textual, and 3) copies of recipes or recipe books do not aim to be literal. The multitude of sources and transmission modes suggests that the single archetype hypothesis is untenable.

A recent methodological effort to deal with the haphazard character of recipe books, has been made by Francisco Alonso-Almeida.<sup>203</sup> He applies Michael Hoey’s ‘discourse colony’ to English recipe books between 1600 and 1800. He defines a colony as ‘a discourse whose component parts do not derive their meaning from the sequence in which they are placed.’<sup>204</sup> With the beehive as the prime metaphor, it is easy to understand that the text type is homogenous, but the order is heterogenous. The important aspect is that the sequence of the textual parts is irrelevant to the meaning of the text. This method can usefully be applied, as it gives meaning to the non-coherence of a group of recipes, identifying the diversity of a recipe collection as a strength, rather than a weakness.<sup>205</sup> Notwithstanding the text-colony’s usefulness, this model neglects some essential criteria when talking about transmission dynamics. The text-colony model is

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200 Tetel Andresen 2014, p. 115.

201 Tetel Andresen 2014, p. 115.

202 Pasquali 1988, p. 15.

203 Alonso-Almeida 2013.

204 Quote taken from Alonso-Almeida 2013, p. 82.

205 Alonso-Almeida 2013, pp. 82–85.

interested in a recipe book as a finished collection of recipes. It takes this collection as a final product, overlooking other textual genres that may appear in the same book and neglecting its history. Recipe books are often a work in progress. The text-colony model bypasses transmission dynamics by focusing on the end result of the manuscript.

This chapter investigates transmission dynamics but will not rely on the tree model because of its unsustainable hypothesis, and neither will it rely on the text-colony model because of our interest in the dynamics of recipes before and after they are set down in a single book. For this reason, the concept of a rhizome is the most appropriate and useful for the study of recipe books and practical knowledge. The OED defines rhizome as: ‘an elongated, usually horizontal, subterranean stem which sends out roots and leafy shoots at intervals along its length.’<sup>206</sup> Think of ginger, bamboo, and asparagus roots. The rhizome model is often compared to the tree model in order to determine its characteristics. The tree has a centralized root, which means that its structure is hierarchical. The centralized root is situated in a network of ramifications. All these ramifications are based on a bifurcation or multiple split. This means that the further the little roots are distant from the central root, the smaller they are. The tree model makes use of long-term memory, because the centralized root is always the basis of comparison to measure any smaller root. The rhizome is a multiple root system that makes use of short-term memory, meaning that only the direct connection counts.

The concept of rhizome was developed by the philosopher Gilles Deleuze and psychotherapist Félix Guattari, and was published for the first time in 1976.<sup>207</sup> Later, in 1980, it was included in *Mille Plateaux*.<sup>208</sup> The edition consulted here is *A Thousand Plateaus* (1987, reprint 2005).<sup>209</sup> This work takes books as images of the world and the realities of books and literature are seen as assemblages. Assemblages of reality are ‘unattributable’. These assemblages behave like rhizomes. A rhizome is a system of multiple ramification of a subterranean stem that can assume multiple forms.

Within the boundaries of *A Thousand Plateaus* the French duo determined six characteristics of the rhizome for philosophical application: connection, heterogeneity, multiplicity, asignifying rupture, cartography, and decalomania. The

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206 OED.

207 Gilles Deleuze and Félix Guattari, *Rhizome* (Paris: Éditions de Minuit, 1976).

208 Gilles Deleuze and Félix Guattari, *Mille Plateaux* (Paris: Éditions de Minuit, 1980).

209 Deleuze and Guattari 2005.

first characteristic is connection. A rhizome can be connected and should be connected at any place and to any other thing. The second characteristic is heterogeneity. A rhizome can be connected to different code systems, for instance the political, economic, biological, etc. The third characteristic is multiplicity. Rhizomes have no object or subject; they have no beginnings or ends. They have increasing levels of multiplicity. The fourth characteristic is asignifying rupture. When a rhizome is broken, it starts up again. This is easily demonstrated with an animal rhizome. For instance, it is difficult to interrupt the path of ants. The fifth and sixth characteristics are cartography and decalomania.<sup>210</sup> A rhizome is not a single tracing, but it is a map with multiple entryways. Examples given to clarify these aspects are the city of Amsterdam and the orchid. The city of Amsterdam is a rhizome city because it has no roots; it is built on water and has canals as an infrastructure. With this concept of a rhizome and its characteristics in mind a group of connected early modern books and their interconnectivity will be discussed.

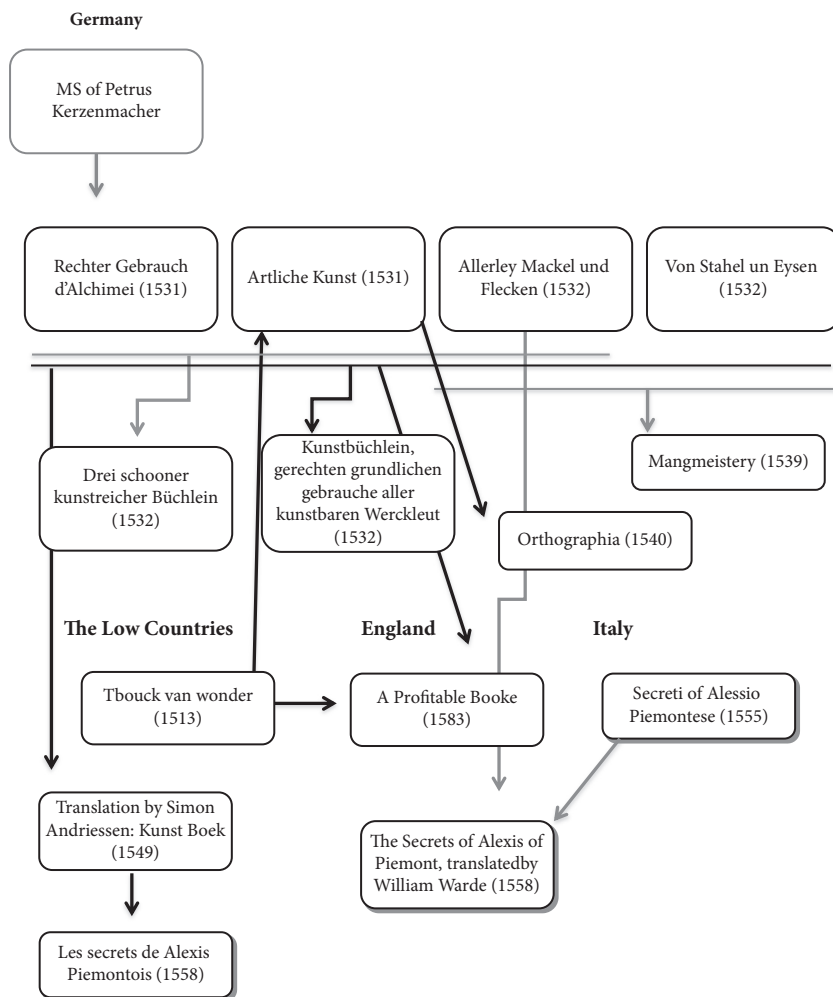
One of the difficulties in studying early modern books containing practical knowledge is tracing this knowledge. The instructions in recipe books contain excerpts of a knowledge culture. One of the possible questions one can ask is where the knowledge comes from and goes to. According to the rhizome method these are 'totally useless questions' to ask.<sup>211</sup> However, showing where the knowledge comes from and showing the dynamics in transmission is precisely the way to show that recipe books behave like rhizomes. During the sixteenth century, Europe was heavily populated with interconnected vernacular recipe books. This section will discuss a possible line of connections between art technological books. The interpretation here of rhizome and art technological books builds further on the textual correspondence William Eamon pointed out in his *Science and the Secrets of Nature* (1994). Fig. 1 shows a visual representation of the textual coherence between the discussed works, which enables conclusions to be drawn about the transmission dynamics of art technological knowledge, and applying the rhizome theory to art technological knowledge.

The most popular and well-known collection of art technological recipes in early modern Europe is found in the German *Kunstabüchlein* [art booklet]. The *Kunstabüchlein* are a group of initially four booklets or pamphlets that went

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210 The OED definition for decalomania is: 'a process or art of transferring pictures from a specially prepared paper to surfaces of glass, porcelain, etc., much in vogue about 1862'.

211 Deleuze and Guattari 2005, p. 25.



**Fig. 1:** Visual representation of rhizomatic connections

through more than twelve editions between 1531 and 1532. These booklets are printers' compilations with information that derives from a workshop environment, which will be further explored later in this chapter. The first *Kunstabuechlein* is named *Rechter Gebrauch d'Alchimei* [The proper use of alchemy] printed by

Christian Egenolff in 1531. The basis of this work is the alchemical treatise in manuscript by Petrus Kerzenmacher. The original manuscript has never been found, but in 1534 the entire Kerzenmacher treatise was published by Jacob Cammerlander, hence a comparison is possible and *Rechter Gebrauch* is found to indeed be based on Kerzenmacher's manuscript. The second *Kunstabüchlein* is entitled *Artliche Kunst* [Pretty skills], which was printed by three different printers in 1531: Simon Dunckel of Nuremberg, Peter Jordan of Mainz, and Melchior Sachs of Erfurt. This particular volume was reprinted until well into the 1540s. Its position was taken over in 1549 by Valentin Boltz's *Illuminierbuch* [Illuminating book]. The third booklet was *Allerley Mackel und Flecken aus [...] su bringen* [How to remove various stains and spots from clothing] which was firstly printed in 1532. It was printed by Sachs, Jordan, Meierpeck, and Kunigunde Hergot of Nuremberg. *Allerley Mackel* was focused on dyeing and the cleaning of fabrics. The fourth and last treatise was also published in 1532: *Von Stahel und Eysen* [On steel and iron]. This work on metallurgy was printed by Sachs, Jordan, and Hergot.<sup>212</sup>

During the initial phase of the *Kunstabüchlein* (1531–1533) printers focused on the four titles described above. A different rhizomatic offshoot was the creation of new works. New titles found their way to the printing press, but they were based on these four well established works. In 1532 three of the *Kunstabüchlein* were printed by Michael Blum of Leipzig under the title *Drei schooner kunstreicher Büchlein* [Three pretty booklets of ingenious skills]. And in 1535 all four *Kunstabüchlein* were printed under the title *Kunstabüchlein, gerechten grundlichen gebrauchte aller kunstbaren Werckleut* [The little book of skills, proper, basic practices for all skilled workmen]. The title was published by two different printers: Egenolff and Heinrig Steiner of Augsburg. The 1539 title *Mangmeistery* was printed by Jacob Cammerlander; the book title combines *Von Stahel und Eysen* and *Allerley Mackel*. Subsequently Cammerlander printed *Orthographia* by Fabian Frank, in which he included ink recipes from *Artliche Kunst*.<sup>213</sup>

The *Kunstabüchlein* were assembled not only in the German speaking area, they were taken up in a larger European context. In the English setting, recipes from *Kunstabüchlein* ended up in a famous English manual. Leonard Mascall translated and transferred recipes from the most common Dutch and German recipe traditions concerning dyeing and removing of spots. Mascall's *A Profitable booke declaring dyuers approoued remedies, to take out spottes and staines, in*

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212 Eamon 1994, pp. 114–119.

213 Eamon 1994, pp. 127–129.

*sillkes* was first published in 1583 and had other editions in 1588, 1596, and 1605. *A Profitable booke* is a translation and compilation of *Tbouck van wonder* and *Kunstbüchlein*.<sup>214</sup> Franco Brunello, a specialist in the history of dyeing, found that the first printed dye manual in Europe was the Flemish *Tbouck van wonder* from 1513, printed in Brussels by Thomas van der Noot (ca. 1475–ca. 1525). This volume contains 59 recipes for the dyeing of cloths, leather, and also paper and canvas. A second edition followed in 1544 by the Antwerp printer Symon Cock. This edition listed 59 recipes in the table of contents. Two of these recipes are different. Recipe no. 13 of the 1544 edition prescribes a yellow dye instead of sanguine dye. The last recipe, no. 59, is no longer another way to dye red, but it is a recipe to make iron as soft as copper. From here on there is a sequence of metallurgical recipes, followed by recipes for wine and vinegar. *Tbouck van wondre* of 1544 concludes with a treatise on plants, which is more of a general household manual.<sup>215</sup> Finally, a third edition appeared in 1551 presumably by the widow of the Antwerp printer Jacob van Liesveldt (ca. 1490–1545). Van Liesveldt was known for the printing of the first Netherlandish bible.<sup>216</sup>

The European spread of the German *Kunstbüchlein* was facilitated and stimulated by the contribution of the *Secreti* of Alessio Piemontese. How the *Kunstbüchlein* ended up in the *Secreti*, happened by multiple ways. Not all editions and translations of the *Secrets* are equal. There is a lot of interference of other works. For instance, the translation of the *Secrets* into English (1558), produced by William Warde, gained additions from *Allerley Mackel*, and the French *Les Secrets* published by Plantin in 1559 added material from a Dutch translation Simon Andriessen made of the *Kunstbüchlein* in 1549.<sup>217</sup> The *Secreti* were originally printed in Venice in 1555, and this volume became one of the most popular books of secrets of its time. It contained technical, medical, and cosmetic recipes. The scholar Ad Stijnman published a short-title bibliography on the subject and found that between its first print in 1555 and 1791, two hundred and sixty-four editions of the *Secreti* were published.<sup>218</sup> In the sixteenth century alone,

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214 The connection between *Tbouck van Wondre* and *A Profitable Booke* was already discussed in Driessen 1934.

215 The comparison is based on two twentieth-century reproductions of the texts: Braekman 1986; Frencken 1934.

216 He met his end, beheaded; because he printed Luther's comments with an overtly reforming tone. See Greenslade 1963, p. 123; Hermans 2009, p. 130. Unfortunately, we were unable to compare the third edition in person.

217 Eamon 1994, pp. 128–130.

218 This contains a possible double edition (no. 80–81) and a manuscript copy (no. 67).

one hundred and thirty-four editions of the *Secrets* were published. In the first five years there were already thirty-one editions made in Italian, French, Dutch, English, and Latin. The last of these thirty-one editions is the Latin version.<sup>219</sup> Christoffel Plantijn or Plantin (1514–1589) was the second printer of the *Secrets* and the first non-Italian printer to publish the *Secrets*, in French (1557) and later in Dutch (1558). Plantin opened his printing press in 1555; less than two years before his first publication of the *Secrets*. Plantin produced eight editions of the *Secrets*, both in Dutch and French. The English translation by William Warde ran to fourteen editions. Warde's and Plantin's translations and publications combined, then, account for twenty-two editions of the *Secrets* that include material from the *Kunstabüchlein*.<sup>220</sup> (These numbers are approximate, as they are based on surviving information.) Eamon's work focuses on the textual coherence of the works and he draws conclusions on science and popular culture in early modern Germany.<sup>221</sup>

The German side of the history of the *Secrets* is a particularly interesting case. We would argue that the history of the *Kunstabüchlein* interfered with the printing history of the German *Secrets*. The translation of the *Secrets* into German only appeared in 1569. Within five years of the *Secreti* being first published, the work has already been translated into French, Dutch, English, and Latin, and in 1563, three Spanish translations came out, among them the first in Catalan and Castilian.<sup>222</sup> The first German translation (no. 83) only came later in 1569, which is one year before the first Portuguese translation of the *Segredos* appeared (no. 88).<sup>223</sup> The first German translation did not stick to the original title, instead being translated as *Kunstabuch* [Art book]. In one instance the German *Secrets* would be translated into *Von den Secreten*, which is more faithful to the frequently appearing Italian title *De Secreti* (no. 85). But most of the German translations of the *Secreti* stick to the title *Kunstabuch* (nos. 83, 84, 91, 95, 111, 114, 127, 143, and 164). There is a clear correspondence in title between *Kunstabuch* [art book] and *Kunstabüchlein* [art booklet]. Here, we maintain that the success of the *Kunstabüchlein* was able to satisfy the German market for longer than in other

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219 The first Latin edition was a translation from an Italian edition. The first Italian edition was a translation of the Latin manuscript. The origin of the *Secreti* will be discussed in the second and third chapter of Part I.

220 Stijnman 2012.

221 Eamon 1994, pp. 121–126.

222 We will examine the possibility of an earlier Spanish edition during this and the following chapter.

223 Stijnman 2012.



countries. When the *Secrets* finally made their entrance, they assimilated a title that could be easily understood by the public. The concept of the *Kunstabüchlein* became widely known very early in its printing history. The contents of the *Kunstabüchlein* and the *Secrets* overlapped, because both contained art technological recipes of the same calibre. Adapting the title of *Secrets* to one that was commonly known guaranteed the success of the books.

This section has mapped out the publishing history of a possible story line or narrative for technical literature, starting and ending with the German *Kunstabüchlein*, and building on the case study of William Eamon. What Eamon did with a group of texts concerning the *Kunstabüchlein* was to draw conclusions on science and popular culture in early modern Germany and he extended this study to a wider European context and also to the wider phenomenon of the frequent appearance of technical literature in vernacular. Eamon refers to this period as the age of 'how-to'. As mentioned above, he focuses on textual interdependence. This argument is used to demonstrate that recipe books behave as rhizome. In other words, Eamon's case study connects to the rhizome model developed by Deleuze and Guattari.

This publication follows the narrative of Eamon considering the group of German and European vernacular recipes books. Other narratives would have been possible, precisely because these recipe books behave as rhizome. These recipe books are assemblages, they are printers' products, built out of other collections and compilations. There is always a connection to be found between the different recipe books. Recipe books can reproduce other recipe books, in a quite literal way. They can be a translation of another recipe book. They can take a selection of another recipe book or add another selection to a particular recipe book. This can all happen with or without the preservation of the original title. A title can be a connection or a break point. The heterogeneity of subjects and its change or mutation is equally a particularity of these recipe books. This section has shown one possible configuration of this landscape of numerous recipe books. This means that the transmission of art technological texts, and also practical knowledge, is complex and hard to pin down. The transmission patterns are complex, and the network of information flow is a rhizomatic one, meaning it is full of multiple decentralized connections.

## 2 The appearance of textual variations

The discussion above shows the textual interdependence between a group of early modern art technical sources. It is an account mainly relying on the level of publications and thus this could be described as the textual interdependence

on a macro level. In the current section, the micro level of the interdependence of texts will be discussed. Here, we are indebted to the study of Michelle DiMeo on authorship and medical networks<sup>224</sup> to demonstrate that the copying of texts operated under different to than those we adhere to under today's concept of copying. Our research results and findings concerning Wellcome MS 7113 regarding copying issues, translation, and oral transmission, will be considered and disseminated through the current publication.<sup>225</sup>

During the research phase, several theories about authorities emerged, some of which were based on misconceptions. One example, which will be further explored in the next chapter, is that of the two scholars Feuillet de Conches and Baschet. They published a work on *Les blondes femmes selon les peintres de l'école de Venise* (1865) arguing that textual overlap or textual coherence between two or more works indicates the same author for all works.<sup>226</sup> The outcome of their research on a group of recipe books remains influential today. However, in this study, we did not find the argument that textual overlap indicates a single author to be valid for practical knowledge. The early modern concept of making a book was different from ours. For instance, there was a different understanding of plagiarism. In fact, copying was a frequent and common practice among books for personal use and books for publication. Furthermore, the procedure of copying was itself very different from the ones we follow today.

Michelle DiMeo demonstrated that copying practices in seventeenth century England did not proceed according our conventions. She points out that two British Library recipe books from the Brockman family contain the same recipe to make cherry water.<sup>227</sup> Granddaughter Elisabeth copied this recipe from the recipe book of her grandmother Ann. What, by early modern standards would be considered the same, to our eyes, is still characterized by a lot of differences. Grandmother Ann generally writes numbers with full words and she uses punctuation, meanwhile granddaughter Elizabeth writes the numbers with numerals and uses almost no punctuation. Then there is a clear difference in the concluding expressions of the recipe. Ann wrote 'the virtue you shall find to be good', meanwhile Elizabeth wrote 'you shall find it to be good'. Clearly copying involves a good amount of personal elaboration. This coincides with the findings of Kari Anne Rand Schmidt who discussed the method of registration

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224 DiMeo 2013.

225 Leemans 2015.

226 Baschet and Feuillet de Conches 1865, pp. 102; 181–183.

227 DiMeo and Pennell 2013, pp. 25–46.

of recipes and collections of recipes for *The Index of Middle English Prose*. She notes that the repetition of individual recipes in different recipe collections is very rare. And if the repeated recipes are compared textually, they show considerable differences, alternating punctuation, vocabulary, and omitting or adding things.<sup>228</sup> Dimeo found that the copying of texts in the early modern world lead to textual variations.

The manuscript that illustrates the findings and reflections about textual variations best is MS 7113 of the Wellcome Library in London. This manuscript contains the title 'Booke of Receipts of Physickes, Salues, Waters, Cordials, Preserues and Cookery' and belongs to Mrs Fanshawe. It was Joseph Averie, the scribe who started this manuscript, who wrote and signed the title page in 1651. The manuscript was repeatedly supplemented until 1707 by the heirs of Mrs Fanshawe. Mrs Fanshawe is better known as Lady Ann Fanshawe (1625–1680), wife of the diplomat and translator Sir Richard Fanshawe (1608–1666). This English couple resided multiple times in the Iberian Peninsula.<sup>229</sup> This reality is reflected in the recipe book. The collection of recipes shows the European itinerary of the couple haphazardly. In terms of recipes a split can be made between English and foreign recipes. The English recipes are mainly kitchen and medical recipes. The foreign recipes appear in translation and in the original language. Among this group, there are several Mediterranean recipes; they are spread all over the manuscript and they mainly concern perfumes. This is the group of recipes of interest to the study of transmission. These are several recipes of Spanish origin, all translated into English, and one Portuguese recipe that appears in original and translated version.

The Spanish knowledge that one can find in this manuscript is almost entirely related to perfumes. Most of the perfumes are amber based and often have purposes other than perfuming the human skin: we find the perfuming of gloves, the perfuming of leather, pastilles to burn, etc. The group of recipes of Spanish origin appears twice in the manuscript. First, they appear as stand-alone recipes near other recipes for waters and powders. Then, they appear for a second time as a group in a little booklet stitched into the manuscript. They were selected and copied in the same order of appearance as in the manuscript. Here the copying of recipes has the function of gathering a selection of recipes that originally appear throughout the whole of the manuscript. This can be explained

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228 Rand Schmidt 1994, pp. 425–427.

229 The recipe book was started at return of the stay in Spain between February 1650 and 1651.

by the material support of an originally separate booklet. So, this precise group of recipes appears twice in MS 7113. What is significant is the fact that recipes were gathered and re-written again in a very neat handwriting and were given an additional space on separate leaves. The copying of the recipes happened in a literal way: word for word. Here, it is argued that the personal elaboration of a text had already happened in the first stage. Thus, the second stage of copying the recipes in the same document did not need any further textual elaboration. In the manuscript itself, the recipes appear in a more arbitrary way, meanwhile in the copied quire the section of recipes appears to be ordered. Literal copying served a purpose. In DiMeo's study it becomes clear that copying for personal use was not strictly literal and changed according to personalized elaborations. Here, the case study shows an example of literal copying. Here is argued that the second literally copied group of perfume recipes had a representative function. These recipes appear in a neat handwriting in a separate booklet. Most likely, this booklet was meant to be shown to people. It ended up stitched to the whole manuscript probably at the time of later generations, to prevent it becoming lost.

This particular set of recipes provides us with plenty of information about the Anglo-Iberian context in which knowledge transmission took place. The recipes register the place, time, and people involved. We know that the transmission of knowledge about perfumes took place in Madrid between 1656 and 1665. There is even a specific place indicated: *Casa de las Siete Chimeneas*, which was the ambassadorial house of the couple. This is the very place where the 1665 peace treaty between England and Spain was signed and also the place where Richard Fanshawe died in 1666.<sup>230</sup> The person from whom the recipes came was Francisco Morenas. He was, at times, accompanied or even replaced by his cousin, who was also his assistant. Morenas or Moreno and his assistant performed demonstrations of how to make the perfumes. Often, expert knowledge had to be demonstrated in order to be fully comprehended. Wellcome MS 7113 offers this very fortuitous reference to this probably more widely used practice. The study of the Spanish recipes in Wellcome MS 7113 shows that knowledge was transmitted orally through demonstrations. It also shows that the copying of recipes could have another function beyond merely transferring knowledge.

A different case in Wellcome MS 7113 is the Portuguese recipe. One of the pearls of Wellcome MS 7113 is the recipe for *pão de ló*. The recipe appears around the middle of the manuscript, not too far from the two groups of Spanish recipes. *Pão de ló* is a Portuguese sweet cake which is still eaten today. It is a fluffy and light

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230 Davidson 2004.

cake made of eggs, sugar, and flour. Early modern visual representations of *Pão de ló* are known by the seventeenth-century Portuguese still-life painter Josefa de Obidos. A Portuguese dictionary of synonyms registers that the word *bate* would indicate the same as *Pão de ló*.<sup>231</sup> *Bate* presumably comes from the verb *bater* which means to beat, to hit, or to batter. This refers directly to the main preparation technique. The recipe of Wellcome MS 7113 prescribes whisking twenty eggs, one pound of sugar, and one pound of flour for ‘the space of an hour or five quarters’. After this action of a continuous rapid sweeping motion the dough is put into a baking basin that is clothed with paper after which it is baked in the oven. Certainly, the history of *pão de ló* has yet to be written: from preliminary research it seems that the cake and the term did not always go together in history. The fifteenth century MS I-E-33 at the National Library of Naples contains a recipe for *pão de ló*, although it misses two of the basic ingredients: eggs and flour.<sup>232</sup> The basic ingredients of this *pão de ló* are sugar and almonds and it is not baked in the oven but prepared over a fire. Not quite the *pão de ló* Ann Fanshawe was interested in. The Naples variant corresponds to one of the recipes for *pão de ló* in *Arte de Cozinha*, the first Portuguese recipe book put into print, in the 1680s. Here the recipe is called *pão de ló de amendoas*. The same printed recipe book has a similar *pão de ló* that is baked in the oven with a base of sugar, flour, and eggs; and named it *pão de ló fofo*, or a fluffy *pão de ló*. Different recipes, names, and concepts of *pão de ló* were present at different moments in history. The concept of *pão de ló* is not consistent throughout history, and neither are its recipes.

Wellcome MS 7113 certainly deserves its place among the highlights of the history of this sweet. It indicates foreign interest in European transmission of Portuguese kitchen wisdom. And this becomes relevant for the topic of transmission. The recipe appears twice, but the repetition has a different function than the Spanish recipes. First the English translation appears and then the Portuguese original. The translation seems to be quite accurate apart from one curiosity. The original recipe is constructed using the common form to address its public, through the imperative: ‘*Premeiram se tomao vinte ovos*’ [First you take twenty eggs]. The English translation does not follow this international accepted form and translates it as ‘First they take twenty eggs’. One can eliminate the idea that the person translating has no experience with recipes or with

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231 Another synonym for *pão de ló* would be *pão leve*: Lopes 1977, p. 817.f.

232 A facsimile and transcription of MS I-E-33 is found in Gomes Filho 1963; for the recipes of *pão de llo* see Gomes Filho 1963, pp. 132–135.

translating, because along the way other imperatives come up and they are translated as intended. What is argued here is that consciously or unconsciously the person translating did take a position: that of an outsider. He or she translated the recipe as described how the Portuguese make *pão de ló*. So, the recipe was not only taken up in the collection for further practical reproduction. It was written down to register what the sweet was and how the Portuguese or ‘the other group’ would produce it. This is strengthened by the fact that its original Portuguese recipe is written down as well. Note that in Wellcome MS 7113 the Portuguese recipe is the only recipe of foreign origin appearing in the original language. The conclusions of DiMeo also apply here. The translation comes with a certain degree of elaboration, that of taking the position of an outsider, resulting in an alteration in the text.

This recipe certainly does not escape one’s attention as it contains two different languages, two different scripts, two different uses of the imperative, and two different means of transmission. The conclusion here, is that there are a lot of questions around *pão de ló*.<sup>233</sup> Whatever the historical succession of events for this recipe, it involved several people. Which brings us to Elaine Leong’s theory that families collaborate and construct a manuscript in several stages. Important for the argument here, is that the presumably English person who wrote down the translation took an unusual point of view for a recipe. The writer, who might also have been the translator, included in the translation a particular perception of the Portuguese, that of a different people. Earlier on, this part discussed that the simple action of copying a text can easily lead to the creation of textual variants. The early modern concept of copying did not necessarily imply a literal transcription of every single word in the same sequence. Here, it is concluded that translating and dictating are also responsible for textual variants in instructions, recipes, and practical knowledge. Textual variants are texts that contain a significant textual overlap. In the rhizome metaphor, every textual variant is a new offshoot of the root. They are similar but not the same and the offshoot can start growing in whichever way, at whichever time, and at whichever place.

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233 Many questions remain. For instance, who translated the text? Was it Richard, husband of Ann Fanshawe and translator of Camoes’ *Lusiads* (1652)? A minor error reveals that the Portuguese version was written by a non-native speaker. The recipe talks about the paper in female terms ‘a papel’, rather than in masculine terms ‘o papel’. This would mean that it was copied from a textual source where the ‘o’ was misread as an ‘a’, which is an acceptable mistake for a non-native speaker.

### 3 Contextualizing knowledge transmission: from origin to wider circulation

The previous section addressed the theory of practical knowledge transmission, applying the rhizome metaphor and using specific example of transmission in the textual transmission of art technical knowledge, the *Kunstbüchlein*. This macro study shows that practical knowledge expanded across the European continent. Through a micro study of textual variants, light is shed upon one concrete aspect of transmission. One of the examples used was the fascinating recipe book of Lady Ann Fanshawe. The appearance of Portuguese and Spanish recipes is quite normal as the continental transmission of recipes suggests. But in this particular case one can see how the practical living conditions facilitate knowledge transfers. The Fanshawe couple had an ambassadorial function in the Iberian Peninsula. This means that it was not the recipes that travelled, but the people or users. This section will provide two examples that contextualize the processes of knowledge transmission. Inherent to the process of knowledge transmission is the production of new knowledge. The writing down of knowledge includes minor or major changes, which leads to the production of new knowledge.

Here, it is argued that practical knowledge found its origin in specialized and adapted practical environments. Steven Shapin stated that 'knowledge [...] does not stand outside of practical activity: it is made and sustained through situated practical activity'.<sup>234</sup> With this in mind, two case studies about the concrete circumstances of practical knowledge transmission are developed. Their focus lies on 1) the professional work environment of artists, more precisely the painter's studio, and 2) on secret academies with laboratories.

The professional environment was a nucleus where practical knowledge was actually applied and where textual sources of practical knowledge were created. These texts sometimes left the work environment and went into wider circulation. This is how such texts fell into the hands of professional collectors who had publishing intentions. Thus, originally professional knowledge came (at a later stage) to be printed. The two cases studies, of the workshop and the academy, show similar contexts for transmission.

My conclusions on the concrete context of practical knowledge transmission are based on two literary works: a dialogue and an introduction to a printed recipe book. Both texts are literary products, meaning they are fictions. However,

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234 Shapin 1994, p. xix.

both cases reflect an early modern reality that was created with the purpose of resembling a realistic situation.

### 3.1 Knowledge transmission in the professional environment of a painter's workshop

This section analyses the artists' workshop as a professional environment where practical knowledge transfer was an organized procedure. The situation of the artist's workshop serves as an example of how practical knowledge circulated and was disseminated in a professional environment. The concept of rhizomatic transmission persisted even in a highly organized professional environment. As will be seen, the transmission of knowledge was based on the learning process of the apprentice, who received a manual from the leading artist. The manual contained a collection of relevant recipes. The application of practical knowledge was the prime reason for the existence of a workshop. For instance, a painter who had to paint an altarpiece needed a space to carry out the work.

The reason practical knowledge was transmitted in workshops was to fulfil the purpose of the workshops, and also to ensure the durability of the activity. An efficient and large-scale workshop had several people in service; sometimes the children or relatives of the artist.<sup>235</sup> Each of the individuals working within this workshop needed to know the rules of the art. To guarantee the survival of a workshop, practical knowledge would have to be passed on to employees and future generations of artists. It is assumed that a significant part of specialized education in the early modern workshop would have happened through demonstration and oral transmission. However, there are textual indications that shed light on textual transmission as a valid option for transferring knowledge from master to students in a workshop. Here, it is argued that within a professional environment, specialist knowledge circulated not only orally and through demonstration, but also textually.

The literary source *Modo da tener nel dipingere* (undated) of Giovanni Battista Volpato (1633–1706) will be used to demonstrate the textual modalities of transmitting practical knowledge in the workshop. The Volpato text is a fictional dialogue. However, dialogues may serve educational purposes, as can be seen in one of Desiderius Erasmus' best-known works the *Colloquies*. The first printed

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235 In the medieval and early modern period, artist's workshops ran as family businesses. Workshop efficiency is often associated with large numbers of pupils. Michelangelo is considered atypical by Hicks because he did not often work with studio assistants. See Rubens 2015; Hicks 2015.



edition of 1518 is known as *Familiarium colloquiorum formulae*, but other, later and enlarged editions followed. Their purpose was to teach schoolboys good Latin, and as mentioned, the literary form of the dialogue was used.<sup>236</sup> The Volpato dialogue portrays a spoken conversation between two apprentices, the younger of whom, named Silvius, has close to no experience and the older one has mastered the mechanical parts of painting. Silvius asks his elder to teach him ‘the mode of preparing canvas, colours, and those things which pertain to the business in which I [Silvius] am engaged, as I [Silvius] have had little practice in such things.’<sup>237</sup> This indicates that one needs practice in order to learn. The dialogue develops into a conversation where knowledge is being transmitted.

Textually speaking, it looks like it incorporates recipes from a recipe book. The style of the following answer to a question on how to wash paintings seems to be taken straight out of a recipe book: ‘Take some ashes, which have been sifted very fine that there may not be any pieces of charcoal or any large substances which may scratch the picture; put them into a small pipkin with pure water, and with a sponge spread them all over the painting, and clean it by moving about the sponge gently, then wash it off quickly with pure water, because the ashes corrode the color. Afterwards wash it well with clear water, dry it with a linen cloth, and then varnish it with white of egg.’ This particular recipe is criticized by the elder apprentice, because washing paintings damages the last refining layers of a painting and therefore also affects the final quality. The dialogue has a clear didactic purpose. It contextualizes practical knowledge in the artists’ workshop.

This dialogue contextualizes concrete sources and their accessibility. The advice Silvius’ elder gives is based on the work procedures of known painters, such as Bassano, who was one of the actual masters of Volpato, the dialogue’s author. The apprentice names his sources and gives insights on how to get further content from these sources. This particular part of the dialogue opens with a question from Silvius and is answered by the older apprentice:

S: How are varnishes made?

F: Varnishes are of different kinds, some we make ourselves, some we buy, like the thick varnish, that of amber we buy, but mastic varnish I make myself.

S: So tell me how do you make it?

F: I take pulverized white mastic, and put it into a recipient<sup>238</sup> with spirit or turpentine, or naphtha, in such quantities that the spirit of turpentine may rise two-thirds

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236 Rummel 1990, p. 239.

237 Translation taken from Merrifield 1999 [1849], p. 726.

238 The original text says *ampola*. According to Treccani *ampolla* is a recipient of glass, but it can also appear in earth ware or metal. Merrifield translates *ampola* with *pipkin*,

above the mastic in the recipient. I set the recipient over the fire, and boil it until the mastic is perfectly dissolved, and sometimes add to it a little *olio d'abbezzo*. This serves for varnishing finished pictures, but if you wish to see diverse modes of preparing varnishes, consult Armenio da Faenza and Rafael Borghini, who teach all things pertaining to our trade, and how to make other kinds of varnishes, as well as the proper mode of using them.

S: I don't have these books, nor can I see them.

F: Borrow them, and write down what you wish to know on this subject; perhaps your master may have the works, and then you may use them, because as they wrote of other things appertaining to painters, if your master studies painting, he will most certainly have them.<sup>239</sup>

The narrative around the recipes brings the recipes and their application into context. The dialogue transforms this recipe's heading into a question by the younger apprentice: 'How are varnishes made?'. The elder apprentice replies that there are different varnishes, of which some are made by himself and some are bought. This kind of information would generally be missing from a recipe book. Here, the dialogue contextualizes the topic of varnishes.

What the elder apprentice adds after the recipe is of major importance for understanding the transmission of practical knowledge in a professional workshop environment. From this excerpt one can deduce that textual sources were used in the workshop and that the transmission of textual knowledge was a fact. First the elder gives information about which sources are used. These are 'Armenio da Faenza and Rafael Borghini'. Armenio da Faenza today is commonly known as Armenini (1525–1609). He was a painter, copyist, writer, and priest. He published but one work entitled *De' veri precetti della pittura* (1587). This is the work the elder apprentice refers to. Armenini's work is not exactly a recipe book. The work contains three books, which expound the basics of the painting trade and iconography. It is quite possible he had the second edition of 1678 in mind.<sup>240</sup> The second work mentioned by the apprentice is *Il riposo* (1584) by Raffaello Borghini (1537–1588), which has painting and sculpture as its subject. This work discusses the main topics of both arts and teaches the basics. These

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which according to the OED is a small pot or pan, usually of earth ware. We preferred to replace *pipkin* with the more generalizing term recipient. Cf. OED; Treccani.

239 Merrifield 1999 [1849], pp. 742–743. Translation ours, but based on Merrifield's translation.

240 This could help in the further determining of the production date of the Volpato's dialogue. Merrifield determines it should be written at least after the work of Lana. Cf. Merrifield 1999 [1849], p. 722.

two important 16th century treatises concerning painting are part of the canon of textual sources about practical knowledge.

Volpato's dialogue contains additional information relevant for the transmission of practical knowledge. A bit further on in the dialogue, the younger apprentice asks the elder if he is the one who prepares the painter's palette. As this is among the apprentice's responsibilities, the elder apprentice gives an account:

S: I pray, tell me, do you set your master's palette?

F: Certainly; I also distemper all the powder colours, and it is sufficient for him to tell me what he wants to paint, for I know what colours I ought to put on the palette; I wash the sketches, I oil them, I varnish them, and yet to some I apply the white of egg according to his orders; and then he has given me in writing full instructions in the distemping of the colours that I may know what to do, and his directions exactly correspond with those of Armenino da Faenza, and this you also may write them out, for besides this he teaches the whole process. Father Lana also, a Jesuit, has treated of this matter in his discourse on painting.<sup>241</sup>

In this excerpt the apprentice communicates that his master gave him, most presumably, a handwritten<sup>242</sup> document with all the information he needed to know about colors. Furthermore, there seems to be a textual overlap between the text of his master Bassano and the text of Armenini. This means that Bassano's text was adapted to the practical working conditions of his workshop. In this way the elder apprentice could directly apply it. The recipe and procedures were partially taken from Armenini, but probably also from other sources such as the Jesuit Francesco Lana (1631–1687), who wrote *Prodromo ovvero saggio di alcuna invenzioni nuove* (1670), a book about inventions. There is a possibility Bassano's collection of recipes and procedures contained procedures that came out of proper experimenting, but this will be discussed in the next section on academies. One can deduce from the dialogue that, in a professional environment, a master possessed printed and handwritten books containing practical knowledge. The master lent printed copies for proper research to his students and presumably provided students with selections of recipes and procedures adapted to the workshop tasks. Students received printed works to be copied from and they received specific handwritten guides. Handwritten texts in the professional environment thus contained specific and useful fragments from different works. This situation corresponds in some ways to the recipe books of non-specialists. Both

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241 Merrifield 1999 [1849], pp. 746–747. Translation ours, but based on Merrifield's translation.

242 The original text says *in scritto*; Merrifield 1999 [1849], p. 747.

are marked by a fragmentary character, precisely because these writings grew and developed through the copying of selected material.

Volpato's dialogue contains a lot of information about the practical side of workshop practices and knowledge transmission. The difference between his book and a standard recipe book is that Volpato's text gives insights into the context wherein recipes were used and how the recipes were transmitted. This leads us to conclude that in the specialist environment of the painter's workshop, knowledge was transmitted through oral, demonstrational, and textual means. Among the textual sources there might have been both printed and handwritten sources. The dialogue, in particular, gives insights into the transmission patterns and fragmentary character of handwritten recipe books in the workshop. In addition to being a workspace physically adapted for an artist, it was also a hierarchic enterprise and a training center for a new generation of artists.

This dialogue offers contextual insights into textual transmission in the painter's workshop. This fragment from the dialogue not only teaches us that textual sources were used alongside oral and visual methods for transmitting knowledge, it also tells us which textual sources were used, and still more about how they were used. The apprentice tells his younger colleague to borrow written works and copy what is of specific use. The transmission occurs through the borrowing of works. In this case, textual transmission is based on interpersonal contacts and professional networks. On top of this, the reader receives information about transmission dynamics. We can deduce that borrowed texts were copied. Only the useful parts or parts of interest were copied. This means that practical knowledge first went through a process of selection before it was copied. Volpato's dialogue shows that the selective copying of textual sources containing practical knowledge was customary in the professional environment of the painter.

### **3.2 Practical knowledge, laboratories, and secret societies**

The first case study of knowledge transmission in a professional environment concerned the artist's studio. A case study will now be presented of knowledge transmission in another environment where practical knowledge was put into practice: the laboratory. The posthumous *Secreti nuovi di maravigliosa virtu* (1567) by Girolamo Ruscelli offers an interesting insight into the specifics of the organization, operation, and materiality of a secret society and its functions. The text suggests that the secret society contains a laboratory where all recipes are to verify their veracity.

Ruscelli is mostly known as the author behind the books of secrets of the more famous Alessio Piemonese.<sup>243</sup> Ruscelli is also known for founding the *Accademia dello Sdegno* [Academy of Disdain] in Rome. The *Secreti nuovi* gives a lengthy proem about the functioning of his Neapolitan ‘academia filosofica [...] che fusse e si chiamasse secreta’ [the philosophical academy that would remain and would be named secret].<sup>244</sup> According to Eamon and Paheau’s calculations, the academy would have been founded around 1542.<sup>245</sup> An academy with this precise name, *Accademia Secreta*, does not appear in the British Library Database of Italian Academies, nor is it discussed in the authoritative work on Italian academies by Michele Maylender.<sup>246</sup> The Database of Italian Academies of the British Library does list Girolamo Ruscelli in a Neapolitan academy, named *Accademia Martiraniana* that was active between the 1530s and 1555 with the following members: Cosmo and Giano Anisio, Scipione Capece, Bernardino Martirano, Agostino Nifo, Bernardino Rota and Girolamo Ruscelli.<sup>247</sup> But this was a literary academy; not interested in the study of natural philosophy or practical knowledge in any way.<sup>248</sup> The existence of the society is one of the mysterious veils hanging over this case.<sup>249</sup>

Eamon and Paheau raised questions about whether the society really existed but they did not reach a definitive conclusion. The society could have been an actual operating body, but it could also have been an imaginary society and the fruit of Ruscelli’s literary pen. If it was a fake, the society might have been fabricated to claim authority over Alessio Piemontese’s secrets, which Ruscelli edited.<sup>250</sup> It is quite possible that the academy was, in fact, a product of Ruscelli’s literary imagination, as, after stating its working method, he declares that he sends the chosen secrets to the printer. Whether real or not, the description of the procedures dealing with practical knowledge and the space in which this occurred, are certainly of great value. If the society belongs to the realm of fantasy, it still represents an ideal image of a knowledge-producing entity. Eamon

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243 For problems about attribution of Alessio Piemontese’s writings, cf. Chapter 3 of Part I of this publication.

244 Ruscelli 1567, fol. 1r.

245 Eamon and Paheau 1984, p. 329.

246 We refer to Maylender and Rava 1926–1930.

247 <http://www.bl.uk/catalogues/ItalianAcademies/>.

248 Maylender and Rava 1926–1930, IV, pp. 20–21.

249 Worth investigating is the idea that the *Accademia Secreta* is possibly the *Accademia Martiraniana*.

250 Eamon and Paheau 1984, p. 336.

and Paheau point out the possibility that this could have been a utopian society.<sup>251</sup> The interest in this fictitious text lies in the fact that it was probably created to sustain the credibility of the recipe book.

Ruscelli's *Secreti nuovi* contains two parts: a prelude and a recipe book. The more interesting part here is the prelude, which contains a lengthy description about the space where the secret society met and performed their daily activities. Unfortunately, there is no concrete information about the requirements for a laboratory. The description of the space housing the laboratory is focused on the structure of the building and its beautifying elements. Another part of the description deals with the composition and conduct of the members, the financial situation and the rules of secrecy.

Even though the account may be based on fictitious facts, it is undoubtedly still useful for understanding the transmission patterns and procedures of the *Accademia Secreta*, given what is known about similar institutions and their ways. The principal purpose of the *Accademia Secreta* was the study of the 'true anatomy of the things and operations of nature'.<sup>252</sup> Their intention was to educate themselves, adding that disciplines such as medicine were greatly helped by *l'arte*, in the precise sense of the OED definition of art: 'skill in doing something, esp. as the result of knowledge or practice'.<sup>253</sup> They were first and foremost interested in 'all kinds of secrets for all sorts of people, whether they be rich, & poor, learned, & uncultivated, & man, & woman, young or old'.<sup>254</sup> The secrets they could find primarily came from textual sources: 'from printed books or old and new manuscripts'.<sup>255</sup> There was a clear order and method in dealing with experiments: they were all repeated three times to check their truthfulness.<sup>256</sup> The collecting of writings with practical knowledge and the repeating of the procedures stood at the core of the functioning of the *Accademia Secreta*. It is interesting that there seems to be only one mode of collecting of practical knowledge, and this is through writings. The next chapter will expand on other methods of practical knowledge acquisition, such as the oral acquisition of knowledge, which seems to be absent here. The *Secreti nuovi* of Ruscelli,

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251 Eamon and Paheau link it to the work of Frank and Fritzie Manuel about *Utopian Thought in the Western World* (1979). This work offers plenty of case studies of utopian topoi in early modern (and later) literature. See Manuel and Manuel 1979.

252 Ruscelli 1567, fol. 3v. (English translation from Eamon and Paheau 1984).

253 OED.

254 Ruscelli 1567, fol. 3v. (English translation from Eamon and Paheau 1984).

255 Ruscelli 1567, fol. 3v. (English translation from Eamon and Paheau 1984).

256 Ruscelli 1567, fol. 3v.

which borrows secrets that had passed through the *Accademia Secreta*, is tententially a work based on a textual tradition of practical knowledge. One of the works Ruscelli copies from is Isabella Cortese's *Secreti* (1561) which is also based primarily on other textual sources. This contributes to the idea that practical knowledge survives in multiple ways. In this example one sees that once practical knowledge enters into textual circulation, it can remain in circulation through copying. In the case of Cortese, the author presumably took some fragments out of manuscripts and printed them, and these were later copied by Ruscelli and put into print again. The same fragments were put into print many times through Cortese's book.<sup>257</sup> The study of Ruscelli's *Nuovi secreti* shows a literary way of collecting recipes alongside the textual circulation of practical knowledge.

Paracelsus proclaimed that 'experience was the crucial link in obtaining knowledge.'<sup>258</sup> The *Accademia Secreta* was the institution that guaranteed the utility of the recipes in the publications of both Alessio Piemontese and Girolamo Ruscelli. The legitimation of its judgement lay in its system of testing and re-enacting the recipes. It states that they would repeat recipes three times: 'in doing such experiments we adopt an order and method, one better than which cannot be found or imagined, as will be recounted next. Of all those secrets which we found to be true by doing three experiments on each in the manner that will be described.'<sup>259</sup> We would add a sceptical note to this practice, which is that it contravened the society's secrecy policy. The practical side of their rule to test every recipe three times was unsustainable. One wonders how the antidote for the poison and Black Death for pope Clement VII was re-enacted. Or, for that matter, how did they deal with the broad selection of medical cures? Did they invite sick people to their secret location for treatment, or did they go out to the streets to treat people? There are one thousand and twenty-four medical recipes in *Secreti nuovi*.<sup>260</sup> This means that the secret society would have needed at least three-thousand and seventy-two subjects to be cured. Here, it is argued that involving enormous numbers of individuals would make the secret society more of a known society, which would go against its founding principles. The prerequisite of testing might have been adopted as a measure to enhance the credibility of the book as truth.

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257 For more on this topic and concrete references, see Chapter 3 of Part I.

258 Quotation from Smith 2008, p. 289.

259 Ruscelli 1567, fol. 3v. (English translation from Eamon and Paheau 1984).

260 For a breakdown of recipes, cf. Eamon and Paheau 1984, pp. 335–336.

The statement about experimenting and re-enacting recipes can also be criticised through a textual and book historical study, which is developed more fully in the third chapter. Ruscelli's introduction contains crucial information about his sources. Ruscelli and his co-members of the secret society used exclusively textual sources. Ruscelli literally copies parts of books entirely. As will be pointed out in the third chapter of Part I, he copied the entire first chapter of the first edition of Isabella Cortese's *Secreti* (1561), including the ending formula of the first chapter. Cortese's ending formula is not found in the same place in Ruscelli's work, as he only ends his first chapter much later. This is an obvious sign of blind copying, and blind copying does not involve much substantial interaction with the recipes. The testing and selecting of recipes and on the basis of their truthfulness would imply a selection of the examined materials, and this is not found in the *Secreti nuovi*. Based on the textual study, we must conclude that it is unlikely that the testing claimed in the introduction actually took place.

During the sixteenth century in different places on Italian soil, secret scientific societies entered the scene of the study of nature. These societies were called *accademie* or academies. Many of them had their interest invested in natural philosophy, such as the *Accademia Secreta* in Naples in the 1540s. Girolamo Ruscelli claimed to be a member of this secret society. His description may well be a literary product, rather than a faithful account of an actual society. Even if it is truly a fictional product, it is still useful for this argument because it reflects a certain credible ideal. Its description of procedures is important for understanding how people thought about experimenting and finding the truth. Furthermore, the account is of use because it talks about its sources, which appear to be exclusively textual.

## 4 Conclusion

The second chapter of Part I of this publication has dealt with practical knowledge transmission. Three approaches were used to discuss this subject. 1) The first pillar was the building of a theoretical framework through the metaphor of rhizome, developed by Gilles Deleuze and Félix Guattari for the first time in 1976. 2) The second pillar demonstrated the application of the theory, through a textual study of transmission patterns. First, the macro level of transmission dynamics was discussed through the example of the German *Kunstabchlein* and their spread across Europe. Second, the micro level of textual transmission was discussed through the study of how textual variants come to life, for instance through copying, oral transmission and translation. 3) The third pillar was the contextualization of practical knowledge transmission. Here, two typical sites of



practical knowledge, the artist's studio and the secret academy, brought to light various patterns of knowledge transmission. For professional work environments such as the painter's workshop or studio, one can see that there is a multifunctional pattern for disseminating practical knowledge. In the case of the workshop, one can easily rely on Bouza's 'communicative trinity' scheme, because oral, visual, and written communication are all a significant part of effective and purposeful knowledge transmission. The case of the *Secreti nuovi* and the literary construction of a secret academy, reveals a pattern of textual transmission. In the case of the artist's studio, necessary knowledge was selected from other sources and written down. This is how highly fragmented manuscripts came into circulation, which later might enter printed circulation. In the case of textual circulation, it should be stressed that, while the selection just discussed shows textual dissemination, there was also practice involving initiators or mediators of knowledge who wrote down the recipes, and individual users on the home front who bought the recipe books. It is unlikely that there was actually a secret society as described that tested recipes according to rigid procedures. Practical knowledge behaves like a rhizome root. With practical knowledge we are dealing with both a fixed set of returning recipes and a multitude of changing recipes that appear in various sequences and selections. Following one channel or web of recipes is a way of researching practical knowledge. Both the multiform and single modes of dissemination share the dynamics inherent to rhizome growth, and to the transmission of practical knowledge.



### 3 The early modern users of practical knowledge: mediating the information flux

**Abstract:** In this chapter the key functions of knowledge producers and users are delineated. The discussed categories are gatekeepers, mediators, and professors of secrets. The key figures in this chapter are Isabella Cortese, Alessio Piemontese, Girolamo Ruscelli, Leonardo Fioravanti, and Sir Hugh Plat.

**Keywords:** Professori de' Secreti, Cortese, Piemontese, Ruscelli, Fioravanti, Plat

*[...] the physician [...] hath no particular acts demonstrative of his ability, but is judged most by the event, which is ever but as it is taken: for who can tell, if a patient die or recover, or if a state be preserved or ruined, whether it be art or accident?*

Francis Bacon, 1605<sup>261</sup>

#### 1 Introduction

The current chapter will build on the previous two; the first chapter explored the nature of practical knowledge; the second chapter studied the transmission of practical knowledge through textual witnesses. This third chapter will study the users of practical knowledge, more precisely, the category of users who are responsible for the transmission of practical knowledge. This research aims to answer the following research questions: Who dealt with practical knowledge? What were the key roles in the transmission process? Who dominated the flux of practical information? Who were the mediators in the transmission process? What was the profile of the mediators? What was the position of mediators in the transmission process? Are there any interesting instances of identity? Are there relevant secrecy topoi in the literature the consumers and mediators produced?

The transmission of ideas and knowledge, whether orally or textually, is a human interaction. The people involved are here considered as users or consumers, and these terms will be used interchangeably. Virtually all people were users, because everybody, irrespective of their level of literacy, age, gender,

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261 Bacon 1605, fol. 39v. Put into current English.

or class, dealt with instructions and recipes. Although everybody was a consumer, not everybody was responsible for the dissemination of the practical knowledge they used. Users of practical knowledge can be narrowed down into categories. Among the group of users, there are people responsible for the dissemination. This group can be further divided into subcategories. The two subcategories of interest are gatekeepers and mediators. The category of gatekeepers is described by Karel Davids and is relevant for this publication because it is comprised that gatekeepers are individuals with the function of knowledge provider in the early modern society.<sup>262</sup> Those in this category may have written down their knowledge in manuscripts, but they are mainly active in one-to-one relationships. Think, for instance, of the wise women in a village where random people had access to information about herbs and health.

Distinct from gatekeepers, are the mediators of practical knowledge, a terminology that is developed within the boundaries of this publication. The subgroup of mediators was responsible for most of the wide dissemination of practical knowledge. Mediators collected practical knowledge and spread it through print. Through this medium they reached a larger group of users, who mostly remained anonymous to them. Although both of them provided and managed practical knowledge, the mediators significantly boosted dissemination. The gatekeepers worked on a more personal level with their public. The level of dissemination and involvement with the public was different in both cases. The profile of both practical knowledge providers will be explored subsequently.

We maintain that practical knowledge mediators did not necessarily possess inherent or personal knowledge about the subject matter of the practical knowledge they disseminated. Mediators purposefully collected knowledge. This group can be further subdivided into two categories. Some of the mediators were professional writers who wrote for a living. The members of this group are referred to as literary mediators. In their case, the knowledge gathering was intended to be economically profitable. Often, writers of recipe books are mistaken for specialists in the area. The results of the current chapter add nuance to the commonly held view that writers of recipe books were specialist-authors. An exemplary case is the disputed authorship of Isabella Cortese's *Secreti* on which, despite a long-running debate, no consensus has yet been reached. Various scholars have taken into consideration the supposed alchemical specialization and long years of experience of Isabella Cortese, who is presented as the writer of the *Secreti*. This book will argue for a completely different hypothesis. The author

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262 Davids 2012.

or writer, whether called Isabella Cortese or not, does not claim to be a specialist in alchemy. To the contrary, the author acknowledges his or her source: the work of a certain abbot Chirico. It is this abbot who claimed to be a specialist. The historiography and critical reading of the *Secreti* by Isabella Cortese will be part of this chapter.

In this chapter, several issues of complex authorship are addressed through the critical reading of books of secrets. Often answers lie hidden within the books themselves but have been overlooked because of prevailing theories. This chapter contains substantial original research. In the case of Isabella Cortese, it investigates Cortese's *Secreti* along with Vannoccio Biringuccio's *Pirotechnia*. Cortese's *Secreti* have often been treated dismissively, as if the claims made in the book are all fraudulent. In this case, a concrete profile of the writer cannot be reconstructed based on the contents of the book. The book faithfully acknowledges its sources and therefore the conclusion emerges that many of the instances in contemporary studies are decontextualized, because they are taken as being the writer's voice rather than the voice of other literary producers. Equally, in the case of the *Pirotechnia*, it has been decontextualized in order to serve a hypothesis. This chapter addresses various issues that historiography has raised, and offers a new reading of the sources.

The second subcategory of mediators of practical knowledge contains practitioners, referred to as mediating practitioners. In some cases, practitioners decided to publish their findings, in other cases collectors of knowledge decided to interact and experiment with the practical knowledge they had found. Two cases will be examined: Leonardo Fioravanti and Hugh Plat. Both were medical practitioners, but encountered different cultural climates while exercising medicine. Fioravanti, who had a degree, was accused and jailed more than once, while Plat operated without a degree and never met institutional headwind.

The current chapter not only builds on the previous one, it actually complements it. Each chapter examines a different point of view of the reality that recipe books are compilations; they are composed. Most recipe books contain information that comes from different sources. Among the information included, there is often specialist information. Specialist knowledge in common recipe books is a strong indication that these recipe books are compilations. Specialist knowledge comes from specialist environments. At a certain point in time, this specialist knowledge can leave the specialist environment, and enter wider circulation. In the previous chapter, Volpato's dialogue was used to demonstrate this tendency. This chapter argues that the wide spread of practical knowledge in early modern Europe was not the responsibility of experts, but rather of people with collector's interests, often linked to professional purposes.

## 1.1 Gatekeepers

The concept of gatekeepers of knowledge was described by Karel Davids in his article ‘Who Defined ‘Useful Knowledge’ in Early Modern Times?’<sup>263</sup> Gatekeepers are people who dealt with an enormous flux of knowledge, meaning they went through procedures of ‘selecting, translating and focusing’<sup>264</sup> Since this category has been described before, it is relevant for the discussion of users and consumers of practical knowledge. Gatekeepers were present in early modern society, but they are not always visible to our eyes. Davids looked at a category of people who defined ‘useful knowledge’ in early modern times, because currently used definitions about ‘useful knowledge’ are ‘ex post’, meaning that it is today’s scholars looking back and deciding what is useful and what is not.<sup>265</sup> The determining criterion to single out a gatekeeper is his or her function in society. According to Davids’ findings, the people who decided what was useful knowledge, or gatekeepers, were women, clergymen, and virtuosi. With regard to virtuosi, Davids adopts John Cascoigne’s definition: virtuosi are people ‘who had the time and leisure to advance knowledge either by collecting rarities or by promoting experiments’<sup>266</sup> Davids describes how this particular category of gatekeepers almost disappeared during the eighteenth century.<sup>267</sup> Already during the seventeenth and the eighteenth century ‘institutionalized, academic and formal knowledge tried to impose itself [...] all over Europe’<sup>268</sup>

Somewhat less defined in terms of categories is the concept of Ursula Klein and E.C. Spary in their co-edited work *Materials and Expertise in Early Modern Europe*. Here they introduce the idea that all practitioners in their publications

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263 Davids 2012.

264 Davids 2012, p. 73.

265 Davids 2012, p. 69.

266 Davids 2012, pp. 79–80, referring to Cascoigne John, *Joseph Banks and the English Enlightenment. Useful Knowledge and Polite Culture* (Cambridge: Cambridge University Press, 1994), 59–60. The working definition of Davids is similar to the one of William Eamon, who defines virtuosi as scholars, gentlemen, and curiosi. See Eamon 1994, p. 301.

267 Davids 2012, pp. 73–76. Davids distinguishes between the Dutch context and other societies in the North Atlantic where ‘gatekeepers of knowledge in the eighteenth century were primarily based at academies, societies, state agencies or publishing houses rather than at universities or similar institutions of higher learning’. See Davids 2012, p. 82.

268 Polónia, Capelão and Giesteira 2016. I cited from this work in progress with permission of professor Amélia Pólónia, for which I am very grateful.

about materials and expertise could be seen as gatekeepers because ‘matter was both transformed and transformative: it left their workshops and laboratories in a new and different condition, but also went to alter the condition (social, physical, moral) of consumers and clients, from courts to commoners.’<sup>269</sup> Klein and Spary use the term gatekeepers more in a context of economical profitability, and a certain output to a larger public. In this book, we will rely on Davids’ theory.

Women played a vital role in the collecting, consuming, and disseminating of practical knowledge. It is often argued that household literature and recipe books were products of female enterprise. However, Elaine Leong proposes a new reading and interpretation for recipe books in her article ‘Collecting Knowledge for the Family’. She argues that recipe books can be seen as ‘testaments of the interests and needs of particular families.’<sup>270</sup> Equally, Sara Pennell argues that ‘culinary knowledge is collectively generated’.<sup>271</sup> Leong studied the notebooks of Mary Cholmeley as a multi-stage and open-ended construction process, where several members of a family contributed and collaborated, both male and female.<sup>272</sup> Recipe books were often compiled by multiple members of a family, regardless of their gender. However, institutionalized knowledge did not call on female dissemination.

Generally, the users of practical knowledge are not determinable by gender or class. Gatekeepers are people manipulating the information flux and appurtenant material culture. Their actions do not always involve writing and, therefore, they form a more difficult category of subjects to investigate. Alessio Piemontese writes in his *Secreti* (1555) that he got his information ‘da grandi huomini per dottrina, & da gran Signori, ma ancora da pouere feminelle, d’artegiani, da contadini, & da ogni sorte di persone’ [from great men by doctrine, & great lords, but again from poor women, from artisans, from peasants, and every kind of person].<sup>273</sup> Piemontese stresses that any person could be a potential source of practical knowledge.

This corresponds to what recipe books indicate as their sources. Seventeenth-century English recipe books often acknowledge their source. This is the case in the recipe books of Ann Fanshawe (Wellcome MS 3117), or Johanna St. John (Wellcome MS 4338). Both recipe books frequently name and indicate their

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269 Klein and Spary 2010, p. 22.

270 Leong 2013, p. 81.

271 Pennell 2004, p. 242.

272 Leong 2013, pp. 84; 90.

273 Piemontese 1555, sig. A2v. Translation is ours.

sources, either in the margin or in the recipe itself. A fascinating feature of Wellcome MS 3117 is the appearance of numerous attributions. There are two kinds of attributions. The first kind of attribution is that of provenance, indicating where a recipe came from, such as 'Lady Butler's' or 'My mother'. The second type of attribution is that of ownership at the time the recipe was recorded, in this case the recipes belong to Ann Fanshawe. The manuscript registers transactions of knowledge; it registers from whom recipes came, and to whom they go. David Goldstein argues that the convention of attributing is a seventeenth-century usage. Recipe book MS 3117 attributes almost a hundred per cent of its recipes. Again, Goldstein has traced many of the individuals and found that they came from different social backgrounds. Many of the people named in the margins of the manuscript are unknown, but some are fairly well-known personalities such as Sir Kenelm Digby. The names in the margins form the social network of Ann Fanshawe. Many of them belong to her extended family.<sup>274</sup> This means that the family and their surroundings represent a significant proportion of the sources of practical knowledge.

Sometimes recipes reveal a larger provenance. A beautiful example is found in Wellcome MS 4338. Among the many recipes for curing breast cancer in Johanna St. John's recipe book, there is one which 'was used to a woman whos[e] bre[a]st was to be cut off but was not broke [...] & it kept her very many years without any paine or troble & at last dyed of another disease. La Child knew the woman to whom it was taught by a French man.'<sup>275</sup> This recipe involves three people before it actually was taken up into Johanna's recipe book. A Frenchman taught a recipe to a woman who applied it. La Child knew this woman and clearly knew Johanna. La Child possibly means 'Lady Child', the manuscript often uses 'La' before names. This is also the case for 'La St. John Mary', which would be Lady St. John Mary.<sup>276</sup> In this example the recipe recognizes a known female user, an unknown female user and unknown male user as its sources. Source recognition can be found in indications of provenance in recipe books.

Virtually everybody in early modern Europe could be a gatekeeper of practical knowledge to greater or lesser degree. Gatekeepers were not bound to gender or class, but rather to a position in society. They were the people who managed or controlled the flux of information regarding practical knowledge. Everybody

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274 Goldstein 2013, pp. 145–146.

275 London, Wellcome Library: Wellcome MS 4338, fol. 18v.

276 London, Wellcome Library: Wellcome MS 4338, fol. 15v.



who entered the cycle of selecting, using, and passing-on of practical knowledge could be seen as a gatekeeper.

## 1.2 Mediators

Mediators are managers of the information flux. Mediators control the flow of information; they are the professional providers of practical knowledge.<sup>277</sup> They serve as a portal to practical knowledge. Mediators have a gatekeeping function as well, but on a multiple scale. While a gatekeeper exploits a one-to-one relationship with the user of knowledge, the mediator has an impersonal relationship with an anonymous group of beneficiaries who receive the mediator's information through print.<sup>278</sup> This category mediates between providers of knowledge (be it orally or textually) and other users (common users and also other mediators).

Here, it is argued that the group of practical knowledge providers is not solely comprised of gatekeepers. A different group of practical knowledge providers is described here. Both gatekeepers and mediators have a lot in common, but there are differences. Davids describes and attaches importance to the function of gatekeepers in society. As previously mentioned, this is determined by the type of relationship with the user or receiver of the information. There are three important factors that reveal the breaking points or ruptures between the two categories: 1) the medium they used, 2) their outreach to a larger public, and 3) professional involvement.

The type of relationship with users was different for mediators because of the tool they used: the printing medium. The main way mediators reached their public was through print. In the case of the gatekeeper, the tools were manuscript and oral means of transmission. In this way, one can argue that mediators work structurally. The relationship between the mediator and the public is largely impersonal, whereas the relationship between the gatekeeper and the public, or 'the other consumer', was very likely to be personal, as it often included oral

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277 Mediators control the information flux because they are at the providers, even though the idea is to share information with others, the final decision of the nature and quantity of information passing through the gate belongs to the group of mediators. We say 'group of mediators' because in the case of Girolamo Ruscelli, others have put his work to publication post mortem.

278 In line with the previous chapter, it is more than probable that in later stages the printed information ended up in manuscript again, which means that the mediator indirectly reached for his public. In fact, the concept of rhizome provides that printed, handwritten, and oral means of transmission can all work together in multiple ways to the dissemination of practical knowledge.

transmission and thus personal contact. One could go to the local gatekeeper to find out about a certain procedure. But one did not go to the mediator to get access to practical knowledge; one bought his or her book.

A significant part of the spread of practical knowledge across Europe during the sixteenth-century happened through print. An exemplary case study can be found in the second chapter of Part I, regarding the spread of the German *Kunstabchlein*. What many mediators had in common was that they wrote for a living. The work behind the scenes of printed recipe books involved an on-going sequence of collecting, experimenting, adapting, improving, selecting, editing, and publishing practical knowledge. The degree of the spread of practical knowledge is the criterion for belonging to the limited group of practical knowledge users defined here as mediators, is the extent to which they spread practical knowledge.

The current chapter studies four mediators, of which two were mediators with practical experience and two were literary mediators. Three out of these four mediators were Italian 'professors of secrets'. This historical term will be explained below. The reason why there are more examples in the Italian setting is because each of the cases is problematic and interesting. In the Italian examples, there are struggles with issues of name integrity and professionalism. Already during the sixteenth century two of them had been blamed for using false names. The first is Isabella Cortese, presumed to be the first female recipe writer. And among the various constructions around her persona is the belief that she was the Ragusan archdeacon Mario Chaboga. The second is Alessio Piemontese, the most successful recipe collector. It is frequently believed that Alessio Piemontese is the pseudonym of the professional writer Girolamo Ruscelli. The third professor of secrets is Leonardo Fioravanti, who is seen more as a quacksalver than a professional writer. He often had run-ins with the officials, and dealings with the judicial system more than once. All of these cases come with caveats, which are noted in this chapter.

The fourth mediator is an English professional writer. The case of Londoner Hugh Plat is less ambiguous. Hugh Plat, who published practical medical knowledge and cured people, just as Fioravanti did, was never imprisoned for his illegal practice. We can perceive Hugh Plat's identity quite clearly through documents. His body of work, biographical data, and reputation as a professional writer are well preserved. Nonetheless, Plat has a lot in common with the Italian professors of secrets in his way of working and his objectives with respect to practical knowledge. But he also had a strong opinion on the professors of secrets, which he called the 'Magical crew'.<sup>279</sup>

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279 Plat 1594, sig. B3v.

### 1.3 The *Professori de' Secreti*

William Eamon introduced contemporary scholarship to the concept of professors of secrets. Professors of secrets are 'relentless seekers of obscure, veiled, and occult things'.<sup>280</sup> The terminology *Professori de' Secreti* has a historical use. It was used by the Dominican monk Tommaso Garzoni in his *Piazza universale di tutte le professione del mondo* (1583) [Universal marketplace of all the professions of the world]<sup>281</sup>. In his discussion of the profession, Garzoni focuses on the nature of secrets rather than on the status of the professors. Garzoni's prime example is natural philosopher Girolamo Cardano (1501–1576). Garzoni uses Cardano's taxonomy of secrets. The professors of secrets are not directly judged by Garzoni, but he does warn against the misuse of secrets. The conclusion of each of the discussed professions in *Piazza universale* results in a list with names. Garzoni provides his readers, and us, with the names of sixteen professors of secrets.<sup>282</sup>

1. Plinio [Pliny (23–79)]
2. Alberto Magno [Albert the Great (1200–1280)]
3. Rogerio Bachone [Roger Bacon (ca. 1214–ca.1292)]
4. Hieronimo Cardano [Girolamo Cardano (1501–1576)]
5. Giouan Battista Porta [Giovambattista della Porta (ca.1535–1615)]
6. Don Alessio Piemontese [Alessio Piemontese]
7. Quell profane dell'Agrippa [Cornelius Agrippa (1486–1535)]
8. Hieronimo Ruscello [Girolamo Ruscelli (1504–1566)]
9. Isabella Cortese – il cui nome si tiene esser mentito insieme con quell di Don Alessio dal Ruscello [Isabella Cortese]
10. Il Fioravanti glorioso [Leonardo Fioravanti (ca.1517–post 1583)]
11. Lo Scalifero [possibly Julius Caesar Scaliger (1484–1558)]
12. Il Fallopa [Gabriele Fallopius (1523–1562)]
13. Antonio Mizaldo [Antoine Mizauld (1510–1578)]
14. Leuinio Lemnio [Lieven Lemse (1505–1568)]
15. Il Paracelso [Philipp Theophrast Bombast von Hohenheim, known as Paracelsus (1493–1541)]

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280 Eamon 1994, p. 135.

281 The first edition is of 1583, but the edition we consulted is the one of 1593.

282 Garzoni 1593, p. 184. The information between square brackets is ours.

16. Giacomo Vvechero [Johannes Jacob Wecker (1528–1586)]
17. & altri assai, ma in effetto fra colore ne son recitati molti che hanno piu del superstitioso, che altro.

The seven professors of secrets that Hugh Plat named (nos. 2, 4, 5, 6, 10, 13, and 16), are all present in this list. As mentioned before, Plat described these seven as ‘that crew’, while Garzoni maintained a less judgmental terminology. Both lists contain a selection of international scholars. Eight of the sixteen names are of Italian origin, and among the other names there are professors of secrets from Germany, Switzerland, England, France, and the Netherlands. One possible exception among the Italians is Isabella Cortese, who is associated with a Dalmatian writer here (see below). The professors of secrets were bound to a larger European context and can largely be considered mediators because many of them widely disseminated recipes through print and practice.

The list of professors is not a closed one. It starts with recognizing one of the classic authorities (Pliny) and includes medieval authorities (Albertus Magnus and Roger Bacon). From the fourth subject on, sixteenth-century subjects are named, and the list is left open. Garzoni’s final word on the professors of secrets is that many among them are superstitious. These concluding words give an idea of public opinion regarding the profession. In what follows, the profiles of a selection of professors of secrets will be studied. What all professors of secrets have in common is the search for knowledge, often metaphorically understood as a hunt or *venatio*.<sup>283</sup> The concept of *venatio*, ‘a hunt – as an attempt to penetrate territories never known or explored before’ was first explored by Paolo Rossi<sup>284</sup>, and further developed by William Eamon who argues that: ‘the ‘new’ scientific epistemology advanced by the professors of secrets was in reality one of the most ancient epistemologies of all: that of the hunter. The hunter of nature’s secrets experiences nature as a dense woods in which theory offers a poor guide. Just as the hunter tracks his hidden prey following its spoor, the hunter of secrets looks for traces, signs, and clues that will lead to the discovery of nature’s hidden causes. [...] The ‘secrets of nature’ which were inaccessible to the intellect, could be found out only by long experience in the ways of nature.’<sup>285</sup>

Some professors of secrets had to deal with questions about their reliability and authenticity. Garzoni’s list reports that the identity of two of the professors of secrets was disputed. That of Alessio Piemontese was already discussed in the

283 Eamon 1994, p. 270.

284 Citation of Paolo Rossi taken from Eamon 1994, p. 296, who cites from Rossi, Paolo, *Philosophy, Technology, and the Arts* (New Harper & Row, 1970), p. 42.

285 Eamon 1994, p. 269.

post mortem publication of Girolamo Ruscelli, in which the final editor argues that Ruscelli published his secrets under the name of Piemontese. Garzoni echoes this debate in his writing. However, the case of Isabella Cortese, equally seen as a creation of Ruscelli, is not based on a similar claim. What is stressed here is that Cortese is the only female subject in Garzoni's list and she is the only subject that is judged to be false without previous claims or reattributions. Such issues of identity will be disentangled in the next section.

## 2 Literary mediators

This section will study the complex cases of authorship of two of Tommaso Garzoni's list of *professori de' segreti* or professors of secrets: Isabella Cortese and Alessio Piemontese. It is the only instance in which Garzoni adds that both identities may be false and invented by the author Girolamo Ruscelli (1504–1566). This section will trace the historiography of the two authors Isabella Cortese and Alessio Piemontese, and their publications. Both Cortese's *Secreti* and Piemontese's *Secreti* offer very curious cases of complex authorship. Many of the conclusions drawn today are based on a deep-rooted historiographical mish-mash of presumptions, and a nineteenth-century understanding of authorship. The short version of the current, most commonly heard hypothesis, is that a historical person with the name Isabella Cortese did not exist, and that Alessio Piemontese is a pseudonym. The two cases are intertwined, as various sources attribute the works to the same person, Girolamo Ruscelli, author of yet another book of secrets: *Secreti nuovi di maravigliosa virtu* (1567) [New secrets of marvellous virtue].

### 2.1 The fortune of Isabella Cortese

In the case of Isabella Cortese, various male authors have been proposed to stand in for the unidentified author, because unidentified female writers were mostly interpreted as pseudonyms or fabrications. Over time, several propositions have been made regarding the identity of the writer of *I secreti de la signora Isabella Cortese* (1561). These stand-ins were mostly taken directly from the network of people around Cortese's *Secreti*: the printer Giovanni Bariletto, the dedicatee Mario Caboga, the privilege-seeker<sup>286</sup> Curtio Troiano Navó, and another

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286 Terminology used by Elizabeth Armstrong in her work 'Before Copyright' where she discusses the French book-privilege system between 1498 and 1526. See Armstrong 2002, pp. 29–30.

professor of secrets, Girolamo Ruscelli. Here, it is argued that there is a tendency to attribute books of secrets to potential male authors, and to ‘authors’ rather than ‘writers’. Most hypotheses propose a mastermind as the driving engine behind a group of sources. Here, this tendency will be called ‘the monopoly of secrets’, and it will be disproved where there is evidence. It must be said that none of the hypotheses are sufficiently convincing because of their lack of proof and weak arguments. The prime argument here is that these hypotheses have been concocted based on textual overlap and editorial style. Textual overlap is a problem of transmission. It explains the existence of a social network whose purpose is the exchange of knowledge and an editorial style rather than the existence of a single driving force behind these books. The conclusion is that the *Secreti* of Isabella Cortese is a compiled book of recipes that acknowledges its sources and that underwent an editing process.

The publication of interest here is *I secreti de la signora Isabella Cortese* (1561) [The secrets of Lady Isabella Cortese]. Cortese’s *Secreti* was an octavo, which was published for the first time in Venice by Giovanni Bariletto and had at least fifteen Italian editions and a further four German editions.<sup>287</sup> There is no extensive bibliographical or book-historical research about this publication or its public. Often, it is assumed that it was aimed at a female public because of the information on the title page. The complete title says *I secreti de la signora Isabella Cortese, ne’ quali si contengono cose minerali, medicinali, artificiose, & Alchimiche, & molte de l’arte profumatoria, appartenenti a ogni gran Signora. Con altri bellissimi Secreti aggiunti* [The secrets of Lady Isabella Cortese, which contain mineral, medicinal, artificial & Alchemical things, & a lot of the art of perfumery, belonging to every great lady. With other beautiful secrets added]. The clause ‘every great lady’ suggests a female public. However, the title also states that other secrets were added, without reference to the subject or public. Despite what the title says, a male public was not unthinkable. Maybe cosmetics were and are considered primarily female, but a male public could also make use of them. Think of the European theatre environment, where young adolescent male actors took the roles of female characters.<sup>288</sup> Another subject of Cortese’s *Secreti* is alchemy, which was a recognised subject of male interest.

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287 We see the work done for this section as the preliminaries of a larger book-historical investigation on this precise book title, where each individual remaining copy is examined.

288 The introduction of female actresses was a gradual evolution in the European history of drama. *The Oxford Companion to Theatre and Performance* says: ‘In all European theatrical traditions, female roles were regularly played by boys or young men until

A male public can be confirmed, or at least substantiated, by the signatures in the surviving copies. We studied five copies for this publication. Two of the five copies have male signatures and one has a so-far unidentified name.<sup>289</sup> Another male user turns up via a reference to Isabella's *Secreti* in another publication. In *The Art of Glass* (1662), Antonio Neri refers to Cortese's work. He points out Cortese's variant on the making of *Aqua fortis* which prescribes arsenic instead of vitriol. Neri knew Cortese's *Secreti*; he states out that he used her book 'printed at Venice in Italian 18 years before the publication of this work.'<sup>290</sup> Hugh Plat also copied from this work.<sup>291</sup> Thus it can be concluded that the actual audience of Cortese's *Secreti* was probably very mixed, which is unsurprising for early modern books of secrets, and recipe books in general.

Let's start at the beginning with what we know and do not know about the identity of Isabella Cortese, presented as the author of the book. The strongest – and almost only – vein in the discussion about Cortese's *Secreti* concerns its authorship. According to William Eamon, Cortese was a Venetian noble lady. But he is one of the few scholars who attribute a specific, albeit vague, identity to the author. The truth is that although, to date, no single document can conclusively prove the existence of a historical Isabella Cortese, there is no document proving that the author was a male either. There is silence around the name Isabella Cortese in Venetian archival material.<sup>292</sup> As a consequence, the historical existence of Isabella Cortese has been questioned by most scholars.

As mentioned earlier, these questions echo a sixteenth-century doubt about the author's identity. As seen in the list above, Isabella Cortese was included in Garzoni's account of *professori de' segreti*. Cortese's name 'si tiene esser mentito' [is considered to be a lie], and Cortese would not be the only fictional author. Alessio

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Italian popular companies introduced actresses in the mid-sixteenth century. Even these companies were not allowed to use actresses throughout Italy, and where actresses were permitted, they used male performers to play bawdy female servants [...] Gradually, the use of actresses spread across Western Europe, but the English commercial theatre remained an all-male preserve until the enforced cessation of playing in 1642, and only introduced actresses after the Restoration in 1660.' See Shapiro 2010.

289 All five copies come from the British Library: BL 1038 C.4; BL 1038 d 10; BL 1038. c. 9; BL 1492 d 4; BL 1578/4270.

290 Neri 1662, p. 309.

291 See below.

292 Lesage also draws attention to the fact that Cortese does not appear in the *Dizionario Biografico degli Italiani*, not in the archives of Modena, the city of origin of the family name Cortese. See Lesage 1993, p. 157.

Piemontese also entered into this category of invented professors of secrets. Both Isabella and Alessio were believed to be fabrications of Girolamo Ruscelli (1504–1566). Ruscelli was the founder of the Roman *Accademia dello Sdegno* [Academy of Disdain/Indignation], an initiative for people to gather with the intention to learn. So, a mere two decades after the first edition of Cortese's *Secreti*, the existence of the author was already being questioned. However, another sixteenth-century document, contemporary to the first publication, would seem to argue the opposite. On August 17th, 1560, one year before the publication of Cortese's *Secreti*, a printing privilege was requested from the Venetian Senate for 'Gli secreti della Sig.ra Isabella Cortese' [the secrets of Lady Isabella Cortese].<sup>293</sup> Communications with official authorities are presumed to be truthful. And in this case, the author of the book of secrets is in fact named as 'Signora Isabella Cortese'. So, from the point of view of the sixteenth-century sources, there are two contradictory messages. Neither of the two provide definitive proof.

Studies that examine the *Secreti di Isabella Cortese* have something in common: 1) they are looking for the identity of the author. 2) They interpret the use of the grammatical first person as indicative of text written by the 'true author' of the work. 3) They deny the existence of a historical Isabella Cortese. 4) Subsequently, they propose a replacement author, normally male with some link to secrets or the publishing world. Although any one of these steps in isolation, or even the complete form of this argument, might be acceptable, it is undeniable that this pattern is so pervasive that it is problematic. As mentioned above, it is called the 'monopoly of secrets', because the idea is that a male mastermind was the organizing force and executor of multiple published recipe books. This mastermind monopolized the secrets business in mid sixteenth-century Venice and Italy. These hypotheses are based on the textual similarities between a significant group of recipe books. However, we would suggest that there is a different and in many ways simpler explanation for these similarities: they are merely proof of the transmission of knowledge within a network of people.

The first modern scholars to question Isabella's identity were a nineteenth century French duo. In 1865 the scholars Feuillet de Conches and Baschet published a work on *Les blondes femmes selon les peintres de l'école de Venise* [Blond ladies in the eyes of Venetian painters]. The duo made a textual comparison between the four books of secrets:

- 1) Alessio Piemontese, *Secreti* (1555)
- 2) Girolamo Ruscelli, *Secreti nuovi di maravigliosa virtù* (1567)

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293 Lesage 1993, p. 166.



- 3) Timotheo Rossello, *Della summa de' secreti universali in ogni materia* (1575)
- 4) Isabella Cortese, *I segreti della signora Isabella Cortese* (1574)

Their reasons for attributing all four works to the same pen were based on a recurrence of topics and what they believed to be a similar writing style.<sup>294</sup> According to Feuillet de Conches and Baschet, Girolamo Ruscelli is the author of the books of secrets written by Alessio Piemontese, Isabella Cortese, and Timoteo Rossello. The latter one is the author of *Della summa de' secreti universali in ogni materia* (1559), hereafter referred to as the *Summa*.

This hypothesis was dismantled by Claire Lesage in 1993, through a textual comparative study. She concluded that the lexicon, regional patina, linguistic complexity, and procedure technicality are different in each of the four cases. She also analyzed the introductions and found that they were all different in style and approach, notwithstanding some superficial topical similarity in two of them, which was hunting for nature's secrets in Cortese's *Secreti* and Rossello's *Summa*. Her argument is thorough, rigorous, and well supported, and it is convincing, both as a dismissal of the charge that Cortese's *Secreti* could have been written by Ruscelli, and as a framework for arguing against other claims of 'mastermind' authorship.

According to Jo Wheeler, the true mastermind and hunter of secrets in this story was Curtio Troiano di Navò. Wheeler finds evidence for this hypothesis in two documents. The first is the granting of printing privileges. The person who asked for the right to print Cortese's *Secreti* was Navò, rather than the printer Bariletto. The document names two other books: The *Summa* by Timoteo Rossello and the *Pirotechnia* by Vannoccio Biringuccio. Wheeler believes that the dedication of the third edition of the *Pirotechnia* provides context to the mystery around Rossello's and Cortese's book. The dedication is also addressed to Mario Caboga and talks about the fact that Caboga 'adornata & emendata' [embellished and amended] all three editions<sup>295</sup>. According to Wheeler, the document 'reveals that the dedicatees of the first two volumes were fictitious.' The dedication states that Caboga did not suffer from the fact that 'certain false names were found (...) under his shadow', which would indicate that he would have been publishing under a false name.<sup>296</sup> Wheeler takes two key factors together: first, Caboga and the use of false names around his person, and second; the three books granted

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294 Baschet and Feuillet de Conches 1865, pp. 102; 181–183.

295 Biringuccio 1558, sig. A1v.

296 Wheeler 2009, p. 37; Wheeler 2013.

printing permission: the *Summa*, the *Secreti* and the *Pirotechnia*. This would explain the mystery around Isabella Cortese.<sup>297</sup> Wheeler proposes that the dedications of the *Summa* and the *Secreti* were written under a false name, therefore the whole book must have been written under a false name. And that Navò would have been the driving force behind all the books dedicated to Caboga. To refer to this network around Caboga and Navò, Wheeler coined the name ‘the Ragusan connection’, which has been used repeatedly in historiography.<sup>298</sup>

Our original research uncovered significant supporting evidence for an alternative interpretation of the dedication of the *Pirotechnia*’s third edition. Wheeler argues that the reference to ‘all three’ editions in the dedication refers to the three books granted approvals: Cortese’s *Secreti*, Rossello’s *Summa*, and Biringuccio’s *Pirotechnia*. Wheeler claims that Curtio Troiano di Navò was the organizing mind behind *I secreti de la signora Isabella Cortese* (1561). She uses interesting external sources but decontextualizes the information in the dedication of *Pirotechnia*’s third edition in order to get to this conclusion. Our research investigates whether ‘all three’ editions referenced in the third edition of this particular book, refers to the editions of the book title itself, or to the volumes to which they are only tenuously related. Here, it is argued that the dedication of the *Pirotechnia* makes the *Pirotechnia* central, and that Navò was referring to the two earlier editions of the *Pirotechnia* rather than the *Summa* and the *Secreti*. It was precisely those two earlier editions that Caboga had edited, but his name does not appear in the dedication.

But beyond the Ockham’s Razor argument, the current research produced convincing evidence for this reading. An analysis of the first three editions of the *Pirotechnia* indicates that they came from the same printing press. They all consist of the same number of pages, and the imagery is recycled.<sup>299</sup> Two of the presumed printers are unknown to scholarship: the second printer, Giovan Padovano of Venice, and the third, Comin da Trino di Monferrato. Persuing the argument of potential fake names, two of the dedicatees fall under this category. The first edition of 1540, is dedicated to Bernardino Moncellesi da Solo,<sup>300</sup> and the second edition of 1550, to Guidotto Napio of Bohemia.<sup>301</sup> No information could be found about any of these four names. Only the printer of the first edition of

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297 We have to mention that equally Timotteo Rossello, the author of the *Summa*, is left without historic data, but nobody seems to be bothered about this.

298 See Wheeler 2013; Ray 2015, p. 57.

299 Smith and Gnudi 1943, pp. xix–xx.

300 Biringuccio 1943, p. 2.

301 Beckmann 1817, p. 466; Smith and Gnudi 1943, p. xix.

the *Pirotechnia*, Curtio Troiano di Navò, is unquestionably an historical person. The self-declared role of Navò in the three editions is limited: he was the printer of the first edition, and wrote the dedication to the third edition. But the consistency of the three editions, in terms of their editorial style and network, is quite strong. This interpretation is based on a close reading of the dedication in its proper context, that of the book title itself and its history. This research thus disproves Jo Wheeler's findings. Wheeler claims that Curtio Troiano di Navò was the organizing mind behind *I secreti de la signora Isabella Cortese* (1561). She uses interesting external sources but decontextualizes the information in the dedication of the third edition of the *Pirotechnia* to reach this conclusion. From our research the *Pirotechnia* provides no information about the case of Cortese.

Yet another variant of the monopoly hypothesis puts Mario Caboga, the dedicatee of Cortese's *Secreti*, at the center. Massimo Rizzardini published an opinionated article on the subject in 2010 in which he rejects Claire Lesage's findings.<sup>302</sup> Rizzardini persists in the nineteenth-century French hypothesis that all four books were written by one hand, but he proposes Mario Caboga as the true author. He puts forward several reasons: 1) Caboga was an historical person. 2) According to an eighteenth-century source, Caboga wrote two books of secrets. 3) One of the Slavic variants of the name Caboga is Kordiza, which, according to Rizzardini, resembles Cortese.<sup>303</sup> 4) The name Cortese is an anagram for 'secreto'.

Rizzardini makes much of the fact that, according to an eighteenth-century source, Caboga wrote two recipe books. This eighteenth-century source is the *Fasti litterario-Ragusini* (1767) by Sebastiano Dolci, who published about scholars and men of letters from Ragusa. This Latin source reports that Caboga wrote 'duos secretorum Libellos sub alieno nome evulgatos' [two books of secrets were given under an alien name].<sup>304</sup> Dolci does not report his sources. An analysis of Dolci's words reveals that he should have referenced published or printed sources. Anyone could write one, two, or more recipe books, but that does not explain the public character, much less the need for an *alieno nome*, which here is interpreted as a pseudonym.

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302 Rizzardini 2010, pp. 73–77.

303 Our comment on this hypothesis is that the stress in Kordiza would come on the first syllable: Kórdiza, meaning that the 'i' is short. Therefore, it does not perfectly correspond to Cortese, where the first 'e' is long. Again, the work of Cortese is published in Italy, a place where people would be likely to pronounce words according to their own rules.

304 Dolci 1767, p. 40.

If there is one book that shows significant similarities with the work of Isabella Cortese, it is the *Summa* of Timotheo Rossello. As mentioned earlier, Caboga was the dedicatee of both Rosello's *Summa* and Cortese's *Secreti*. Another interesting point is that, according to Lesage, who studied both works textually, the text of the *Summa* could be seen as a simplification of the *Secreti*, both in its dedication letter and individual recipes.<sup>305</sup> Another aspect of Caboga's work is that he worked incognito at times. The first three editions of the *Pirotechnia* were edited by Caboga, but this was only revealed in the third edition, which recognized Caboga's work through a dedication. Both Rosello's *Summa* and Cortese's *Secreti* are dedicated to Caboga. And for all three book titles, the *Summa*, Cortese's *Secreti*, and the *Pirotechnia*, printing permission was requested at the same time by Navó. Jo Wheeler finds a link between Caboga and Navó. Although it is not inconceivable that Caboga is a candidate, certain details suggest he was not the 'mastermind'. For example, the dedications in Isabella's *Secreti* and Rosello's *Summa* would be dedications to himself, which defeats the object of a dedicatory letter. However, the person of Mario Caboga reappears in various sixteenth-century documents as well as in contemporary theories about the mystery. He was born in 1505 and died in 1582 in Rome where earlier, in 1574, he had defended himself after being accused by the Roman Inquisition.

Could Caboga have been the so-called author of Cortese's *Secreti*? He could. But it is by no means a certainty, and focusing exclusively on issues of 'true' authorship has the side-effect of eliding other important discussions. Recipe books, in fact, are usually not the product of a single writer. They are compilations, sometimes assembled by a single writer, but always the result of multiple sources.

The work of Isabella Cortese borrows material from various sources, of which some are acknowledged. Cortese's ten commandments and other advice on how to deal with alchemy do not originate from her, as is generally believed,<sup>306</sup> but from a certain abbot Chirico from Cologne. It is generally believed that the author of the book, either a certain Isabella Cortese or another male writer, was also a fierce practitioner of the art of alchemy. This statement will not be contested, but the reasons put forward for this assumption will be. It is believed that the author who addresses the readers is the person who brought together all the book's recipes, presumably Isabella Cortese. The valid argument here is that the writer of Isabella's *Secreti* copied this section from another source, and therefore, it is not in the voice of the current writer, but of another writer. The

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305 Lesage 1993, pp. 63–64.

306 Explicitly in Rizzardini 2010; Eamon 2011.

'I' is copied. The second book is introduced as an *Opera di Canfora* or a 'work of Camphor'<sup>307</sup>, starting with a section from *Chirico abate di Colonia*. This text addresses its public as 'dear brother,' which is often interpreted as the voice of Isabella. The tone and type of information differs from that in other parts in Cortese's *Secreti*. It forms a nucleus of specialized advice for practitioners. Taking into consideration its concept of epistemological secrecy, it may have been taken from a much older work.

Another of the sources that the *Secreti* of Cortese recognizes, is the work of the priest Benedict from Vienna. This forms part of the *Secreti*'s second chapter, after the section of recipes from Abbot Chirico. This section contains one of the favorite secrecy topoi: the discovery and preservation of knowledge, connected to the death of a person. This is one of the reasons Cortese's *Secreti* has been dismissively treated as forgery. Here, it is maintained that what we read is not the voice of Isabella or the writer of the *Secreti*. It is the voice of the person who signed the paragraph with the narrative: 'fratello Benedetto' [brother Benedetto].<sup>308</sup> The *Secreti* of Isabella Cortese acknowledges its sources where possible or necessary. In the past, the narratives and advice in the *Secreti* were often seen as its author addressing the public in person. This was frequently received with considerable scepticism. We argue that a close reading of the source is necessary to understand its textual dynamics. Abbot Chirico's 'I' is not the same as brother Benedict's 'I', which is certainly not the 'I' of Isabella Cortese.

With this in mind, the similarities between the various recipe books in Cortese's *Secreti* should not be understood as the work of a single author. It is often argued that the author would have tried to adapt his or her product to a diversified market. Secrets in general were a marketable product. Signs of editing are often seen as indications of the style of an author. The editing of recipe books before printing was quite normal practice across Europe at that time. Recipe books both in manuscript and print were studied in this regard. We consider that manuscripts are the, often unelaborated, raw material. There might be a title and a name, but that would be rather exceptional. Furthermore, if you encounter a clean organized recipe book, you are clearly dealing with a copy. Normally, recipe books were compilations that could be used daily. They have

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307 The OED definition of camphor: 'A whitish translucent crystalline volatile substance, belonging chemically to the vegetable oils, and having a bitter aromatic taste and a strong characteristic smell: it is used in pharmacy, and was formerly in repute as an antaphrodisiac.'

308 Cortese 1561, fols 14r-v.

signs of usage such as stains, comments, crossed-out information, writings in the margins, writings in different hands (because writing down recipes was a practice common to an entire household), etc. The printed recipe book is different: it is a polished version of a manuscript. Often recipes in a printed recipe book are arranged or semi-arranged into books or chapters, or by to subject for instance. In the case of Cortese's *Secreti* there are three books: the first book is medical, the second alchemical, and the third artisanal. In later editions, a fourth book was added, with beauty as its subject. As shown in the second chapter, texts continuously changed. A new topic might be introduced into newer editions because of the demand or potential success of the topic, as printed recipe books were market oriented. Cortese's *Secreti* was no different.

Another element indicating the intervention of an editor in Cortese's *Secreti* is the order of the recipes. The first recipes of each chapter are eye-catchers. The very first recipe is about treating the Black Death and poison. The recipe includes a narrative involving historical personalities. The story goes that Brother Gregorio Mezzo developed a remedy against poison and the Black Death for Pope Clement VII. Clement VII was born Giulio di Giuliano de' Medici (1478–1534), and his papacy ran from 1523 to 1534. The antivenin was tested on two condemned prisoners in the Campidoglio. The first one died, and the second one survived – or at least he survived the poison and the cure.<sup>309</sup> The second chapter begins with Abbot Chirico's distinctive introduction, ten commandments, and recipes, followed by brother Benedict's narrative and recipes, before going on to more random recipes about alchemy. The signs of an editing process are seen in the structure and build of the book.

Further evidence of sales techniques for secrets can be found in the second chapter on alchemy. The chapter is introduced by a plea from Abbot Chirico to the reader. The reader should not follow what the alchemical authorities have said, because 'they did not tell the truth'. The thirteenth- and fourteenth-century masters such as Geber, Ramon Llull, and Arnaldus de Villa Nova told nothing but 'fables and chitter-chatter'. He advises the reader not to spend a lifetime on these works, as he did; and wasted thirty years. Chirico touches upon another point, the economic aspect of getting involved in the journey of alchemy. He confesses that he has not only lost a lifetime, but also a lot of money. Chirico encourages his reader to strictly follow what is instructed, such as the recipes and the ten commandments.<sup>310</sup> Making readers follow the writer's recommendations,

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309 Cortese 1561, fols 1r-2r.

310 Cortese 1561, fols 9v-10v.

especially when these recommendations tell them to stay away from other authors, might be considered a way of selling the book.

The eighth commandment gives us a clue to the concept of the secrecy incorporated in the *Secreti*. It says ‘do not teach this art to anyone, because revealing the secrets makes them loose effectiveness.’<sup>311</sup> According to William Eamon’s taxonomy of secrets of, this can be categorised under epistemological secrets, which are seen as a more Medieval form of understanding secrecy. In this view, God put secrets into nature, and they are impenetrable and powerful. Making secret knowledge public was breaking the celestial seal. Here, the risk was that it would render the secrets dysfunctional. Again, this also belongs to the second category of social secrets; a social secret is the intentional suppressing of information for protectionist reasons.<sup>312</sup> It is often claimed that printed secrets are a kind of *contradictio in adjecto*, because what is more public than printed material on a free market? But here again, market principles come into play. Keeping Cortese’s secrets personal signifies that anybody interested would have to buy a book rather than copy it. And this is a significant difference between handwritten recipe books and printed recipe books: the return to an old pattern of secrecy might be very effective for selling the book.

## 2.2 Entanglement between Alessio Piemontese and Girolamo Ruscelli

In this section, we will argue that Alessio Piemontese is a gatekeeper in the guise of a mediator. In our research Girolamo Ruscelli (d. 1565/1566) is identified as the literary mediator behind Alessio’s publications. In order to reach this conclusion, it is useful to first go back to the hypothesis of the French scholars Feuillet de Conches and Baschet, who argued that Girolamo Ruscelli is the author of the books of secrets written by Alessio Piemontese, Isabella Cortese, and Timoteo Rossello.<sup>313</sup> Previously Cortese’s and Rossello’s work were grouped together and a connection was sought with Mario Caboga, the possible compiler. The 1865 hypothesis proposes Alessio Piemontese and Girolamo Ruscelli as the two other authors. Today, it is generally accepted that Girolamo Ruscelli is the real author of the *Secreti* of Alessio Piemontese.<sup>314</sup> Below, Alessio’s *Secreti* and Ruscelli’s *Secreti*

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311 Cortese 1561, fol. 10r.

312 See Chapter 1 of Part I.

313 Baschet and Feuillet de Conches 1865, pp. 181–183.

314 The idea that Ruscelli wrote under the pseudonym of Piemontese is found in Eamon 2011, and is a central thought in Guliza 2014.

*nuovi* are discussed, the various arguments used to link Ruscelli to Piemontese are listed, and a new hypothesis is constructed to show that Alessio Piemontese and Girolamo Ruscelli are two separate physical and historical people.

In 2012, a short-title bibliographical list was published by Ad Stijnman about the *Secreti del reverend donno Alessio Piemontese* (1555) [Secrets of Sir Alessio Piemontese].<sup>315</sup> Stijnman had been working towards completion of this list and was able to enumerate an impressive number of editions and copies in Italian, French, Latin, Spanish, Portuguese, Dutch, German, Danish, and Polish. As of 1999, there are numbered two hundred and sixty-seven editions. The most significant period for the printing of Alessio's *Secreti* lies between the first print in 1555 and 1791; a period in which two hundred and sixty-four editions of Alessio's *Secreti* were published.<sup>316</sup> During our research for this book, we were able to trace a reference to a possibly overlooked early edition in Spanish. Stijnman's short-list bibliography includes two surviving and known Spanish editions from 1563, a Catalan and a Castilian version, as the first Spanish editions.<sup>317</sup> The first Dutch translation of the *Secreti* (1558) reveals that the printer Christoffel Plantijn was granted the right to print Alessio's *Secreti* for the five consecutive years as the only printer. He also obtained the rights to publish Alessio's *Secreti* in French, Dutch, and Spanish. Thus, there was at least an attempt to publish a Spanish edition between 1558 and 1562, anticipating the first Spanish editions. Even, if the project was actually successfully completed, no copy of this edition is known to have survived.

The first edition of a book of secrets bearing Girolamo Ruscelli's name is *Secreti nuovi di meravigliosa virtù del signor Ieronimo Ruscelli, i quali continovando a quelli di donno Alexio, cognome finto del detto Ruscelli* (1567) [New secrets of marvellous virtue by Sir Ieronimo Ruscelli, which continue the ones of Sir Alessio, fake family name of the said Ruscelli].<sup>318</sup> Scholars have followed the information contained in the title. In fact, it is even a commonplace in library catalogues to state that was the true author of Alessio's *Secreti*. Ruscelli's *Nuovi secreti* introduced the same concept in various instances. In the foreword to the reader, Ruscelli says that the truth is that all the secrets he gathered and published in name of Alessio Piemontese, were collected in the context of an *academia secreta* or 'secret academy': *io raccolti tutti i secreti seguenti & gli anteriori ancora, ch'io*

315 Stijnman 2012.

316 This contains a possible double edition (no. 80–81) and a manuscript copy (no. 67).

317 Stijnman 2012, p. 38.

318 The title is not very precise about given name and family name. The title sustains that 'Alessio' would be the false family name of Ruscelli. But 'Alessio' is a given name; 'Piemontese' would be the family name.



*publicai pochi anni sono di Donno Alessio Piemontese, li quali nel vero tutti furono raccolt[i] nella predetta Academia.*<sup>319</sup>

There are various problems with the hypothesis that Piemontese is the pseudonym of Ruscelli or that Ruscelli and Piemontese are the same person. One of the problems is that Ruscelli's *Secreti nuovi* were printed post mortem. The work appeared in 1567, one year after the death of Ruscelli. This means that Ruscelli did not have the final decisive hand in the publication. In fact, the whole of the manuscript was probably unfinished at the time of Ruscelli's death. The dedication, for instance, was written by the scholar Francesco Sansovino (1521–1586). The whole printing process was possibly beyond the control of Ruscelli himself. This means that he may not have carried out the editing and that information may have been altered.

Contradictions in the contested hypothesis arise because of several textual and documental indications. The first instance is a biographical record of Alessio Piemontese made in 1753. Giammaria Mazzuchelli created the profile of a bishop from Piacenza who flourished around 1540. Alessio was here portrayed as a specialist in languages, inclined to study natural philosophy, who had travelled the world for fifty-seven years, and died around 1550.<sup>320</sup> Mazzuchelli clearly takes some of his information from Alessio's printed work. He is also aware of the hypothesis that Ruscelli was the real author of Alessio's *Secreti*, but he states that this is not a generally accepted hypothesis.<sup>321</sup>

The second and third instances come from the Venetian archives. The second instance arises from a request for authorization to print a Latin manuscript from a certain Alessio Piemontese that Ruscelli wanted to translate and publish. The third instance is approval for printing the project.<sup>322</sup> The last instance

319 Ruscelli 1567, fol. 7v.

320 What Mazzuchelli mentions about Piemontese's life, that he flourished around 1540 and died around 1550 may be quite close to the truth. The date 1540 could have been taken from the manuscript and, by the time the printed book arrived on the market, Piemontese had probably already died. It is unlikely that a person working with recipes would sell their own notes and recipe books unless they were copies. Yet, Ruscelli managed to buy the recipe book from Piemontese, according to the archival document. But this is information which Mazzuchelli could not have known, as he believed Piemontese was a vulgar writer. So, Mazzuchelli probably had access to other sources that are unknown to us today. Mukherjee considers that Alessio Piemontese flourished between 1514 and 1547. Thus far, we have been unable to trace where this information comes from. See Mukherjee 2011, p. 69, n. 1.

321 Mazzuchelli 1753, pp. 464–465.

322 Lesage 1993, p. 160.

comes from Alessio's *Secreti* itself. It concerns the recipe for pectoral water used for pneumonia, an inflammatory condition of the lungs. The end of the recipe contains an account of a meeting between Alessio Piemontese and Girolamo Ruscelli. Alessio writes that 'questa acqua mi fu data in Bologna, l'anno mille cinque cento quaranta tre, dal Signor Girolamo Ruscelli' [this water was given to me in Bologna, in 1543, by Mr Girolamo Ruscelli].<sup>323</sup> The fragment provides further confirmation that in that particular year Ruscelli himself suffered from pneumonia.

To contest the hypothesis that Alessio Piemontese and Girolamo Ruscelli were one person, we have drawn evidence from Mazzuchelli, who created a profile of Alessio Piemontese despite acknowledging earlier controversy surrounding his identity. Furthermore, there are two archival documents mentioning the publication by Ruscelli of a translated manuscript of Alessio Piemontese. And finally, there is the textual reference to a meeting and exchange of a medicine between the two. This is ample evidence to show that Alessio Piemontese and Girolamo Ruscelli were two separate people.

Then why the need to proclaim the contrary? What could be the use and importance of this mechanism? At the bottom of this case lies a different understanding of authorship and the involvement of marketing principals. As discussed in the first chapter, the current concept of authorship is affected by nineteenth-century (and possibly earlier) thought. Parallel to this, are the ideas of plagiarism. Today, plagiarism is seen as literary theft, but this view was not always shared in the early modern period, when copying was common.<sup>324</sup> Girolamo Ruscelli would actually buy a manuscript and select, translate, and possibly rearrange the content before publishing. Ruscelli thus became the mediator and vital factor in a process of knowledge transmission. Ruscelli was the translator and editor of Alessio's *Secreti*; he was the driving force behind its publication. The indisputable success of Alessio's *Secreti* might have generated reactions and feelings of pride as the instigator of the publication. By the time the *Secreti nuovi* were published, at least seventy-four editions had appeared over the whole of Europe in only twelve years. And what could be more successful than the most successful book? The 'real' author of the most successful book of course. Note that the way in which

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323 Piemontese 1555, p. 64; pointed out by Stijnman 2012, p. 32. Special thanks to Mark Clarke who made me aware of this article and its content.

324 There are exceptional cases about the understanding of plagiarism such as the one of Albrecht Dürer, subtopic in my thesis of the Advanced Master in Medieval and Renaissance Studies at the Katholieke Universiteit Leuven (2011–2012). See Leemans 2012.

the *Secreti nuovi* claims its authenticity is very elaborate. The whole introductory part of the recipe book is characterised by the same degree of elaboration. Every possibility is grabbed to unveil this exclusive information. The argument is being sold to its public. Whether it was due to pride or a marketing strategy, simply judging from the book itself, one might never discover its true origin.

According to the proem of the *Secreti nuovi*, Ruscelli recovered secrets from ‘libri à stampa, ò à penna così antichi, come moderni’ [printed books, or in pen, so old, as well as modern].<sup>325</sup> By his own admission, Ruscelli used printed books and old and newer manuscripts. There is evidence that the *Secreti nuovi* used printed material in its first section. Folios 8r to 17r contain a faithful copy of the first book of the *Secreti* by Isabella Cortese. However, there are a few clear signs of editorial intervention. The last recipe of the first book in Cortese’s *Secreti* is a recipe for hemorrhoids.<sup>326</sup> This is a Latin recipe, which is incorporated in a group of Italian recipes for a failing kidney. This last part of the first book is entitled ‘a far orinare la renella’ [to make the kidney urinate] and contains three alternative Italian recipes for kidneys, and one Latin recipe for hemorrhoids. Ruscelli probably copied them from the first edition of Cortese’s *Secreti* because he announces the end of the first part after this recipe. What is remarkable is that, having closed the first part, he does not open a second. The recipe following that for hemorrhoids in the *Secreti nuovi*, which is for redness in the face, shows no signs of discontinuity. In fact, the second book itself is announced with a title page on folio 185r. The reason why he probably did not use another edition of Cortese’s *Secreti* is precisely because the second edition of Cortese’s *Secreti* contains a slightly altered and enriched selection of recipes. Apart from faithfully copying the recipes, Ruscelli, or the actual editor, translated the Latin recipe for hemorrhoids and gave the recipe its own space in the publication. In *Secreti nuovi* the recipe for hemorrhoids stands on its own, and has its own title and set of instructions.

Thus, we can clearly see that Ruscelli used various sources, of which the *Secreti* of Isabella Cortese form a significant part. Without acknowledging the precise titles, he mentioned that he used both printed sources and manuscripts, both old and new. Both Piemontese’s and Cortese’s work has been interpreted as

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325 The translation has to be read with intonation. The sense would be that material was borrowed from printed book, or books that are so old that they are written with pen (or feather), and also more modern books, intended handwritten, but more recently. The writer is quite complete about the media he used.

326 Cortese 1561, fol. 9r.

being written by Ruscelli, because of textual overlap. But all of these works are the result of collecting recipes, and collecting and publishing recipes is what a literary mediator does.

### 3 Mediating practitioners

#### 3.1 At the border of quack medicine: the case of Leonardo Fioravanti

Professors of secrets have a lot in common with so-called charlatans or quacks. William Eamon points out several characteristics of charlatans: 1) travelling, 2) self-fashioning, and 3) the use of the printing medium. These three characteristics are now briefly discussed. Travelling takes up a central role in their lives. Somehow, their rootlessness becomes a stereotypical characteristic. Another point associated with charlatanism is self-fashioning, through, for instance, the usage of a pseudonym. Often a nickname or artistic name was used when they were performing in a square. Eamon names 'Il Fortunato' [the fortunate], 'Scampamorte' [the person who escaped death], and 'Il Turchetto' [the little Turk] referring to the remote origins of the person. The third characteristic is that charlatans eagerly make use of the printing press for publicity pamphlets and popular writings.<sup>327</sup> The following sections will look for these characteristics in the life and career of Leonardo Fioravanti's (ca. 1517–post 1583), number ten in Garzoni's list of professors of secrets.

Fioravanti was someone who travelled a lot, he has been in most parts of Italy, literally from the very South in Sicily up to the very North of the country. But his travels went beyond the Italian peninsula, as he had also been to Spain. The fact that Fioravanti travelled is worth noting, but so too is the number of incidents in which he was involved on his travels. Fioravanti was accused several times in his life. In 1568 he was convicted in Venice for being a vagabond and for putting people's health at risk by his unorthodox cures.<sup>328</sup> During his time at the Spanish court, starting in 1576, he was accused by the *Real Tribunal del Protomedicato* for five reasons: 1) the practice of medicine without a license from the Protomedicato, meaning illegally, 2) the use of damaging cures, resulting in the death of a servant of the courtesan Tristan de la Torre, 3) practicing medicine without the proper academic title (that is, a title recognized by one of the three Castilian universities), 4) making medicines in his house, (the right to make and

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327 Eamon 2014, pp. 149–150.

328 Eamon 2014, p. 149.

sell medicines was restricted to pharmacists), and finally 5) the practicing of surgery in contravention of the rules of the authorities.<sup>329</sup> There is also a letter preserved from Fioravanti's days in prison in Milan, addressed to the physicist Nicolò Boldoni and to the deputy of justice, which is dated April 22nd 1573. He was held there because of accusations made by the 'Collegio de' medici'. According to him, he was put in jail because of jealousy.<sup>330</sup> Clearly, Fioravanti clashed with the official authorities wherever he went. And among the accusations was the Venetian judgment that considered him a 'vagabond'. Fioravanti travelled extensively across southern Europe and all over Italy. A common thread during his travels were his conflicts with official authorities, wherever he went.

As mentioned above, Fioravanti was declared a vagabond by Venetian authorities. In other instances, he was judged more favourably, as in the case of Garzoni, who gave him the name 'Il Fioravanti glorioso', which means 'the Glorious Fioravanti'. How others looked upon Fioravanti is only part of his name and fame. Fioravanti himself was interested in building a reputation and a name. One way of name-building was through his publications.<sup>331</sup> Fioravanti promoted himself in a certain way, calling on a few recurring images. He frequently names himself a medical doctor, surgeon, and knight. He is often portrayed as an excellent medical doctor and it is always mentioned that he is from Bologna. It was common practice to present writers or authors in print and indicate the place they came from. However, the fame of Bologna as the oldest university city where medicine was taught, might have been part of the reason why he repeated this association.

Another way to build his fame was through actions on the medical marketplace: he performed so-called miracle cures, which he reported in his writings. One of the legendary stories concerns the successful removal of the spleen of Marulla Greco, the beautiful wife of a Spanish captain. This event was presented by Fioravanti as if it was his own accomplishment. However, Fioravanti only acts in the capacity of a contact person and states that the person who physically performed the opening of the body and removal of the spleen was Andriano Zaccarello.<sup>332</sup> Another cure he claimed to have invented was for the 'mal francese' or syphilis. Fioravanti dealt with second- and third-generation syphilis patients. The first generation of patients had to deal with the worst variant of the disease.

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329 Eamon 2014, pp. 237, 252.

330 Eamon 2014, pp. 232–235.

331 Titles used that resulted out of the search in the USTC.

332 In his recipe book *Il Tesoro della vita humana* [The treasure of human life] Fioravanti talks about the procedure of removing a spleen, where he narrates this episode. Fioravanti 1570, fols 25v–26v.

In subsequent generations, the various stages of the disease evolved less severely. Fioravanti was present in Palermo to cure those in any of the first two stages, which even under normal conditions would disappear by themselves. By the time he left Palermo the next stage had not yet made its entrance.<sup>333</sup> And thus Fioravanti talks about himself and how he managed to cure this terrible disease. Fioravanti used his successes as a means of self-fashioning.<sup>334</sup>

However, notwithstanding Fioravanti's efforts to build his reputation, it was the Venetian judgment of Fioravanti's lifestyle and his frequent troubles with officials that indelibly determined his image and were transmitted through history. William Eamon traced the success and general perception of this professor of secrets. During the nineteenth century a disrespectful image was created around the figure and capacities of Fioravanti. Through the writings of the medical historian Salvatore De Renzi, Fioravanti became the archetype of a charlatan. However, Eamon argues that in Fioravanti's day, this image may have been very different. He poses the question of who would be seen as more significant: Andreas Vesalius or Leonardo Fioravanti? Today people would ask: 'Leonardo who?', but in sixteenth-century Venice they would have said: 'Andrea who?'. Even though Vesalius might have been the founder of modern medicine, his importance is more recognized by average people today than back in the sixteenth century. However, Fioravanti, who published some useful recipes, produced medicines that were sold until well into the eighteenth century in recognized pharmacies and who cured people personally, was better known, and had a name and a reputation.

Eamon tries to re-contextualize the significance of the image of a charlatan. He stresses that the meaning of the word charlatan had a different connotation in the sixteenth century.<sup>335</sup> The Italian word 'ciarlatano' [charlatan/quack] did not have the connotation of a cheater or incompetent medical doctor. Eamon argues that a 'ciarlatano' was a specific type of doctor among various categories of medical actors. Finally, Eamon points out that, even though not officially recognized by the history of medicine, Fioravanti had different and unorthodox – but certainly valid – ideas about sickness and about the body. During the early modern period, it was believed that the balance and imbalance of the humours in the

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333 Eamon 2014, pp. 82–83, Fioravanti 1570, fols 29r-30v.

334 Eamon 2014, p. 130.

335 I thank dr. Robrecht Van Hee for pointing out that common people possibly had no access to more qualitative medicine and, as a consequence, accepted quacksalvers as the norm.

body established sickness and health. Fioravanti's *Nuovo modo di curare* [New method of healing] was simply seeing a disease as something that can leave the body. He also worked with the idea of a dosage or specific quantities of medication for each individual patient. Taking dosages into account was not common practice in the universities Fioravanti had a degree from, Bologna and Naples. He also invented a panacea, a medicine close to what we now know as penicillin, developed in 1908 by the German microbiologist Paul Ehrlich.<sup>336</sup>

Now we have seen Fioravanti's travels and his reputation then and today. The last argument concerns Fioravanti's use of the printing medium. Fioravanti was an avid publisher of medical recipe books dealing with surgery, secrets, and science. Fioravanti wrote nine books under his own name and he edited two additional titles for other authors. All the books were first published between 1561 and 1582. Eamon counts seventy-seven Italian editions in the sixteenth and seventeenth century, including one early eighteenth-century edition.<sup>337</sup> This list only includes his work in Italian, but translations made during his lifetime existed. Below is the short-title list of all first editions of his own work:<sup>338</sup>

1. *Secreti medicinali* (Venice, 1561)
2. *Capricci medicinali* (Venice, 1561)
3. *Compendio de i secreti rationali* (Venice, 1564)
4. *Dello specchio di scientia universale* (Venice, 1564)
5. *Del reggimento della peste* (Venice, 1565)
6. *Scelta di diversi capitoli importantissimi alla cirugia, estratti dalle opere dell'eccellentissimo dottor, et cavaliere, m. Leonardo Fioravanti* (Venice, 1568)
7. *La cirugia* (Venice, 1570)
8. *Il tesoro della vita humana* (Venice, 1570)
9. *Della fisica* (Venice, 1582)

The two works that Fioravanti produced together with other authors are the following:

1. Pietro e Lodovico Rostinio, *Compendio di tutta le cirugia (a cura di Fioravanti e comprendente i suoi Discorsi [...] sopra la chirugia, com la dichiarazione di molte cose necessarie da sapere, non piu scritte in tale modo)* (Venice, 1561)

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336 Bud 2007, pp. 14–15.

337 Eamon 2014, pp. 349–350.

338 This list is based on the bibliography provided by Eamon 2014, pp. 349–350 and has been cross-checked against the USTC search results.

2. Giovanni de Vigo, *La prattica universale in cirugia*. [...] *Et di nuovo aggiuntivi molti capitoli estratti dalle opere dell'ecellentissimo dottor [...]* Leonardo Fioravanti (Venice, 1576)

Most of the subsequent editions were published in Venice, with the exception of two. During his lifetime only one work was published in Turin: the fifth edition of *Compendio de I secreti rationali* (1580). The other work was the sixth edition of *Del reggimento della peste* (1720), which was published in Naples. During roughly two decades of his life, Fioravanti published twenty-six editions. This means that Fioravanti would have published at least one book a year. In reality this fluctuated, on some years there were no books, on others there were two or three publications.

The nature of Fioravanti's recipe books is very similar to other sixteenth-century Italian recipe books. The structure and content of *Secreti medicinali* (1561) will be discussed because of its particular character. The commonly-seen parts in recipe books are the title page, dedication, table of contents with a reference system to chapter and page numbers, and three books or chapters with recipes each starting with a title, chapter number, and body of text. The parts that are not always present in other recipe books are a set of sonnets dedicated to individuals, and three concluding parts. The general topic of this recipe book is announced as medicine. The first book is indeed about medicine, offering prescriptions to cure various types of diseases. From rotten teeth and bad smelling breath to the raising of the dead. The second chapter deals with medicines and the third chapter teaches alchemy, making use of visual material of the various recipients and instruments. Fioravanti's public consists of learned readers and potential dilettantes.<sup>339</sup>

Fioravanti is known as a Bolognese medical doctor and popular writer. He was an itinerant healer, like many of his time. Throughout his life, Fioravanti may have been seen, and may still be seen as a charlatan, but he was certainly a qualified and practicing doctor who contributed to the sixteenth-century medical and literary scene.<sup>340</sup> Fioravanti made his name in the medical marketplace and used this fame to publish medical books to further provide for his living. Fioravanti was a controversial figure who, thanks to his practice and books, spread a great deal of practical knowledge in early modern Italy, that reached all kinds of people.

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339 Fioravanti 1561, fol. 177r.

340 Eamon 2014, pp. 267–278.



### 3.2 The clear case of Sir Hugh Plat

The case study of professional writer Hugh Plat is presented here as one with few mysteries. Obviously, a lot of interesting research questions can be asked about this historical figure but, in several respects, Plat is different from the three previous mediators. First, Hugh Plat is indisputably a historical person, unlike two of the literary mediators studied earlier in this chapter. In the words of Deborah Harkness: ‘Hugh Plat clearly emerges as a better representative of the actual practice of science in Elizabethan London,’ comparing his ‘ongoing practices and experiences with Bacon’s belief that any inquiry into nature must be undertaken within a structured, and highly supervised, system of administration.’<sup>341</sup> Second, Plat was a London-born and London-based mediator, unlike the other three mediators. London in the sixteenth century was a vital center for practical knowledge and provided publications with practical knowledge for the British Islands.<sup>342</sup> English books of secrets were either sold anonymously, or with only the initials of the writer, or with their full name. The latter is most likely to clearly identify the writer, as in Plat’s case. Third, Plat is especially known for his printed books with practical knowledge, but his papers are also preserved. A lot of his handwritten notebooks survive in the British Library. Of the selected group of Italian professors of secrets, not a single manuscript is reported to have survived. Furthermore, Plat’s private library is still preserved, and is partly held in St John’s College Library in Cambridge.<sup>343</sup> Fourth and last, even though he practiced medicine illegally, like Leonardo Fioravanti, he had a clean record with the authorities.<sup>344</sup> This difference might be explained by the different religious and political climate in England, but also by Plat’s position in society. Plat knew a considerable number of highly-placed people, who could offer a guarantee of greater freedom from persecution.

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341 Harkness 2007, p. 214.

342 In the fourth volume of the successful series *The Cambridge History of the Book in Britain* deals with the period 1557–1695, London takes a significant place because of its printing and publishing center. See Barnard and McKenzie 2008.

343 Sir Hugh Plat left his whole library to his son William Plat (d. 1637). William Plat bequeathed his own entire library, which includes the library of his father, to St John’s College Cambridge, where he was matriculated in 1609. The lists of books are found in St John’s College archive, Ms U2, fol. 53; MS U3, fol. 47. Ayesha Mukherjee counts nineteen fiercely annotated books by the hand of Hugh Plat. See Mukherjee 2011, p. 77, n. 27.

344 At least, no objecting materials seem to have survived.

Plat has a lot in common with the other mediators in this chapter, although, as we can see, his profile is slightly different in profile. All of them collected, used, improved, and spread practical knowledge through the providing of expertise, or through the printing press.<sup>345</sup> To compare him to the other practicing mediator, Leonardo Fioravanti, we will show that Sir Hugh Plat's profile was that of a consumer, collector, and mediator of practical knowledge.

Sir Hugh Plat or Platt (*bap.* 1552 – 1608) was a London-born gentleman of immigrant parents. His father, Richard Plat, from whom he inherited his gentleman status, was a Hertfordshire yeoman. Hugh Plat enjoyed the education of the better-educated gentry, first in rhetoric, logic, and philosophy at St. John's College at Cambridge.<sup>346</sup> The year he graduated, 1572, was also the year of his first publication: *The Flouers of Philosophie, with the Pleasure of Poetrie annexed to them, aswel pleasant to be read as profitable to be followed by all men.*<sup>347</sup> After this publication, Plat entered Lincoln's Inn for his higher education.<sup>348</sup> Malcolm Thick compares his best-known publication, the *Jewell House of Art and Nature* (1594) to a contemporary PhD thesis.<sup>349</sup> His two other famous publications, *Delights for Ladies* (1600) and *Floraes Paradise* (1608), appeared after he received his inheritance following the death of his father in 1600.<sup>350</sup>

The writings of Deborah Harkness and Malcolm Thick on Hugh Plat contain a lot of information about Plat's networks.<sup>351</sup> The people from whom Plat acquired practical knowledge can be divided in several categories: courtesans or common people; foreigners, internationals, or locals; an intimate circle or professional acquaintances; famous or anonymous. Any combinations of these categories was possible, meaning that Plat had a large pool of sources. He knew many people at the Inns of Court, the law courts, and the royal court. Among his known English sources were John Dee, Stephen Bateman, Sir Francis Drake, and the circle of Sir Walter Raleigh. He knew the queen's surgeon. Plat also relied for practical knowledge on his foreign contacts, such as the Spanish Ambassador Mendoza. He met foreigners in his own country, on the street, or through other contacts. Among the common and more anonymous people, Plat called on apothecaries,

345 It is not unthinkable that some British authors may have gone to the continent to have their books printed. A good overview about the British book market is Pettegree 2011.

346 Thick 2010, pp. 11–13; 23.

347 Thick 2010, p. 15.

348 Thick 2010, p. 17.

349 Thick 2010, p. 29.

350 Thick 2010, p. 39.

351 Harkness 2007; Thick 2010.

bakers, builders, comfit makers, cooks, dyers, goldsmiths, metalworkers, sailors, saltpeter men, tradesmen, and vintners. He encountered husband-and-wife teams such as Mr and Mrs Edgecombe.<sup>352</sup> Furthermore, as Thick points out, Plat was willing and eager to talk to ‘an itinerant woad-grower about medicine, an aged gardener about plants, a Dutch entertainer about tricks with molten metal, an Italian woman about preserving nuts’, but he would equally talk ‘with fellow gentleman at the Bar or at Court’.<sup>353</sup> Finally, Plat consulted his own intimate circle concerning practical issues. He published recipes from his second wife Judith, such as a salad she invented, and the way she made cheese.<sup>354</sup> Plat’s connectivity to people was extensive; he was interested in talking to anybody about his subjects of interest. Plat’s contacts cannot be pinned down by origin, status, or gender. He would find his information through people he met and talked with. Thick discusses Plat’s methods of information seeking, of which ‘casual conversation’ was one.<sup>355</sup> The study of Plat shows that his writings testify to the collection of oral knowledge, involving people from various layers of society. Plat was well informed about where and from whom he could get certain types of information.

The idea that Plat took information from other individuals becomes clear through his publications. However, Plat also gathered information from written sources. Plat read English books with practical knowledge from, for instance, Thomas Gascoigne, Thomas Hill (ca.1528–ca.1574), and Thomas Lupton (fl.1572–1584). He also had an explicit interest in the books of the Italian professors of secrets. Plat consulted the work of Giambattista della Porta (1535–1615), Girolamo Cardano (1501–1576), and Isabella Cortese.<sup>356</sup> Among Plat’s collection of recipes for ‘wild’ fire, is a recipe copied from Cortese’s *Secreti* of 1574.<sup>357</sup> He was also familiar with other Italian works such as that of Bartolommeo Scappi (ca.1500–1577), a papal cook.<sup>358</sup> Again he also refers to a certain T.T. in his notes, which is a manuscript.<sup>359</sup> Plat made use of oral and textual sources, both in manuscript and print. Plat had a broad spectrum of sources from which he collected material.

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352 Harkness 2007, pp. 217–218; Thick 2010, pp. 32–34.

353 Citations taken from Thick 2010, p. 32.

354 Thick 2010, pp. 11–40.

355 Thick 2010, pp. 259–278, in particular p. 259.

356 Harkness 2007, p. 221.

357 Thick 2010, p. 295.

358 Thick 2010, pp. 122; 155.

359 Thick 2010, pp. 161–162.

Deborah Harkness creates the image of a Plat who 'spent much of his time walking the streets of the City in search of nuggets of practical wisdom about nature, which he copied into small notebooks that he could slip into his pocket before compiling the best and most reliable into published books'.<sup>360</sup> The British Library contains a good twenty of these notebooks, and also family papers with sections in his hand.<sup>361</sup> Just like the professors of secrets, Plat was actively looking for knowledge. He had procedures to follow-up on practical knowledge, from its acquisition to the process of making the knowledge public. His manuscripts in little notebooks were a playground for his work in progress. One can deduce his analysis and sorting processes from the notebooks. They contain different kinds of information, while the printed version is often a clean one. Harkness studied the case of 'Plat's published account of a lantern capable of being carried in high winds without being extinguished'; she compares this printed account with the information about the same topic in his notebook and sees that the published sketch was elegant and elaborate, while the one in the notebook was a rough sketch. The notebook generally contains more detailed information, such as the name of the informant, more precise construction details and sizes. There are marginal notes with the correct terminologies about the parts of the lantern.<sup>362</sup> The notebook is a working document. Matters discussed here are often presented open-endedly; they are a product of collaboration and contingency. The printed books are different, because they contain a selection of practical knowledge Plat considered suitable to be made public. The printed books contain tested and reliable practical knowledge.<sup>363</sup> Plat's notebooks are his work in progress; his publications are the final result.

Plat's most famous work, *The Jewel House of Art and Nature*, is presented as a work 'containing divers rare and profitable inventions, together with sundry new experiments'.<sup>364</sup> Both inventions and experiments were essential to Plat's thought and contribution. The next two paragraphs develop thoughts about his inventions and approach to experiments, because he was a practicing mediator. Inventions in Plat's body of work are improvements on existing ideas. Thick determines four categories of novelties: military, industrial, domestic, and agricultural

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360 Harkness 2007, p. 211.

361 Add. MSS 72, 891; Sloane MSS SL 2170, 2171, 2172, 2175 (fols 71v-86r), 2176, 2177, 2189, 2194, 2195, 2197, 2203, 2209, 2210, 2212, 2216, 2223, 2242, 2243, 2244, 2245, 2247, 2249, 2272, 3574.

362 Harkness 2007, p. 236.

363 Harkness 2007, p. 236.

364 Plat 1594, sig. A1r.

applications.<sup>365</sup> In 1605, Hugh Plat was knighted by King James VI (1566–1625), for his service as an inventor.<sup>366</sup> He was noted for his inventions, some of which were published, others kept in his notebooks, and yet others were meant to be sold. Plat's 'Jewel House' was not only a publication, but also a physical place where he sold his inventions. The bulk of his notebooks consists of lists with specific inventions that could be sold such as macaroni, ink powder, and others. Thick observes an interesting fact about Plat's shop. The name of the shop was intended to be 'Jewel House'. A jewel house is a building for safeguarding jewellery, and was 'a cabinet of curiosities', associated with 'innermost secrets'. Thick argues that clear plans were made but it is uncertain whether the shop was actually completed. There was a namesake exhibition to show his inventions, which was held in his own house.<sup>367</sup> Mukherjee found evidence about the existence of the shop in priced inventories and references to further ideas about furnishing 'our' Jewel House in a letter to Plat from his cousin.<sup>368</sup> If the shop did become reality, Plat's inventions were not merely spread through print. The physical space of a shop would have also contributed to his trademark. Plat's innovations contributed to the creation of new practical knowledge.

As said earlier, in the light of practical knowledge, inventions were improvements on existing ideas. Plenty of these improvements could be developed through experiments. Fundamental in Plat's thought was that the true understanding of nature came through experiment. He had a certain strategy to study nature. First came the selection of an object of study, after he had collected satisfying and useful insights on the matter. Finally he tried to obtain credible information about its properties from a practitioner, or he would observe an experiment, or conduct the experiment himself.<sup>369</sup> In the preface of *The Jewel House of Art and Nature* he wrote that he had 'spent som of my sweetest hours in reading, & many of them in conference, and more in practice, but most of al in contemplation, in regard of al my charge & travel, adventure as boldlie as the rest, to commend the flowers of my youth, to the courteous view of al well disposed readers.'<sup>370</sup> Thus it can be concluded that Plat defined an order of importance in the production of his secrets: reading was the least important, and practice the

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365 Thick 2010, pp. 285–286.

366 Lee 2004; Harkness 2007, p. 233.

367 Thick 2010, pp. 335–337.

368 Mukherjee 2011, p. 75, n.25.

369 Harkness 2007, pp. 225–226.

370 Plat 1594, sig. B4v.

most important action. Reflecting and contemplating took up the largest part of the process.

One of the characteristics of Plat's profile as a mediator is his practice of medicine. This is a point in common with some of the other professors of secrets, in particular Leonardo Fioravanti. Plat, just like Fioravanti in some circumstances, was an unlicensed physician. He openly practiced medicine and even left written records about the patients he cured.<sup>371</sup> He did not have a specific degree in medicine, yet he also traded in medicine. Other practitioners who tried to act like this got into trouble with the College of Physicians. Thick relates the case of John Clark, a 'collaborator' of Plat, or at least somebody who offered cures based on Plat's recommendations. Clark claimed to have been involved with Plat in the writing of two treatises about medicine, which are lost today. He was imprisoned and fined in 1603, but later released from prison. As far as we can determine from our research, there does not appear to be any record indicating that Plat ever came into conflict with the medical authorities. Thick argues that he probably enjoyed protection from clients with high social status.<sup>372</sup> His list of cured patients contains fifty-one names of people he healed between 1593 and 1605.<sup>373</sup> At this point in time, it is unclear if this contains only those healed through personal contact or includes those cured remotely, by passing on medications through another person, or through magic. Thick points out that his medical notes contain a lot of information, but they are silent about how he operated.<sup>374</sup> Plat left documental proof that he made a living as a practitioner, as well as a writer. Even though these documents give no insights into his precise working method, they are of great value for situating this practitioner.

Ayesha Mukherjee creates the image of Plat as a critic. Mukherjee studied Plat's writings and marginalia in printed books and finds his notes informal and more personal. In particular, Plat attacked professors of secrets in his body of work. Mukherjee observes that Plat's criticism is spread over the whole of the body of work.<sup>375</sup> *The Jewel House* contains Plat's opinions on the professors of secrets. What he referred to as 'that magical crew' included Albertus Magnus, Alessio Piemontese, Girolamo Cardano, Antoine Mizauld, Giambattista della Porta, Leonardo Fioravanti, and Johannes Jacob Wecker. He probably got to know

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371 Harkness 2007, p. 230.

372 Thick 2010, pp. 213–214; 216.

373 Harkness 2007, p. 230.

374 Thick 2010, p. 229.

375 Mukherjee 2011, p. 70.

this international company through a work of Wecker: ‘Wickerus, that painefull gatherer and disposer of them all. He juxtaposed this group with the group of ‘professors of rare & profitable inventions’. *The Jewel House* contains three points of criticism. His first argument concerns the language of the professors of secrets. They write in ‘Latine, French, or Italian’, which is not accessible for ‘the vulgar sort of people, who have most need of some profitable inventions.’<sup>376</sup> Plat was actively involved in making knowledge accessible. He made a translation from Latin to English of the three books of Cornelius Agrippa’s *De occulta philosophia* (1509–1510), preserved at the British Library in MS Sloane 2223.<sup>377</sup> Plat expressed his objections against the language of the professor of secrets, which were two-fold. He was not in favor of foreign texts that needed to be translated, and he disapproved of their dark and obscure phrasing.<sup>378</sup> He judged that the philosopher Cornelius Agrippa wrote learnedly ‘though exceeding darklie.’<sup>379</sup> Plat’s second argument against the professors of secrets was the ‘untruth in their best and most especiall receipts’. This was followed by his last argument that the writings of the professors of secrets arose ‘only by a theorical and speculative kind of contemplations, and not drawne from the infallible grounds of practice, [they] have published whole volumes by imagination onely.’<sup>380</sup> This image of Hugh Plat as a critic is studied below, in terms of the criticism of professors of secrets in various parts of his work.

Hugh Plat, a quintessential mediator of practical knowledge, left us with an interesting body of work. Plat was a most active participant in practical knowledge production and dissemination. He used a wide variety of sources and interacted with the knowledge he encountered. He was an improver of existing knowledge and passed on his proposals in his books, which makes him a producer of new or renewed practical knowledge. Plat presumably had a shop where he sold his inventions. But Plat was not only a professional writer and innovator; he practiced medicine without degree. In contrast to his Italian colleague Leonardo Fioravanti, he was never legally prosecuted. As mentioned earlier, this difference may have been due to the local political and religious climate; Plat lived a stable life in London where he enjoyed contacts with plenty of individuals from the high social classes and it is not unthinkable that he benefitted from

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376 Plat, *The Jewel House*, 1594, sig. B3v.

377 Mukherjee 2011, p. 71.

378 Mukherjee 2011, pp. 70–71.

379 Quote from Plat’s work *Floraes Paradise*, taken from Mukherjee 2011, p. 71.

380 Plat 1594, sig. B3v.

their protection. Leonardo Fioravanti, in contrast, was an itinerant medical healer, always a traveller, a wanderer who was not considered a local. The profile of Plat is different from the idea of an expert, who wakes up one day and decides to write to entrust trade secrets to the world. Plat had an investigatory and enterprising spirit, which emerges from his remaining documents.

#### 4 Conclusion

The second chapter of this publication studied patterns of transmission, or how practical knowledge found its way to other people. This chapter has investigated the categories of people who dominate the patterns of practical knowledge transmission. Virtually all people deal with practical knowledge in one way or another. A purposeful selection was thus made, which narrowed the group down to people who have a principal role in the information flux. The focus was on mediators of practical knowledge, meaning that they are responsible for a wide dissemination of information. All mediators collect and reproduce practical knowledge. Since mediators are defined by the extent of their audience or knowledge dissemination network, they have a strong tendency to use print as their way to reach their public, and often as their main source of income. The printing press was a good technology for such a potent medium as books. This section of our study identified the profile and position of two subcategories: 1) literary writers and 2) practicing mediators.

One fundamental idea of this whole publication, and more specifically of the second chapter of Part I, is that recipe books are compilations. That idea flowed into this chapter and focused on individuals dealing with practical knowledge, meaning that they collect, organize, experiment, and divulgate practical knowledge. The idea was rejected that a significant part of printed sixteenth-century recipe books was a result of a monopoly of secrets. The argument that there was a mastermind or a single person, behind a certain selection of Italian recipe books has generally found fertile soil in contemporary research, a mixture of Anglo-Saxon, French, and Italian. However, we argue that these books always resulted from a collaboration between people, directly or indirectly. The most one can do is identify the writer of a certain manuscript or publication, somebody who collects and brings together material.

In the case of the *Secreti* of Isabella Cortese, various people have been pinpointed as the 'true' mastermind behind her work. Among those proposed were the printer Bariletto, the dedicatee Caboga, the permit applicant Navò, and another professor of secrets, Ruscelli. Among these, only Mario Caboga has a reasonable case for being the compiler of Cortese's *Secreti*, but even there, there



is no conclusive proof. In the case of the *Secreti* of Alessio Piemontese, it was certainly Girolamo Ruscelli who put them into print. Later he was identified as the 'true' author, but Ruscelli was the compiler and editor, rather than the author. In fact, Alessio Piemontese, a true gatekeeper of practical knowledge, gathered the information from various sources. His work was published by Ruscelli. Ruscelli is the true mediator because he opened the information flux to the wider public. Alessio is a hybrid between a gatekeeper and a mediator through his original work and its further dissemination. We have shown here that Cortese's *Secreti* and Ruscelli's *Secreti nuovi* are compilations. Plat's work is also a collection of gathered recipes, as is the work of Alessio Piemontese. The literary mediators are presumably Mario Caboga and Girolamo Ruscelli.

Another aspect that is fundamental for practical knowledge creation and transmission is actual practice. The mediating practitioners interact in a significant way with practical knowledge; they conduct experiments in order to innovate or adapt the materials. Our research focused here on two publishing medical practitioners: Leonardo Fioravanti and Hugh Plat. Ironically enough, the Londoner Hugh Plat did not obtain any legal certificate to be a legal practitioner, yet never got into trouble with the established medical authorities. As argued before, his personal network of high socially placed people and the political and religious climate might have worked in Plat's favor. In contrast to this is the case of the Italian Leonardo Fioravanti, who had a degree from two leading universities, Bologna and Naples, but got into trouble with the authorities more than once, both nationally and internationally. Fioravanti has often been associated with charlatanism, like many medical practitioners of his days. His itinerant status meant that he was never considered a local. Both practising mediators operated within legal systems with different rules and working methods; they worked within worlds with different religious and political climates, which influenced how knowledge was treated. What distinguishes both cases from other contemporaries are the number of their publications and their personal fame, and their position as mediators of practical knowledge.

The second chapter of Part I of this book demonstrated through the case study of the *Kunstbüchlein*, that practical knowledge has European dimensions. What originally circulated in Germany, soon found its way to the rest of Europe. In the current chapter, the European dimension of practical knowledge returns. Plat, for instance, was well aware of the existence and status of the professors of secrets, who were individuals from different parts of Europe. The use and transmission of practical knowledge have both a local and an international dimension.

What most mediators here have in common, is a certain level of doubt regarding their identity and the authenticity of their expertise. The case of

Hugh Plat is the clearest and least contested, even though he practiced medicine without a degree. However, Plat's criticism about the category of professors of secrets is very useful to us today. The writings of the professors of secrets, according to Plat, needed translation and simplification in order to be usefully transmitted. Finally, according to Plat, their material was not based on practice. As seen in this chapter, the mediating writers principally collected, edited and published recipes. For the writer, this was a purely textual cycle of events. For the practitioner, this cycle was unthinkable without practice and experience. Plat and Fioravanti both introduced experiments into this cycle and obtained adaptations and innovations of practical knowledge as a consequence.

Both categories of mediators, the literary and the practicing, were often contested while alive, but their image and controversies persisted for centuries. The importance of these individuals for the current chapter is crucial, as they were responsible for the extensive spreading of practical knowledge through print, which is a determining argument to indicate somebody is a mediator. Mediators of practical knowledge were in a determinant position of control of the information flux, for people in early modern Europe and well beyond.

**Part II** *A Very Proper Treatise* (1573): the  
case study of an art technological  
printed book



# Introduction

In Part II of this publication we will make a micro-scale case study about one book title and its context. The center piece of this study is the early modern English printed book *A Very Proper Treatise* (1573). Here the concept of practical knowledge will be narrowed down to art technological knowledge. Ad Stijnman describes 'art technology' as: 'knowledge concerning the production methods of works of art or craft, i.e. knowledge concerning materials, tools, machines, techniques, and sites used in making objects with a certain cultural value / from cultural heritage'.<sup>381</sup> Art technological knowledge is imbedded in art technological sources. For sources see the communicative trinity of Fernando Bouza.<sup>382</sup> It is transmitted through the communicative trinity of oral, visual, and written communication. This triangle indicates the ways in which knowledge or information can travel. The basis of each type of communication is its source. This part of our book will deal with textual sources, specifically with textual sources containing art technological knowledge.

Part II of this book mirrors the structure of Part I. It contains three consecutive chapters that discuss 1) the origin or creation of the work, 2) the dynamics of transmission and dissemination, and 3) the consumption or use.<sup>383</sup> First, there is a brief introduction to the recurring topics, with guidelines for this second part. Chapter 1 of Part II will focus on *A Very Proper Treatise* as a work with a literary tradition, and will use textual criticism to study the content, themes, and sources of the book. Furthermore, it will look into the dynamics of the textual transmission of its text. The focus here is on the text. Generally, the first edition of 1573 will be used, unless otherwise stated. This chapter has an appendix that lists the collation of the six known editions. The main question for this chapter will be: what information was communicated and where did the information come from?

Chapter 2 of Part II will take the study further by historicizing *A Very Proper Treatise* as a commodity, viewing the book as a printer's compilation. The marketing strategies of the printer in the making and selling of this book title will be examined. The printer was the driving force behind this enterprise; he functioned as the (literary) mediator in the dissemination process and contributed

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381 Stijnman 2015, p. 118

382 Bouza 2004, p. 11.

383 The introduction has a schematic representation that includes all six chapters.

exponentially to the dissemination of *A Very Proper Treatise* as a text and as a book. To explore the idea that this book is a printer's compilation a specific idea will be introduced, the idea that the body and index are separated from the title and the printed information in its margins. Textual evidence has been found to sustain the idea that the body and indexes were transformed into a coherent part. The title and the addition and elaboration of information in the margins, form part of the printer's elaborations of the text. He made these annotations in a purposeful way, seeking to broaden its interest and identify its audience. The main question here is: How could the information be spread? Who initiated this process? What was the printer's contribution to the selling of secrets? The short answer is that Richard Tottel probably consulted several sources and selected, collected, rearranged, and modified recipes into a coherent and well-structured work. This chapter examines details of his personal life, business, and working method because his printing business and personality form the context for understanding the making of the book.

Chapter 3 of Part II will investigate the use and the consumers of *A Very Proper Treatise*. For this study, a material approach to each individual copy was required. The main strategy used to reach conclusions was to trace signs of usage. Signs of use can be seen in an owner's signature, a reader's comment, stains caused by human interaction, and much more. All these interactive events are seen as significant for reading and interpreting the life of a book. Because there are many different types of reader interactions, a selection was made of the books and events that provided the most interesting responses to the question: who used *A Very Proper Treatise* and how was it used? The public will be discussed more fully, focusing on usage with an artistic or religious interest. A study about the use of *A Very Proper Treatise* and its actual users has never been attempted before. Through this study it was possible to pin down the people possessed a copy of *A Very Proper Treatise* in their libraries and to understand how the actual use of the book was linked to a subject of interest, but its findings also transcended this.

One of the narratives of Part II concerns the publication of *A Very Proper Treatise*, which is a compilation of recipes. Consequently, our study drew on material from several sources, a common feature for recipe books and works of practical knowledge. The first chapter will focus on the sources of *A Very Proper Treatise*. The second chapter will look at how these sources were brought together and by whom. The second chapter discusses the making of the booktitle *A Very Proper Treatise*. Finally, the third chapter will look at how these sources and this book were turned into new sources. This narrative of the sources will uncover a dynamic transmission of texts and art technological knowledge. It will

become clear that, although a manuscript might be printed, it would also eventually revert back to manuscript form. It could also go back into print after a second manuscript phase.

Another theme running through these three chapters is the public. Susan E. James, who hypothesises that the author of *A Very Proper Treatise* was miniature painter Levina Teerlinc, also argues that the volume was made for a 'professional public'.<sup>384</sup> In contrast, this study takes a more analytical view of the public, and divides the audience of *A Very Proper Treatise* into its intended public, circumstantial public, and actual public. A professional public might have been part of the audience but, as shall be seen, this public was varied in nature.

From reading the text, one gets the sense of a diversified public. Information from one of the sources was meant for 'painters & scriueners', whose targeting as an audience probably goes back to the manuscript tradition that lies at the core of *A Very Proper Treatise*. In another instance, the book proclaims in its title that it is meant for 'gentlemen', which here is collocated as the intended public for this particular printed edition. A title is one of the marketing instruments of a publication, created by the printer. However, the image of the public becomes more complex when one examines the empirical evidence of the actual owners of the book. Tottel had regular customers of his print shop; a group of people living in London, many of whom were law students and lawyers, who were regular buyers. This group differed from the actual audience (as identified in this study), who left physical traces of use and ownership on their books. These people were spread throughout the country. The market for Tottel's books extended beyond the customers of shop.

The narrative of the audience of *A Very Proper Treatise* is complex and will emerge during the three chapters. The first chapter will concentrate on the text of the book and therefore will discuss its intended audience, i.e. the audience the writer had in mind while writing the book, and will take us down two paths. The chapter II of Part II will focus on the circumstantial or contextual audience, i.e. the audience that was part of the editor's and printer's customer network. The third and last chapter will focus on the actual audience. This data is derived from a material investigation of every individual copy of *A Very Proper Treatise*. The conclusion will compare these three different ideas of the book's audience through the various phases of a book's life.

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384 James 2009, p. 294.





# 1 *A Very Proper Treatise* (1573) as a literary product, reflecting art technological knowledge

**Abstract:** This chapter sees the recipe book *A Very Proper Treatise* (1573) as a literary product. It focuses on the textuality and content reality of this booklet. It examines the title page, intended public, utility, color recipes, and it also looks for textual variants in both print and manuscript.

**Keywords:** Intended public, color, transmission, gentlemen, Robert Freelove

## 1 Introduction to a text

The object of our analysis in Part II of this publication, is a concise volume about limning entitled *A Very Proper Treatise*, also known by its running title *The Arte of Limning*. This treatise explains various stages of limning in the form of instructions or recipes, with ‘limming’ or ‘limning’ meaning miniature or watercolor painting.<sup>385</sup> The importance of *A Very Proper Treatise* lies in the fact that it was the first English printed book dealing solely with specialized painting recipes.<sup>386</sup> Today, six editions are known of this book title. This anonymous recipe book was first printed in 1573 and again in 1581 by Richard Tottel in London. Thomas Purfoote reprinted the volume in 1583, 1588, 1596, and 1605. This research found no other editions printed outside of London or Britain. The sixth edition is marked by a slight change in the title: *A Proper Treatise* rather than *A Very Proper Treatise*.<sup>387</sup> Historiographical research conducted for this

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385 The OED reports that the first registered use of the word limning, meaning miniature or miniature painting, appears around 1485 in MS Porkington 10. The concluding section of the manuscripts deals with *the crafte of lymnyng of bokys*. See Halliwell 1855, pp. 72–91; <http://www.oed.com.chain.kent.ac.uk/view/Entry/108510?redirectedFrom=limning#eid>.

386 Also important for enhancing the status of the book in the field of publications, is Gullick’s argument that the text of *A Very Proper Treatise* contains new, previously unpublished, procedures. See Gullick 1979, p. 1.

387 The sixth and last known edition has a slight alteration in the title, which is *A Proper Treatise*. We will only use this title when referring to a precise copy of this edition, or to characteristics of this edition. Conclusions based on this title are sometimes valid for all of the editions and therefore we will often talk of *A Very Proper Treatise* rather than *A Proper Treatise*, in reference to all of them. The texts of all copies are largely

study, brought to light potential seventh and eighth editions, but both cases may be based on misreadings. A 1593 edition was mentioned in Thomas Moule's *Bibliotheca Heraldica Magnae Britanniae*.<sup>388</sup> Moule was aware of the 1573, 1583, and 1588 editions, and says that the book title was printed again in 1593, this has not yet been confirmed by the surviving and identified copies. Likewise, several eighteenth- and nineteenth-century overviews of art books in German, French, and English report the existence of a 1625 edition carrying the name of the 1605 edition, *A Proper Treatise*. However, this information may have been based on a misreading of the year 1605. The type of books that reported the supposed 1625 edition make this misreading more likely, as non of them display much interest in book history or identifying a precise copy, and all of them share the purpose of listing all past publications about art. It is possible that the information of the first overview of 1793 was simply blindly incorporated into the other European editions.<sup>389</sup> Furthermore, *Bibliotheca Heraldica* is an analytical catalogue of books, purporting to list not only book titles, but also their editions. An additional edition of *A Very Proper Treatise* in 1593 is more likely than one of 1625, because this would leave fewer years between the various editions and is more in line with the initial frequency of publication of the editions.

The text of *A Very Proper Treatise* is, in essence, a recipe book. The text is built from a sequence of recipes offering instructions for making certain things. Textually speaking, these individual instructions share the same criteria as many handwritten recipe books. This means that the size of the recipes can vary. Some recipes may be a compilation of instructions from different recipes. In some cases, a recipe may suggest one or more alternative methods to obtain the same effect. For instance, the recipe to make a thin size proposes using 'newe shreds of glovers leather' but, halfway through, it says that 'the like sise maye you make [...] of glue water made of parchement glue'.<sup>390</sup> In other cases, the margins may contain a new text fragment with the word 'nota'. For example, the recipe 'to make a black colour, or an ynke' is long, almost two full pages. The word 'Nota' appears in the margins four times, adding different kinds of information such as the material quality of certain substances or another procedure used by the

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and significantly the same. The minor differences are pointed out in the collation in Appendix 3. Appendix 2 shows the all the traced physical copies, ordered by year of publication and geographic position of conservation.

388 Moule 1822, p. 22.

389 Sulzer 1793; Von Blankenburg 1797; Millin 1806; Elmes 1826; Curtis 1829; De Montabert 1829.

390 Anonymous 1573, fol. 2v.

‘excellent sort of painters.’<sup>391</sup> Finally there is a writer who, occasionally, manifests him or herself in the first person singular, by phrases such as ‘here haue I taught you.’<sup>392</sup> The use of ‘I’ is another recurring characteristic of recipe books.

This chapter will study the text of *A Very Proper Treatise*, through the application of textual and literary criticism, analyzing the work from a textual and literary point of view. Its title, intended public, form, interesting textual instances, and content are all discussed. This chapter will investigate what has been written and how one can detect if it is a compilation. The next chapter will historicize this compilation as a printer’s compilation. Textual criticism has a tendency to restore texts to their original form, but the textual reconstruction of a recipe book is laborious and difficult to obtain, as demonstrated by the use of the rhizome metaphor in the second chapter of Part I. However, this chapter will look for potential sources. This will be done not so much to restore the text, but rather to understand where certain textual and practical traditions come from. This will help the second chapter where we will argue that *A Very Proper Treatise* is a printer’s compilation. We will not only discuss the sources from which *A Very Proper Treatise* was copied, but also how the book was used as source for copying.

## 2 The importance of the title: overview, public, and utility

Before setting out our arguments, the various parts of *A Very Proper Treatise* are listed to facilitate the readability of this section:

1. Title page
2. Body of work: forty-four recipe titles<sup>393</sup>
3. List 1: Index of ingredients
4. List 2: Table of recipe titles

The short title of the work in question is *A Very Proper Treatise*. Before discussing the full title as it appears on the title page, a brief introduction and some other information about the title of the book may be useful. The running

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391 Anonymous 1573, fols 7r-8r.

392 Anonymous 1573, fol. 11v.

393 Several recipe titles contain variant proposals to obtain the desired result. In these cases, a single block of text following the recipe title can actually contain two or more recipes or sets of instructions. We conclude that this recipe book contains more than forty-four distinguished recipes or procedures, but we counted the textual units linked to titles.

title of the work, which appears in the upper margin of all six editions, is *The art of Limming*. The running title appears on each of the pages that contain recipes. In the name index at the end of the book, *A Very Proper Treatise* is referred to as 'this present booke of lymming'. A word often associated with this work is 'limming', as can be observed in the full title of this concise work. The complete title of the first edition is as follows:

'A very proper treatise, wherein is briefly sett forthe the arte of Limming, which teacheth the order in drawing & tracing of letters, vinets, flowers, armes and Imagery, & the maner how to make sundry sises or grounds to laye siluer or golde uppon, and how siluer or golde shalbe layed or limned uppon the sise, & the waye to temper golde & siluer and other mettales and diuerse kyndes of colours to write or to limme withall uppon velym, parchement or paper, & howe to lay them upon the worke which thou entendest to make, & howe to vernish yt when thou hast done, with diuerse other thinges very mete & necessary to be knowne to all suche Gentlemenne, and other persones as doe delite in limming, painting or in tricking of armes in their right colors, & therefor a worke very mete to be adioined to the bookes of Armes, neuer put in printe before this time.'<sup>394</sup>

The complete title on the title page of this book gives an overview of the topics it discusses, its intended public, and the use of the book. The title of the book declares it to be a treatise. According to the OED, a treatise is 'a book or writing which treats of some particular subject [...] formerly more widely used for a literary work in general'. The term 'treatise' is also understood as a description or an account.<sup>395</sup> Treatises can appear in all kinds of literary genres. There are plenty of physical and religious treatises for instance. This particular treatise gives a series or collection of art technological recipes, appearing in the order in which they would be used by a limner. The book starts with the drawing stage, then deals with the preparation of ground or size, and subsequently the preparation of colors to write or limn with. It also contains a recipe for varnish, and finally, other practical knowledge useful for limming. The title gives another indication of its intended audience, who were gentlemen and other people. The title continues by mentioning other books ('the bookes of armes'), which will be discussed below. Finally, the title concludes with the information that it has never been printed before. In addition to the title, the title page contains information about the place it was printed (London), the printer (Richard Tottel) and his shop ('Flete Strete within temple Barre at the signe of the hande & Starre') and the year it was printed (1573). This is the date of the first edition, and obviously this was

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394 This transcription is faithful in the representation of capitals as used in the first edition.

395 OED.

**A very proper treatise,**  
 wherein is briefly sett forth  
 the arte of Limming, which teacheth the order  
 in drawing & tracing of letters, binets, flowers, armes  
 and Imagery, & the maner how to make sundry sises of  
 grounds to laye siluer or golde vppon, and how siluer or  
 golde shalbe layed or limned vppon the sise, & the waye  
 to temper golde & siluer and other mettales and diuerse  
 kyndes of colours to write or to limme withall vppon  
 velym, parchment or paper, & howe to lay them vppon  
 the worke which thou entendest to make, & howe to  
 vernish yt when thou hast done, with diuerse other  
 thinges very mete & necessary to be knowne  
 to all suche Gentlemenne, and other  
 persones as doe delite in limming,  
 painting or in tricking of armes  
 in their right colozs, & therfor  
 a worke very mete to be  
 adioined to the booke  
 of Armes, neuer  
 put in printe  
 before this  
 time.  
 (:)

Imprinted at London in Flete  
 strete within temple Barre at the  
 signe of the Hande & Starre  
 by Richard Tottill.  
 An. 1573.

Cum Priuilegio.

Fig. 2: Title page of the first edition of: Anonymous, *A Very Proper Treatise* (London: Richard Tottill, 1573), Rare Books 60092, The Huntington Library, San Marino, California. (Appendix 2, no. 10)

different for every edition. The very last piece of information on the title page concerns a legal formulation to indicate that the printer had obtained permission to print the book title. Thus, one can conclude that the title page contains essential information about the publication: title, subject, audience, printer, printing place, date of publication, and legal status.

In its title, *A Very Proper Treatise* states that it is ‘very mete to be adioined to the bookes of armes’. The title proclaims or invites the reader to put *A Very Proper Treatise* together with ‘bookes of armes’, which are very ‘mete’ or ‘suitable’.<sup>396</sup> Neither the title, nor the book explains the precise meaning of ‘bookes of armes’. However, the context provides some answers. First, it is necessary to locate a group of works from the first printer of *A Very Proper Treatise*, Richard Tottel; second, contextualize internal references to Tottel’s body of work; and third, use material evidence to strengthen the hypothesis.

Richard Tottel has two other book titles among his body of work with a connection to ‘armes’ and heraldry. The first book is *The Accedens of Armory* (1562), by Gerard Legh. The second book is *Workes of Armorie* (1572), by John Bossewell. What the two book titles have in common with *A Very Proper Treatise*, other than a link to heraldry, is that their first editions were all printed by Tottel. Furthermore, they are also the only three works about arms that Tottel ever published. Words in titles are rarely chosen randomly. Probably Tottel had a clear purpose in printing of *A Very Proper Treatise*, and this thought will be further developed in the next chapter. There are other internal references in Tottel’s body of work, such as the heraldic layer in his work, which will be studied in the following chapter. The 1570 edition of Thomas Tusser’s *Hundreth good Pointes of Husbandry* contains a reference to *Songes and Sonettes*, as a ‘standard of excellence’.

To sustain the hypothesis that the printer was the originator of the work, material investigations of each of the copies of *A Very Proper Treatise* will be used. The copy at Trinity College Dublin corresponds exactly to the suggestion in the title.<sup>397</sup> Volume EE.k.19 binds *A Very Proper Treatise* ‘to the bookes of armes’ in a single binding. There are a few material indications that the current binding replaced an earlier original binding. The binding houses three books, all three books have cropped pages of the same dimension. The leaf edges are

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396 We were unable to find the adjective ‘mete’ in the OED; however, this word was used by Nicholas Hilliard in his *Art of Limning*. The transcription published by Arthur Kinney in 1583 notes in the margin that it means ‘suitable’. Cf. Hilliard 1583, p. 17.

397 Appendix 2, no. 13.

sprinkled with red paint, a habit specific to the seventeenth and eighteenth century. The order of the books is remarkable, as they appear in the order of their first editions:

1. *The Accedens of Armory* (1576, first edition 1562)
2. *Workes of Armorie* (1572, first edition 1572)
3. *A Very Proper Treatise* (1581, first edition 1573)

If the early modern binding had respected the chronological order of their printing dates, the order of the first two books would have been reversed. The person who bound these books together made a selection from other works, because the title page of *The Accedens of Armory* contains a partially lost reference to ‘libris 8’ or eight books that were acquired at a certain moment in time. Another person acknowledged the existence of the three book titles in this volume by numbering each book. The numbering of books, or acknowledging their sequence in a certain binding, was a habit among people with a deeper interest in books. The Dublin binding and collector’s habits are further discussed in the last chapter.

### 3 The intended audience of *A Very Proper Treatise*

One of the first things that draws our attention in the text is the co-existence of different kinds of public for whom it was intended. The intended audience of *A Very Proper Treatise* is defined in two instances in the text. The first appears in the title, the second at the end of the recipes. Both instances show a different aspect of its intended audience. In this chapter the characteristics of its intended audience are discussed. In the following chapter the reasons for this division in audience will be examined.

The full title specifies two groups as its audience: ‘gentlemenne’ and ‘persones as doe delite in limming, painting or in tricking of armes in their right colors’. The term ‘gentlemen’ refers to a social rank in early modern English society, which was organized in an unequal and layered fashion.<sup>398</sup> Because the title page of *A Very Proper Treatise* proposes gentlemen as ideal readers, an examination of what a gentleman was will follow. Keith Wrightson describes the layered English society of that time as a society with ‘degrees of people’, based on the four categories of William Harrison (1535–1593): the first degree was that of gentlemen, consisting of nobility, knights, esquires, and ‘last of all they that are simplie called

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398 Hindle 2001, pp. 655–656.

gentlemen'. The second degree was that of the citizens and burgesses; the third degree contained the yeomen; and finally, the fourth degree included labourers, poor husbandmen, artificers, and servants.<sup>399</sup> The early modern terminology around these categories was not set in stone. For instance, Wrightson points out that Sir Thomas Wilson subdivided society into nobles, citizens, yeomen, artisans, and rural labourers.<sup>400</sup> Wrightson argues that early modern people would categorize society further by conventionalising 'sorts of people'.<sup>401</sup> Many stereotyping adjectives could be applied to describe people (poorer, common, wiser, learned, ruder, vulgar, better, and many more).<sup>402</sup> Following Michael Braddick and John Walter, we will avoid analysing society as a class system, because this would depend on an anachronistic terminology born of the nineteenth century.<sup>403</sup>

The gentleman held a special place in the social order of early modern English culture.<sup>404</sup> However, if one looks at statistical evidence, they were not very numerous. In early seventeenth-century Kent and Lancashire, gentlemen made up two per cent of the population.<sup>405</sup> Also, gentlemen, as a group, had no legal classification.<sup>406</sup> Wrightson points out that gentlemen were 'in strict definition the younger sons and brothers of esquires and their heirs', but in practice this classification was hard to sustain.<sup>407</sup>

The early modern concept of a gentlemen was quite fluid and could be understood in different ways, but it emerged from a hierarchical society based on social status that could be inherited or conquered. The old English proverb 'it takes three generations to make a gentleman' echoes the heraldic need for 'three degrees of gentry, both on the mothers and fathers side'.<sup>408</sup> The bloodline and lineage argument was well developed. In the *Book of Saint Albans* (1486) it goes back to the angels, who were 'creatyd in heven of gentill nature' and 'the begynnynge of mankynde'.<sup>409</sup> This line of thought was already very old at the time, and had been contested long before. Dante Alighieri had already challenged the idea that

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399 Degrees taken from Wrightson 1982, p. 4.

400 Wrightson 1982, p. 5.

401 Wrightson 1994, p. 33.

402 Wrightson 1994, p. 34.

403 Wrightson 1994, pp. 29, 50, 51.

404 Wrightson 1982, p. 7.

405 Hindle 2001, p. 656, Wrightson 1982, p. 8.

406 Wrightson 1982, p. 7.

407 Wrightson 1982, p. 8.

408 Jones 1590, sig. F2v; Shapin 1994, p. 53.

409 Berners 1486, sig. E6r.



gentility was inherited by blood in his *Convivio* or *Banquet*, written at the beginning of the fourteenth century.<sup>410</sup> Another concept about gentlemen took their economic status in society into account, and functioned in a similar way to their bloodline.<sup>411</sup> William Cecil, Baron Burghley (1520/21–1598), wrote that gentility is ‘nothing else but ancient riches.’<sup>412</sup> Henry Peacham (1578–died in or after 1644) defined, in his *Compleat Gentleman* (1622), that ‘touching the mechanicall arts and artists, whosoever labour for their livelihood and gaine, have no share at all in nobiltie or gentry’ but, then again, Peacham also proclaimed that ‘Riches are an ornament, not the cause of Nobilitie.’<sup>413</sup> An interesting working definition of an English gentleman was provided by Guy Miège who wrote in 1703 that ‘any one that, without a coat of arms, has either a liberal or genteel education, that looks gentleman-like (whether he be so or not) and has the wherewithal to live freely and handsomely, is by the courtesy of England usually called a gentleman.’<sup>414</sup> It is interesting to see that, according to Miège, gentlemen did not have to possess a coat of arms. *A Very Proper Treatise* specifically promotes its use for heraldry. Even though, in various instances, the gentle birth, heraldic status, and economical situation of a person played a role in defining whether the person was a gentleman or not, there were other ideas in circulation about education and behaviour being the prime characteristic of a gentleman. Overall then, the understanding of who was a gentleman in the early modern period was characterized by variation and fluidity.

The full title of *A Very Proper Treatise* adds to the group of ‘gentlemenne’ the ‘persones as doe delite in limming, painting or in tricking of armes in their right colors’, in other words, a group who limns for pleasure. Thus, the title leaves considerable room for interpretation of the book’s ideal public. To some extent, this additional category makes it easier to understand the other definition of its public at the end of the recipes. At times ‘pleasure’ was a determining factor in the understanding of what a gentleman was. A critical note was made in the early encyclopedic book of Bartholomaeus Anglicus, originally a thirteenth-century source but reprinted in the sixteenth century: ‘What is a gentleman but his pleasure: but who is more gentle, he that favoureth the poore to the profit of a common wealth, or he that lasciviously spendeth more in one yeere then his

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410 The entire fourth treatise in the *Banquet* addresses the issue of gentility. Cf. Alighieri 1903, pp. 224–382.

411 Shapin 1994, p. 53.

412 Shapin 1994, p. 50.

413 Peacham 1622, p. 10.

414 Barry and Brooks 1994, p. 6.

parents got in 20.<sup>415</sup> The title page of *A Very Proper Treatise* promotes this book to people of a certain standing and people with an interest in limning.

However, elsewhere in *A Very Proper Treatise*, another target public is mentioned. In the concluding words of *A Very Proper Treatise*, the writer addresses its audience as ‘painters & scriueners.’ The definition of a painter is quite straightforward; he or she is an artist or craftsman who makes images or pictures, principally with paint. The OED gives a range of options for a scrivener, as somebody who is ‘a professional penman; a scribe, copyist; a clerk, secretary, amanuensis.’ In his work on the material letter James Daybell points out that both men and women made use of the service of scribes. This was partly due to illiteracy, but it could also be a matter of choice. Circumstances, such as with illness, might dictate the need for a scrivener. It was quite common for household servants, family, friends, or neighbors to write letters as a duty or favor. Scribes and scribes did the same thing for payment. According to Daybell, scribes were ‘semi-professional letter-writers.’<sup>416</sup> An example is worked out in an article on the network of artists around Sofonisba Anguissola, Giulio Clovio, and Levina Teerlinc, which examines the writer and poet Annibale Caro who wrote multiple letters for his acquaintance Giulio Clovio.<sup>417</sup> The OED definition extends the function of a scrivener beyond letter writing to the business of writing itself. This is more in line with the notion of scribes used in *A Very Proper Treatise*, which was linked to writing in general. In fact, some recipes deal with paper or parchment media for colors and ink, and techniques associated with drawing, painting and writing. The manual may also have been intended for home consumption, as there is an ingredient list at the end of the book with substances one could buy at the apothecary.

The connection between gentlemen and arts is not that strange or exceptional. The previously mentioned *Compleat Gentleman* (1622) of Henry Peacham is a manual or guidebook for the gentleman. The text offers twenty chapters covering a broad range of subjects, including the qualities of a gentleman, topics concerning education and communication, and disciplines such as geometry, music, physics, fishing, and war. What is interesting is that chapter thirteen is entirely dedicated to drawing, limning, and painting. The complete title of Peacham’s work says it includes ‘the Art of Limning,’ which may or may not be a reference to *A Very Proper Treatise*. Chapters fourteen and fifteen of his

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415 Anglicus 1582, fol. 185r.

416 Daybell 2012, pp. 23; 74.

417 Leemans 2014b, pp. 35–36.

book concentrate primarily on heraldry. Peacham published earlier works about art technological practices. The first publication was the *Art of Drawing* (1606), which was expanded into *Graphice* (1612), which, in turn, was the basis for the *Compleat Gentleman* (1622). The original nucleus of a work for the education of gentlemen sprang from a work on drawing and painting, in other words, of art technological knowledge. However, for Peacham, limning was one of the interests and abilities of a gentleman.

One can find the opposite approach in the writing of Nicholas Hilliard (1547?–1619). Hilliard is known as miniature painter and goldsmith, but also worked as an author, writing *The Art of Limning*, which remained unpublished during his lifetime. This was probably not the original intention, as Richard Haydocke explicitly invited Hilliard to write about his ideas ‘to the view of all men by his pen.’<sup>418</sup> Hilliard proclaims that limning should be exclusively a gentleman’s activity: ‘I wish it were so that none should medle with limning but gentelmen alone, for that it is a kind of gentill painting’<sup>419</sup> Hilliard also gives a concrete reason why this is genteel painting. One can leave this type of painting at any point without affecting the work, whereas with other painting techniques, the timing and order of work must be carefully controlled.<sup>420</sup> Furthermore, his discourse about the nature of limning reveals Hilliard’s thoughts regarding the involvement of god:

‘Heer is a kind of true gentility when god caleth and doubtles though gentelmen be the metest for this gentill caling or practize, yet not all but naturall aptnes is to be chossen and prefered, for not every gentelman is so gentel sperited as som others are, let us therfore honore and prefferre the election of god in all vocations and degrees.’<sup>421</sup>

Hilliard also stipulates the characteristics of practitioners which he associates with those of gentlemen:

‘the fierst and cheefest precepts which I give, is cleanlynes, and therefor fittest for gentelmen, that the praticer of *Limning* be presizely pure and klenly in all his doings, as in grinding his coulours in place wher ther is neither dust nor smoake, the watter wel chossen or distilled most pure [...] dust or haire weare nothing straight beware you

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418 Richard Haydocke’s invitation to Nicholas Hilliard is frequently mentioned in secondary literature, but mostly without any specific reference. Haydocke’s introduction to the reader is a kind of exposition of current sources of knowledge and activated networks. The precise reference is to be found in Lomazzo 1598, fol. 6r.

419 Hilliard 1983, p. 16.

420 We refer to afresco or ‘a fresco’ painting for instance.

421 Hilliard 1983, p. 17.

tuch not your worke with your fingers, or any hard thing, but with a cleane pencil brush it, or with a whit feather, neither breath one it [...], a good painter hath tender sences, quiet and apt.<sup>422</sup>

The title of Hilliard's manuscript, *The Art of Limning*, is the same as the running title of *A Very Proper Treatise*. Edward Norgate also used the running title of *A Very Proper Treatise* for his work *Miniature*, written at the request of Sir Theodor Mayerne.<sup>423</sup> One can conclude that there was a shift in the meaning of the word liming/limning. In the last quarter of the sixteenth century it indicated painting in books, but, from the turn of the century, limning came to signify portrait miniature painting, as considered by both Hilliard and Norgate. By the end of the sixteenth century, and certainly in the seventeenth century, the connection between gentility and painterly activities seemed to be well established. One of the best-known sixteenth-century works that discussed the qualities of a courtier is *Il libro del Cortegiano*, by Baldassare Castiglione (1478–1529), written between 1508 and 1516, and published in 1528. James Sharpe described Castiglione's work as 'the prototype etiquette book for the Renaissance gentleman.'<sup>424</sup> A translation in English appeared for the first time in 1561 as *The Courtier*, by Thomas Hoby.<sup>425</sup> The fictitious dialogue between historical personalities is dated to 1506, the year in which Castiglione was in England. Castiglione's *Cortegiano* is the first work dealing with this topic.<sup>426</sup>

*A Very Proper Treatise* sought to appeal to gentlemen, a fluid concept which, as we have seen, was not bound by a concrete set of characteristics. In addition, it was of interest to those who needed instruction because of their professional or leisure activities, among whom were painters and scribes. An analysis of the intended audience produces a complex image of the group of people the book tried to reach. In this study we talk about two layers of intended public, because the public is explicitly named in two instances in the book, at the beginning and at the end. The intended public mentioned at the beginning of the book, being gentlemen and people with interests, had status and prestige, either through social status (gentlemen) or through social prestige, because acquiring knowledge and educating oneself can be considered prestigious. The intended public

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422 Hilliard 1983, pp. 21–21.

423 Norgate 1919, p.5.

424 Sharpe 2007, p. 10.

425 Wyatt 2005, p. 37.

426 Other, later works are still relevant, such as *Il Galateo overo de' costumi* (1558), by Giovanni della Casa, and Stefano Guazzo's *La civil conversazione* (1574).

mentioned at the end, painters and scribes, were professionals in the field of writing and painting in books. The book *A Very Proper Treatise*, as printed and sold by Richard Tottel, promoted itself to a group of people with a certain social status. The text of *A Very Proper Treatise*, which is older than the printed book, promoted itself to professionals. Thus, the double layer of its intended public was formed from an old group of the professionals, and a newly-proposed socially prestigious group.

#### 4 The textuality of material culture: colors

In this section we will focus on the content of the text. There are several interesting points regarding the material culture involved in this recipe book, but we will focus here on its approach to colors. *A Very Proper Treatise* provides recipes for many different things such as colors, inks, and varnishes. In total, the text contains recipes for forty-three colors; amongst which there are six blacks, six greens, five reds, five blues, five browns, four oranges, three metals, two greys, two orange-reds, one yellow, one flesh-color, one rose, one purple, and one white.

Understanding the organization of these colors and pigments in *A Very Proper Treatise* can be a complicated matter. For one thing, the naming of coloring agents is inconsistent, and the notion or conception of individual colors differs between cultures and changed over time.

Depending to our sensibility, our definition of certain colors would differ from their early modern definitions. Today, we see the color pink as related to the colors rose, magenta, and fuchsia. But, according to the OED, sixteenth- and seventeenth-century concept of the word pink was surprisingly different. Pink used to be 'a yellowish or greenish-yellow lake pigment made by combining a vegetable coloring matter with a white base, such as a metallic oxide'. Merrifield pointed out that there were various other classifications of pink. There was Dutch pink, Italian pink, brown pink, and many more.<sup>427</sup> Today, the seventeenth-century pink would be referred to technically as 'English pink'.<sup>428</sup> In history, one must generally handle colors with care, since definitions and terminologies change over time.

Nowadays, inks and varnishes are considered distinct from paint colors, but in *A Very Proper Treatise*, we would argue that the defining line between colors, varnishes, and inks can, at times, be negligible. This is borne out by the fact that

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427 Merrifield 1999 [1849], p. clxiv.

428 Eastaugh 2008, p. 156.

*A Very Proper Treatise* includes inks and varnishes in the group of ‘colors’. Thus, a reading of *A Very Proper Treatise* can help us understand how early modern people thought about colors. The text has two interesting cases that expand the idea of what ‘colors’ are. Today, ink comes in two forms, the liquid ink used as writing ink and the thicker ink used as printing ink.<sup>429</sup> Among the blacks described in *A Very Proper Treatise*, one has a dual purpose; it can function as paint or as ink. The introduction to this recipe goes as follows: ‘To make a blacke colour, or an ynke of a good perfection wherewith you may write with a penne or pensel’.<sup>430</sup> The recipe clearly provides instructions to make black ink. A similar procedure with the same purpose is found in *The Secrets* of Alessio Piemontese, where it is clearly described as an ink: ‘To make yncke, or a color to wryte with, in a veye good perfection’.<sup>431</sup> In *A Very Proper Treatise*, the recipe describes what to do when the substance is either too liquid or too dense, and it also provides additional notes. One of the paragraphs summarises the instructions given in the book so far: ‘the waye howe to temper goulde, sylver, and colours to lymme, or to write withall upon velym, parchement, or paper’.<sup>432</sup> The postscriptum to the recipe states that all the colors can be used both to limn and to write, so the distinction between colors and inks is again blurred. This idea that, in *A Very Proper Treatise*, ink belongs to the category of colors, will be further explored in the next section, with regard to varnish.

In *A Very Proper Treatise*, varnish also belongs to this category as ‘vernix’ is seen as a ‘coloring [...] that is more noble and excellent than all other colours’.<sup>433</sup> Today varnish is not necessarily seen as a colorless color. A varnish is a substance ‘used for spreading over a surface in order to give [it] a hard, shining transparent coat’.<sup>434</sup> The text states that a varnish is intended to give color a ‘better glosse or luster’ and for the color to ‘become more brighter by the shining’. It can provide a finish for ‘any color or payntinges’, and can be used ‘upon velym, paper, tymber, stone, leade, copper, glasse etc’. An alternative recipe for varnish includes ‘bengewyn & aquavite’ which ‘is very good to vernishe all thinges aswel paynted as not painted, for it maketh tables & coffers of walnuttree & hebeny to glister, [...] woorkes of iron, copper or tynne, gilted or not gilted’. The reason for using

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429 OED.

430 Anonymous 1573, sig. B3r.

431 Piemontese 1558a, fol. 99r. Both recipes aim for the same procedure and final product, but they come from a different textual tradition.

432 Anonymous 1573, sig. B3v.

433 Anonymous 1573, sig. C1r.

434 OED.

this varnish is because 'it maketh bright, preserueth, aydeth the colour & dryeth incontinent wythout taking any dust or fylth, you may make it cleane wyth a lynnene cloth, or with wpyng the worke with a foxe tayle the which is better.'<sup>435</sup> The recipe for varnish in *A Very Proper Treatise* is an all-purpose varnish that can be used to varnish paintings on various surfaces (panels, paper, etc.), but it can also be used to varnish other kinds of material (wood, stone, metal, etc.). A 'vernix' is used for the same purpose it is today, which is to preserve a painting from external damage and give it a glossy finish. A varnish is a protective and beautifying layer, and it is seen as a 'kynde of coloring' in *A Very Proper Treatise*.

In *A Very Proper Treatise*, colors are not only understood as pigments and paints, but also as inks and varnishes. *A Very Proper Treatise* gives us a broad view of the concept of color at the time, and how it differed from our own. Thus a reading of *A Very Proper Treatise*, provides a basis for understanding color in sixteenth-century England.

## 5 Textual transmission involving *A Very Proper Treatise*

*A Very Proper Treatise*, like most early modern recipe books, is a compilation of existing knowledge, and is built from a complex structure of layers. In the next chapter, we will argue that *A Very Proper Treatise* is a printer's compilation; one layer indicates that the body of text is that of a compiled manuscript, while another layer shows that the printer turned this compiled manuscript into a saleable product. The editorial and visual design, which was one of the printer's trademarks, is left for the following chapter.

We will focus on potential sources, which were mainly situated within the manuscript tradition. This is suggested by the title page of the first edition, which announces that it 'was neuer put into printe before this time', a formula used to indicate that this work had previously circulated in manuscript. As Michael Gullick says, the recipes are older than the book itself, but none of the sources are named.<sup>436</sup> From our research, it seems that there has been no attempt to discover which sources *A Very Proper Treatise* might have borrowed from. The contention that it drew on earlier sources, involves several lines of argument. One of them concerns the editorial layer for which the printer was responsible, and this will be discussed in the second chapter of Part II. Other elements may or may not be the work of the printer. Many of them share characteristics with recipe books

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435 All quotes concerning varnish come from Anonymous 1573, sigs. C1r-v.

436 Gullick 1979, p. 1.

in general, and are therefore considered later in this chapter in a discussion of whether *A Very Proper Treatise* belongs to a textual tradition. Below, we will demonstrate that the text is a product of multiple authorship. Sole authorship of a recipe book would mean that a practitioner had written all the recipes from scratch, based on his or her own experience. Multiple-authorship would entail active collaboration or significant copying. It would also mean that the text, as we know it today, has a history of selections and de-selections, involving several generations of texts and people. We maintain that the knowledge and recipes contained in *A Very Proper Treatise* had a textual origin, borrowed from various sources. Furthermore, we will reveal these various sources, and propose a reconstruction, naming potential sources and focusing on textual sources.

The reliance of recipe books on other textual sources was fully discussed in Part I. In the case of *A Very Proper Treatise*, this is clearly visible at the level of the individual recipes. An underlying or previously existing manuscript tradition can be gleaned from what we call its 'organized fragmentation', in which a single recipe has traces of several other recipes. Many recipes in *A Very Proper Treatise* are written as a single recipe, but are actually a fusion of several. Most of the color recipes have a double function. They include a first paragraph with the recipe for the actual color, followed by a second recipe with instructions on how to make its 'false' and/or 'sadder' version. These are variants of the color, for use as shades and highlights. To obtain a 'sadder' version of a color, it must be 'dimmed, that is to say, sadder, or darked'<sup>437</sup> with another color. The description of 'sadder' appears in one of the prescriptions. The recipe 'to temper orpiment or masticot for a yellow' prescribes grinding orpiment and masticot with gum water, and adding a little saffron to the masticot to make it livelier. The second paragraph proposes that mixing the orpiment with chalk, which would lighten the color. The recipe continues by suggesting that the color can be made 'sadder, or darked with oker de luke, or with browne of Spaine'.<sup>438</sup> This means that adding either oker de luke (a yellow oker) or brown of Spaine (an earth color)<sup>439</sup> will make the yellow darker. *A Very Proper Treatise* borrows from other recipe books and works with practical knowledge, both in terms of the book and of individual recipes. The practical knowledge contained in *A Very Proper Treatise* was

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437 Anonymous 1573, fol. 5r.

438 Anonymous 1573, fol. 5r.

439 Brown of Spain was described as an earth color in Sir William Sanderson's work *Graphice*. Sanderson 1658, p. 82.



compiled from other practical knowledge that it represents in an organized way, hence the term ‘organized fragmentation.’

The manuscript precursor of *A Very Proper Treatise* probably did not stand the test of time. Gullick does not discuss or name the sources that *A Very Proper Treatise* borrowed from. With this research, we take the opportunity to start a discussion of the problematic field of sources, which in the case of *A Very Proper Treatise* has been left undeveloped. First, we suggest a working hypothesis that needs further consideration. Richard Tottel printed *A Very Proper Treatise* for the first time in 1573, the same year as the death of his father-in-law Richard Grafton (1506/7–1573). Grafton was himself a printer and left a large part of his professional belongings to his son in law, a process begun before his death.<sup>440</sup> It is possible that Tottel received a recipe book about limning via Grafton. Another indication linking *A Very Proper Treatise* to Richard Grafton was his becoming a freeman of the Grocers’ Company in 1534.<sup>441</sup> At that time, Apothecaries were part of the Grocers’ Company.<sup>442</sup> The link between the Apothecaries and *A Very Proper Treatise* is apparent in the contents of the book, which prominently lists the ingredients one can buy at the ‘Poticaries’. These are interesting links between Richard Tottel’s network and his publication, but for the moment they remain speculative. Further research about this hypothesis may reveal whether Grafton might have owned any work similar to *A Very Proper Treatise*.

In addition to this hypothesis concerning the possible transmission of a manuscript, our research has identified a manuscript that may have served as a prototype source and used, directly or indirectly, to compile *A Very Proper Treatise*. During the seventeenth century the Grammar School of Coventry preserved a 1525 manuscript concerning *The art of making the gilded and painted letters which we see in old Mss.*<sup>443</sup> This manuscript was compiled by Robert Frelove (born in or before 1501 – dies after 1556).<sup>444</sup> The same manuscript was given the Latin title *Artem illuminandi libros* [The art of illuminating books] and was described as *Tractatu de decorandis & pingendis literis* [Treatise about the

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440 Ferguson 2015.

441 Ferguson 2015.

442 <http://www.apothecaries.org/society/our-history>.

443 Bernhard 1697, p. 1460.

444 Robert Frelove must have been born in or before 1501 as he was at least 26 years old in 1527, the year in which he became a freeman of the Mercers of London. The minimum age of admission to the Mercers was 26. Cf. Database Livery Company: <http://www.liverycompanies.info/a-z-list-of-companies/livery-companies-database.html>. The last reference that we were able to discover, dates from 1556. This derives from a marginal note in one of his autograph manuscripts in which Frelove calculated how

decorating and painting of letters].<sup>445</sup> Currently no trace of this physical manuscript can be found, however, the text is not lost. In 1690, the text was copied by Humfrey Wanley, and Wanley's copy was copied by Elizabeth Elstob in 1710. Today, this manuscript is preserved at the Bodleian Library as MS Ballard 67 (art 4). Elstob's copy was copied at least three times by George Ballard, first in 1735, the year Elstob and Ballard met.<sup>446</sup> The other two were made around the middle of the eighteenth century. These copies are preserved at the University of Glasgow as MS Hunter 330, at the Society of Antiquaries as MS SAL/MS/6, and at the Bodleian Library as MS Douce 392.<sup>447</sup> Elstob entitled the work *To make such coloured and gilded letters, as are to be seen frequently in old MSS*. Ballard extended the title: *Directions how to make such coloured and gilded letters, as are to be seen frequently in old manuscripts*. Robert Freelove's text survives in four copies made in the first half of the eighteenth century. As far as our research can ascertain, it seems they have never been studied in detail, or seen in relation to *A Very Proper Treatise*.

If *The art of making* corresponded to its four known copies, then the work was clearly a compilation in English. The book contains forty-six recipes, the last twenty-two of which come from a work entitled *Temperantia colorum alumnata* [A manual for the tempering of colors].<sup>448</sup> This last group of recipes may have been a translation from Latin. *A Very Proper Treatise* contains forty-four recipes, of which thirteen have a significant textual overlap with *The art of making*. With respect to *Temperantia colorum alumnata*, there is only one corresponding

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many years ago a certain fact had happened. Cf. London, British Library, MS Sloane 3604, fol. 269v.

445 Tanner recognises that Freelove's manuscript was written in English. Albrecht Haller reported that it was bound together to a herbal codex. Cf. Tanner 1748, p. 297; Haller 1771, p. 668.

446 After the death of her brother, with whom she undertook joint research, Elizabeth Elstob vanished from the academic scene. She opened a school in 1718, which failed. She then disappeared into an anonymous life under the name Frances Smith. The antiquarian George Ballard contacted Elstob with a proposal to collaborate on a project about the Saxon language, which she refused, although a meeting took place at Ballard's request. Correspondence by letter persisted until at least 1753. In 1748 Elstob entrusted her manuscripts to Ballard's hands. Elstob died in 1756. See Chance 2005, pp. 15–16. The written correspondence between Elstob and Ballard is preserved in Oxford, Bodleian Library: MSS Ballard 43, 64, 67.

447 Glasgow, University of Glasgow: MS Hunter 330; London, Society of Antiquaries: MS SAL/MS/6; and Oxford, Bodleian Library: MS Douce 392.

448 This is a free translation, more literally it would be: 'the educated tempering of colours'.

recipe. The title of the first recipe of *The art of making* could be a valid description for the whole of the text: 'How thowe shalt temper colourys to gilde or to lymme with and to make thyne assyse'.<sup>449</sup> This title would indicate instructions valid for the whole of the book.<sup>450</sup> The focus of *The art of making* is the making of colors. Recipes not directly dealing with the making of colors were collocated in the recipe book wherever they were useful. This means that drawing instructions and the making of size are in one recipe. Similarly, the recipes for glair and for gum water only appear when needed. For instance, gum water is discussed after the recipe for azure, in which gum water is required. To compare the textual interdependency of the individual recipes, an exemplary synopsis of the first recipes of both texts has been created, and is found below.

The OED says that a synopsis is a 'brief or condensed statement presenting a combined or general view of something; a table, or set of paragraphs or headings, so arranged as to exhibit all the parts or divisions of a subject or work at one view; a conspectus'.<sup>451</sup> A synopsis here is understood as a table to outline the material in order to look for concordances and differences. This method makes it possible to study the text systematically. The first recipe of *The art of making* is part of a larger recipe that includes the making of size, which, in *A Very Proper Treatise*, stands as an individual recipe. This part of *The art of making* contains forty-nine words. The same recipe in *A Very Proper Treatise* leaves out fourteen words and adds twenty-three new ones. The words in black in the recipe of *The art of making* indicate words left out. The words in black in the recipe in *A Very Proper Treatise* indicate the new or added words. Both recipes have thirty-four words in common. The most significant change in this case is the replacing of 'plummet' with 'pencell of blacke lead, or with a cole made sharpe at the poynthe'. Later in the recipe, one learns that the plummet is to be used with ink, meanwhile in *A Very Proper Treatise* the reader gets the information about the drawing device immediately. The writing devices mentioned in both texts, 'plummet' and 'pencell of blacke lead', may just mean the same things. The OED points out that 'plummet' was used to refer to 'a stick of lead for writing, ruling lines, etc' or also 'a lead pencil'. Again, *A Very Proper Treatise* offers descriptions and synonyms, keeping the same sense of the recipes. There is a coherence between the two texts, not

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449 Oxford, Bodleian Library: MS Ballard 67, fol. 30r.

450 We wonder whether it might be the incipit of the 1525 manuscript composed by Robert Freelove.

451 OED.

**Tab. 2:** Synopsis fragment between *The art of making* (1525) and *A Very Proper Treatise* (1573)

<b>Synopsis</b>	
<i>The art of making</i> (1525)	<i>A Very Proper Treatise</i> (1573)
How thowe shalt temper colourys to gilde or to lumme with and to make thyne assyse.	The order of drawing or tracing
Furste thow shalle with a <b>Plummet</b> trace thie letter and <b>also</b> thie Vinnetts, and thyne Imagerye Iffe thow make anie Than shall thou with a small penne Drawe all <b>that</b> thow portred <b>wyth thie plummet with blacke Incke,</b> Than <b>shalle thowe</b> make assyse <b>for thie golde</b> on this <b>manner</b>	First thou shalte with a <b>pencell of blacke lead,</b> <b>or with a cole made sharpe at</b> <b>the poynte</b> trace <b>all</b> thy letters, and <b>sett</b> thy vinetts <b>or flowers,</b> and <b>then</b> thy imagery yf <b>thy wilt</b> make any <b>And</b> then shalt thou with a small pen drawe al thy <b>hast</b> portred, then make <b>thy</b> sise on this <b>wise</b>

only textually, but also in terms of content. Thus, we came to the conclusion that, at least, both works have a common textual source.

The example above is representative of most cases of textual overlap between the two books. There is significant correspondence in the wording and word order, with most changes involving terminology or technical instruments. When *The art of making* talks about books, it is referring to a parchment surface. *A Very Proper Treatise* changes this to ‘your vellym, parchment or paper’.<sup>452</sup> This change reveals an awareness of the use of multiple supports. *A Very Proper Treatise* proves to be a more user-friendly text, which first deals with the basics of the art, such as different recipes for size, glair, and gum water. It then deals with a series of colors, and finally provides recipes for varnish and additional advice, on issues such as proportion. Both texts share a sense of order. In the case of *The art of making*, the colors take the lead. All the other recipes are subordinate, and this is closely reflected in the order. In the case of *A Very Proper Treatise*, the focus is on the complete art of limning, which is reflected in the chronological arrangement and choice of its recipes.

It is hard to establish whether *A Very Proper Treatise* copies directly from *The art of making*. The textual interdependence is significant enough to establish

<sup>452</sup> Anonymous 1573, fol. 10v.

that both texts at least have common roots. Direct copying does not always mean that a text is copied literally, as it often goes through various phases of elaboration. However, in this case, *A Very Proper Treatise* only includes a small selection of the recipes from *The art of making*. Furthermore, in terms of individual recipes, there are quite a few alterations. It is possible that the compiler of *A Very Proper Treatise* used *The art of making* as a direct source, but even so, many other sources would also have been used. Another possibility is that the compiler took another existing manuscript and put it into print with a little elaboration.

Our main concern here, is to point out this relationship using a previously ignored source. We have not been able to discover a direct connection between Richard Tottel, the printer of *A Very Proper Treatise*, and Robert Frelove, the writer of the 1525 manuscript. However, multiple secondary connections can be found. A possible chain of contacts linking Robert Frelove to Richard Tottel goes via Stephan Vaughan, Thomas Cromwell, and Richard Grafton. Frelove was linked to Stephen Vaughan (b. in or before 1502, d. 1549), a London mercer and administrator. Vaughan operated a mercantile network in the Low Countries of which he testified in one of his writings: 'after the exigencies of the same, so that I am never at rest. I am now at Barrugh [Bergen op Zoom], now at Bruce [Bruges], now at Gamut [Ghent], now here now there, so that not without exceeding trouble can I satisfy to all those to whom I minister [...] as to please all if it were possible.'<sup>453</sup> On September 5th 1538, John Hutton died, and Vaughan was elected as his successor. In his new position, Vaughan assumed the function of King Henry VIII's ambassador to the Netherlands and became governor of the Merchant Adventurers. In the same year, Vaughan became a diplomat in the service of Sir Thomas Cromwell.<sup>454</sup> Vaughan mentioned Frelove in three of his letters to Thomas Cromwell, in which he talked about Frelove with concern and suspicion.<sup>455</sup> Cromwell was the patron of Richard Grafton, Richard Tottel's father-in-law.<sup>456</sup> Unfortunately, because of lack of evidence, no credible hypothesis can be proffered here. Various people knew one another, and can be linked, but there is no guarantee that manuscripts were passed along this chain.

In sixteenth-century England, several sources must have stemmed from the same rhizomatic root. In her earlier study, Susan E. James concludes that *A Very Proper*

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453 London, British Library: MS Cotton Galba B.x, fol. 9r. This is most likely a state of account of his later years.

454 Blanchard 2008.

455 London, British Library: MS Cotton Galba B.x, fol. 57; Ref. SP 1/58 fol. 147; Ref. SP 1/76 fol. 10.

456 Ferguson 2015.

*Treatise* 'may have been printed from a manuscript copy already in circulation, a fairly usual practice. This possibility is suggested by the handwritten notebook now in the V&A. Her argument is based on 'variations in phrasing and some additions and subtractions of material' not found in *A Very Proper Treatise*, meaning that it might not be a direct copy, but an indirect copy or a copy of a copy.<sup>457</sup> James gives no reference for her findings. At the National Art Library (NAL), housed in the V&A building, a manuscript can be found that corresponds to the manuscript James studied: NAL 86.EE.69. Our research thus provides this missing reference and contextualizes one of its texts, *The way how to lyme*, as derived from the same textual tradition as *The art of making* and *A Very Proper Treatise*. We contend that *The way how to lyme* of NAL 86.EE.69 does not draw on *A Very Proper Treatise*, but on a variant source of *The art of making*. Some similarities are striking; while others are simply too different to be directly copied from each other. For instance, in the version of the recipe for applying gold or silver on size in *The way how to lyme*, entire phrases are missing or eliminated. Furthermore, its phrasing and the instruments mentioned are also different. *The art of making* prescribes a pencil or a squirrel's tail to lay the size on the paper, and for burnishing, it indicates a dog or horse tooth. In the case of *The way how to lyme*, a pencil made of calaber's pencil or the taile of a squirrel are recommended, along with the tooth of an ox. The text of *The way how to lyme* proposes very specific instruments, which were most likely copied from elsewhere. A calaber is a Siberian squirrel, which is more specific than just a squirrel, and the ox tooth clearly came from a different source. Thus, we conclude that Robert Freelove's compilation must have been one of many in circulation.

As mentioned earlier, *The art of making* was not the only potential source for *A Very Proper Treatise*, and we argue that it borrowed material from multiple sources, of which *The art of making* is a potential candidate. Several of the techniques in *A Very Proper Treatise* are much older than the recipe book itself. For instance, the recipe to 'make letters of the color of gould without gould' has a long history. The manuscript compilation made by Jehan Le Begue in 1431, discussed earlier in the first chapter of Part I, contains several recipes for making gold without the use of actual gold. None of the recipes is a literal copy, but one in particular, describes the same procedure. Both recipes use orpiment and fine crystal. These recipes were widely disseminated, and it is challenging to find an exact recipe that *A Very Proper Treatise* copied, as many manuscripts have vanished and copies were not always literal.

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457 James 2009, pp. 293–294.

**Tab. 3:** Synopsis between *A Very Proper Treatise* (1573) and MS Harley 1279

<b>Synopsis</b>	
<b><i>A Very Proper Treatise</i> (1573), fol. 10r</b>	<b>MS Harley 1279, fol. 62v</b>
To make letters of the colour of gould without gould. <sup>a</sup>	To make letters of the colour of gold, without gold <sup>b</sup>
Take one ounce of Orpyment and one ounce of fine Christall, and <b>beate</b> eche of them by him selfe to <b>poulder in a brasen mortar</b> . Then <b>grynde</b> them wel together wyth <b>glayre upon a paynters stone</b> , then it ys <b>perfect</b> to write withall.	Take an ounce of Orpimente, and an ounce of fyne Crystall, and <b>braye</b> them eche on by hym self, than <b>myngle</b> them together with the <b>whyte of Egges</b> and wryte with hyt.

<sup>a</sup> Anonymous 1573, sig. C2r.<sup>b</sup> London, MS Harley 1279, fol. 62v.

As demonstrated above, *A Very Proper Treatise* was based on pre-existing art technological knowledge and texts. But the transmission of knowledge did not stop at this printed publication. *A Very Proper Treatise* was also used to copy from. This copying tended to involve a pattern of transmission similar to that which had led to *A Very Proper Treatise* itself, and we will illustrate this with one concrete clear example. British Library MS Harley 1279 is a sixteenth-century heraldic manuscript. It contains colored escutcheons, recipes, and information about books. The recipes are on a mixture of medical and art technological subjects. The art technological recipes seem to come from various sources, and it contains one recipe that was apparently copied from *A Very Proper Treatise* or a textual variant. There are a few small differences, especially in the second part of the recipe, which uses a simpler vocabulary and fewer technical terms.

Other recipes contained in *A Very Proper Treatise* ended up in printed books of practical knowledge. Among the examples, is the recipe for varnish, which was taken up in John Bate's *The Mysteries of Nature* (1634).<sup>458</sup> Bate presumably copied from *A Very Proper Treatise* because the text is quite faithful. Nonetheless, there are certain formulas that are abbreviated to improve the readability of the recipe. For instance, 'To make a kynde of colouring called Vernix wherewith you may vernishe golde' becomes in Bate's work 'To make colouring, called Vernix: to varnish gold'. The recipe is slightly shorter because of its simplified wording. The

<sup>458</sup> Bate 1634, pp. 130–131.

same can be seen in the recipe for making ‘white letters in a blacke field’, which was copied from *A Very Proper Treatise*, but becomes slightly simplified in *The Mysteries of Nature*. The above examples demonstrate that recipes from *A Very Proper Treatise* can be found in both manuscripts and printed sources.

## 6 Conclusion

The original source at the heart of *A Very Proper Treatise* was intended for ‘paynters and scriveners’. However, the title page indicates another public, consisting of gentlemen and people with an interests in its content. Above we presented an account of the textual narrative concerning the material culture in this book, with a focus on colors, and lastly, we discussed the textual transmission concerning the book title of *A Very Proper Treatise*.<sup>459</sup> Our study of the text and recipes of *A Very Proper Treatise* reveals a typical rhizome pattern of transmission of practical knowledge. The rhizome theory is studied in more detail in the second chapter of this publication, using the example of the German *Kunstbüchlein*. This case study of *A Very Proper Treatise* shows that its printed text originated from various sources. The transmission continued after its publication, and the same text, or variants of it, are found in new texts, in both manuscript and print form. However, there is no guarantee that these new texts were copied directly from *A Very Proper Treatise*. This is exactly how a rhizome grows: it can originate from any point. Comparable texts created after the first publication of *A Very Proper Treatise* may still have used one of its sources than *A Very Proper Treatise* itself.

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459 This can be linked to Part I of this publication.



## 2 Selling secrets. The print business as a mediator in the dissemination of art technological knowledge

**Abstract:** This chapter examines the process by which the printer prepared the first edition of *A Very Proper Treatise* (1573), situating it within the context of the commercial print trade. Attention goes to the editing process, the visual design and the potential public of Tottel's printshop. Questions about cheap print will be raised.

**Keywords:** Richard Tottel, printing business, potential public

### 1 The introduction to a book

As the previous chapter focused on *A Very Proper Treatise* as a literary product, it considered the text's potential sources, but the search for the writer or maker of the volume was left aside. This chapter will argue that *A Very Proper Treatise* is a printer's compilation, by which is meant that the printer Richard Tottel collected, edited, printed, and disseminated the book as we know it today. This conclusion differs significantly from that of Susan E. James who, in 2009, attributed the authorship of this book to the Flemish miniature painter Levina Teerlinc.<sup>460</sup> This study is less concerned with searching for 'the' author, but instead focuses on the printer as a mediator who brings knowledge together with an eye on the market, and consequently spreads this knowledge.

The chapter will focus on the creation of a book as a commodity or marketable product. The difference in approach compared to the previous chapter is its emphasis on the role of the printer in the genesis of the book. The previous chapter established the context of the book's text in relation to knowledge and its tradition, whereas this chapter will consider the position of the book within the book market. The source material of *A Very Proper Treatise* is pertinent, because the printer may have had access to various sources, rather than a finished manuscript to publish. The editorial and visual design of the book will also be examined, and the economic aspect of early modern life will provide the context for the *raison d'être* and process of making *A Very Proper Treatise* (1573).

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460 James 2009, pp. 293–297.

## 2 Tottel's trademark

Richard Tottel (born in or before 1528–1593) was the printer of the first edition of *A Very Proper Treatise* (1573). Tottel ran a successful printing business most of his life. The volatile nature of private enterprise means that the continuing success of a business can often only be judged in hindsight. Then, as now, there was no guarantee that a business would continue to flourish.<sup>461</sup> During his career, Tottel experienced some unsuccessful episodes, but the successes, for which he is remembered today, remain impressive. Tottel attempted to obtain three patents during his career. The three patents were for the exclusive right to print law books; for the printing of cosmographical books and tables; and for the domestic manufacture of paper.<sup>462</sup> Tottel was granted the first patent in 1554, during the reign of King Edward VI, one year after he became a London freeman, and later had the patent confirmed by both Queen Mary I and Queen Elizabeth I. The two following attempts to get patents for cosmographical books and tables and for the making of paper failed. However, the successes in obtaining a patent for the printing of law books meant that, by 1577, Tottel had built a law book monopoly, and the printing of law books remained a constant throughout his career. In this chapter, following Christopher Knott's reasoning, we argue that Tottel had the capacity to understand the book market and adapt his products accordingly.<sup>463</sup> Before Tottel's law books appeared on the market, students and lawyers had to deal with Latin and French documents. Tottel provided the market with accurate translations and clear explanations.<sup>464</sup>

Paul Marquis argues that Tottel's successes were aided by his enterprising, money-driven personality, rather than ideologically-driven actions.<sup>465</sup> Very early in his career, he was able to establish long-lasting networks, within groups with different religious orientations. Tottel, it would seem, was most likely a Catholic and, during the reign of Mary I, he benefited openly from his denominational position.<sup>466</sup> But in later periods, under Elizabeth I, he still managed to maintain his monopoly in law publications. He was also aware of the need to assess risk in publishing. The value of his patents increased during his lifetime, meaning that,

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461 The many transformations the early printed book market went through are contextualised by Andrew Pettegree in *The Book in the Renaissance*, see Pettegree 2010.

462 Greening 2015.

463 Knott 1996, p. 311.

464 Marquis 2013, p. 14.

465 Herman 2013, p. 112.

466 Greening 2015.

according to Christopher Knott, he became 'less willing to risk capital on other types of publishing.'<sup>467</sup> This also meant that side publications, or those unrelated to law, had to be examined and studied before they were pursued. We will develop this argument further and confirm it through a study of his most famous publication, *Songs and Sonettes* (1557), in comparison with the publication of interest here, *A Very Proper Treatise* (1573).

Tottel married within the trade, a common practice for people in the early modern period. In 1559, he married Joan, daughter of printer-historian Richard Grafton, when she was no more than fourteen-years-old, meaning that Tottel was at least seventeen years older than his new bride. The connection between Tottel and Grafton must have started prior to this, because, at the time of the marriage, Tottel had already inherited Grafton's types and woodcuts, following the failure of Grafton's print business some years earlier.<sup>468</sup> Another connection was that Grafton was also a printer of law books.<sup>469</sup> The connection between Tottel and Grafton also extended to the titles they printed. Tottel published three of Grafton's works: 1) the first edition of Grafton's *Abridgement of the Chronicles of England* (1562); 2) the publication *A Chronicle at Large and Meere History of the Affayres of Englande* (1569); and, 3) the compilation *A Little Treatise Containing Many Proper Tables* (1571), a work with sixteen editions between 1571 and 1611.<sup>470</sup> In all three cases, Grafton was recognized as the author and the person who gathered or collected the material to make the work, and Tottel was recognized as the printer.<sup>471</sup> The remarkable success of this work might have given Tottel the inspiration to apply for a patent for printing 'tables' as mentioned above. Richard Grafton died in 1573, which is the exact same year Richard Tottel printed *A Very Proper Treatise*.

1557 marked a remarkable period in Tottel's career; it was also the year the Stationer's Company was formalized, with Queen Mary I and King Philip granting a group of ninety-seven men a royal charter. Richard Tottel's name

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467 Greening 2015.

468 Byrom explains that this fact applies to a group of printers that went out of business for the same reason: Richard Grafton, John Day, Edward Whitchurch, and William Copland. Byrom 1927–1928, pp. 203–204; Ferguson 2015.

469 Warner 2013, p. 19.

470 The title of this work was subject to change by later printers, when *A Little Treatise* was changed into *A Brief Treatise*.

471 In the case of the chronicle, Tottel had the actual printing job done by Henry Denham. See title page of Richard Grafton, *A Chronicle at Large and Meere History of the Affayres of Englande* (London, Henry Denham, for Richarde Tottle, 1569).

appeared as the sixty-seventh. The Stationer's Company, or the 'Community of the mystery of art of Stationery of the City of London'<sup>472</sup> was founded to regulate and order England's growing book trade.<sup>473</sup>

Alongside these external developments, 1557 was an important year for Tottel's print business. As mentioned above, throughout most of his career Tottel dedicated much of his energy to the printing of law books. In 1557 he printed nine law books, but during his career the volume and intensity of non-legal output decreased. During 1557, Tottel printed several noteworthy works, including the *The Workes of Sir Thomas More Knyght*. Earlier, Tottel had published two other works by More: *A Dialogue of Comfort against Tribulacion* (1553), and *Utopia* (1556), but *The Workes* was an impressive project that demonstrated Tottel's reach in the book market. The complete volume contained 1,458 pages and was a very labour- and capital-intensive product, only made possible through the joint investments of Tottel, John Cawood, and John Walley. Furthermore, Tottel printed the *Litletons Tenures* of Sir Thomas Littleton, an elementary land-law book that was frequently reprinted. Finally, Tottel printed three works in meter: Lord Henry, Earl of Surrey's, translation of *Certain bokes of Virgiles Aeneis*; Thomas Tusser's *A Hundreth Good Pointes of Husbandrie*; and, finally, *Songes and Sonettes*.

Thomas Tusser's *A Hundreth Good Pointes of Husbandrie* became one of Tottel's bestsellers. Tottel reprinted this book about agricultural, domestic, and moral economy at least ten times and it was reprinted numerous times in the following century.<sup>474</sup> The first edition contains one hundred stanzas of four verses each. From the 1573 fifth edition onwards, the book was significantly expanded to become *Five Hundreth Points of Good Husbandry*, but the second edition already contained additions. A study of Tusser's work reveals several interesting features of Tottel's printing business. Tusser's book contains several educational measures regarding the use of books. This attention towards how books were

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472 Kastan 2003, p. 98.

473 Kastan 2003, p. 98; Shaw 2007, p. 227. An organizational structure for the producing and selling of books was already well established by the end of the fourteenth century. This resulted in 1403 in the establishment of the Guild of Stationers, the direct predecessor of the Stationers' Company. See Bland 2010, p. 183; McKenzie 2002, p. 554.

474 Other printers for *A Hundred Good Pointes of Husbandrie* in the sixteenth century were William Seres, Henrie Denham, Richard Yardley, and Peter Short; printers in the seventeenth century of this work were Robert Waldegrave, Nicholas Okes, Thomas Purfoote, John Okes, Thomas Radcliss, and Mary Daniel. One printer of the seventeenth century has been left only with the initials JM.

consumed is also found in *A Very Proper Treatise*. Tusser's work discusses how to deal with books. *A Very Proper Treatise* deals with how to embellish books. Both books address the position of books in the lives of people, whether for beginners or advanced book users. Another point that Tusser's *A Hundreth Good Pointes of Husbandrie* has in common with *A Very Proper Treatise* is its user-friendliness. From the third edition of *A Hundreth Good Pointes of Husbandrie* (1571), the work contained a table, which is an instrument at the end of the book that facilitates navigation through the book. The 1585 edition, again, is 'better ordered' and contains two tables. *A Very Proper Treatise* also has a table to assist the reader. The table in Tusser's work did not appear in the first edition and this is significant. At the time of the first publication of Tusser's work, Tottel had already indexed some other publications. The later addition of a table can be seen as a printer's decision made for the benefit of the reader. Both publications demonstrate Tottel's concern as a printer-publisher. Tusser's work is a nice example of how Tottel was a trendsetter. Tusser's volume contained practical knowledge, and in the early establishment of trends, Tottel helped to define new genres for the book market.

The other work relevant for the discussion of Tottel's work mechanisms is *Songes and Sonettes*, an early anthology of English poetry. It was not the first poetical miscellany in English. Earlier, between 1535 and 1539, *The Court of Venus* was published, but this did not achieve the popularity of *Songes and Sonettes*.<sup>475</sup> *Songes and Sonettes* might not have been the first, but it was certainly, as Peter Herman says, an 'unusual, if not entirely unprecedented, project'.<sup>476</sup> This work is also known as *Tottel's Miscellany*, and was a bestseller in its day and a long-lasting printing success.<sup>477</sup> Amanda Holton and Tom McFaul attribute an important position to this 'little book that kick-started the Golden Age of English literature'.<sup>478</sup> The success of *Tottel's Miscellany* can be deduced from the number of editions that appeared and the frequency of the following up of the various editions. Until the end of the sixteenth century *Songes and Sonettes* had (at least) eleven prints. To use the words of Paul Marquis: 'The popularity of Tottel's compilation is evident. It was reprinted twice in 1557, once between 1557 and 1559, twice in 1565, and once each in 1567, 1574, 1585, and 1587'.<sup>479</sup> Until 1574, all

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475 Bowers and Keeran 2010, p. 163.

476 Herman 2013, p. 112.

477 The use of *Tottel's Miscellany* goes back to Arber's edition of *Songes and Sonettes* of 1870. Cf. Arber 1870; Warner 2013, p. 1.

478 Holton and McFaul 2011.

479 Marquis 2013, p. 13.

editions were produced by Tottel himself. *Songes and Sonettes* has an interesting printing history, as the second edition followed extremely closely after the first edition. The first edition appeared on June 5th and the second edition on July 31st. The time between both editions is remarkably short. Another interesting point is that the second edition is much more substantial than the first. Generally, one can say that the different editions included different selections of lyrics and different structural arrangements, but the second edition is probably the most noted in this regard. *Tottel's Miscellany* is a publication of major importance.

The popularity of this book has not only been measured by its number of reprints, it also appeared in the frequently-cited Shakespearean play *The Merry Wives of Windsor*, printed in 1602. The character of Slender says: 'I had rather then forty shillings I had my booke of *Songes and Sonnets* heere'.<sup>480</sup> Marquis pointed out that George Puttenham, author of *The Arte of English Poesie* (1589) refers to *Tottel's Miscellany*.<sup>481</sup> As mentioned earlier, Tusser's work also contained a reference, and many more were pointed out by Stephen Hamrick.<sup>482</sup> *Tottel's Miscellany* did not only trigger positive sentiments in its time. In a historical recontextualization, Peter Herman concludes that the collection's political and religious undertones may indicate that there were parties less friendly towards this publication.<sup>483</sup> *Tottel's Miscellany* was a well-known and widespread anthology that generated responses across society.

The main importance of *Tottel's Miscellany* for this current study is, first and foremost, connected to Tottel's work methods and marketing strategies. The editing of sources is a characteristic and trademark of Tottel's print shop, and was not uncommon for printing shops at that time. A lot of work has been done on the editing process of *Tottel's Miscellany*, which originally appeared as *Songes and Sonettes* (1557). In his recent work, Paul Marquis argues that *Songes and Sonettes* was not really a miscellany, but rather an anthology.<sup>484</sup> A miscellany would be a more arbitrary mixture than an anthology. An anthology is a more arranged and sequenced collection, such as the complex pattern of organization in *Songes and Sonettes*. Tottel made several changes in his *Songes and Sonettes*; he added titles to the poems and sonnets, and he changed the text. For instance he rearranged parts of Wyatt's lines to obtain more regularity and smoothness in

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480 Byrom 1927–1928, p. 232.

481 Marquis 2013, p.13.

482 Hamrick 2013, pp. 164–199.

483 Herman 2013.

484 Hamrick 2013, p. 7.

the metrical system. Marquis argues that this 'reshaping' formed part of Tottel's editorial design.<sup>485</sup>

This feature is certainly applicable to *A Very Proper Treatise* as well. Both works have a lot in common, as they are primarily collections of texts, whether lyrics or recipes. A collection is a gathering of items. The OED definition of a collection is 'a number of objects collected or gathered together, viewed as a whole; a group of things collected and arranged'.<sup>486</sup> The arranged aspect of a collection is especially applicable to *A Very Proper Treatise* as the prescribed procedures are presented as a series of coherent and consecutive actions in order to embellish books. But the collection of *Songes and Sonettes* was also a work of selection and ordering, which is exemplified again in the re-edited second edition. *Songes and Sonettes* and *A Very Proper Treatise* are results of the same marketing strategy; they were fruit of the same mind, Richard Tottel's. Painstaking editing can therefore be said to have been one of Tottel's trademarks.

Another of Tottel's qualities was how he dealt with language; an argument that can be divided into two parts: vernacular and eloquence. Scholarship always goes back to Tottel's intro to the reader in his *Songes and Sonettes* where he praises 'our tong' and makes known his intention: 'to publish, to the honor of the Englishe tong, and for the profit of the studious of Englishe eloquence'.<sup>487</sup>

Among all of Tottel's publications, *Songes and Sonettes* was a work composed with particular eloquence, which was important for the native public.<sup>488</sup> As mentioned earlier, Tottel was the first to publish law books in the vernacular. Seneca's tragedy *Troas* (1559) was also published in English, with the intention of promoting the vernacular. This work was presented as 'a simple new yeres gift' to the new Queen Elizabeth I, so she would 'se[e] some part of excellent an author' in her own tongue.<sup>489</sup> Christopher Warner concludes that this was not a sign of patriotism, but rather a claim that the English language was fit and apt to obtain 'peer-status with the other elite dominions of Catholic Christendom'.<sup>490</sup>

In fact, Tottel's public was the native English book buyer. Tottel must have had a clear idea who the buyers at his book shop were. Warner points out that a significant number were likely to have been students and lawyers from the Inns of Court, which was located close to his print shop 'in Flete strete within

485 Terminology 'reshaping' borrowed from Hamrick 2013, p. 3; Marquis 2013.

486 OED.

487 Bates 2013, p. 40.

488 Warner 2013, p. 160.

489 Seneca 1559, sig. A3r.

490 Warner 2013, p.4.

temple Barre at the signe of the Hande & Starre.<sup>491</sup> In general, this public would have been English-speaking. Therefore, another quality of Tottel's work was the adapting of his publications to this circumstantial public.

Another point of interest in the discussion of Tottel's printed body of work concerns questions of authorship and editorship. This current study will pay less attention to the search for 'the' author and will focus on the printer as the driving engine behind its creation and the mediator in the dissemination process. Room is left for a potential editor or editors that Tottel may have appointed to undertake the actual editing work, but the printer was the first and final authority in the process of publishing. In fact, Warner convincingly argues in his book about the making of *Songes and Sonettes*, that law students were involved in this process.<sup>492</sup> Texts were often the product of multiple authorship or multiple collaborations. The involvement in collaboration of additional and external editors in the case of *Songes and Sonettes*, is surprising, considering the large scale of the enterprise. The project of *A Very Proper Treatise* would have been small enough to be handled by a single person. According to Tottel's own writing, he often did the work himself. In one instance, Richard Tottel declared himself to be the author of one of his publications. In his translation of Seneca's *Thyestes* (1560) Tottel looks back to the previously published work *Troas* (1559) and confesses that he was the 'author' before excusing himself for the bad work delivered, blaming the printer who 'corrupted all' and 'now flythe abroad as I it wrote.'<sup>493</sup> Tottel was the main figure behind his publications. He collected, selected, translated, ordered, adapted, and published, with and without the help of others.

A study of Tottel's working methods and strengths determines one of the contexts within which *A Very Proper Treatise* can be interpreted. The context of the English native book market and the marketing techniques of the printer Richard Tottel show that there was a favourable climate for producing a printer's compilation containing knowledge of art technological knowledge. Tottel published vernacular user-friendly books, which he adapted to his public through his specialized editorial interventions. *A Very Proper Treatise* was in line with Tottel's printing interests. The next part will zoom in on Tottel's editorial design of *A Very Proper Treatise*.

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491 Citation taken from: Anonymous 1573, fol. 1r; Warner 2013, p. 161.

492 Warner 2013.

493 Byrom 1927–1928, pp. 213–214.



### 3 Editorial design of a printer's compilation

*A Very Proper Treatise* is a compilation, a characteristic of recipe books, as we demonstrated in Part I. New recipe books are the result of a complex and often varied process of collecting, experimenting, and selecting recipes. There are several reasons to assume that *A Very Proper Treatise* was a printer's compilation, meaning that the work was compiled and edited by its first printer, Richard Tottel. In the previous section the context of *A Very Proper Treatise* was established. This section will offer analytical arguments based on textual research.

#### 3.1 ...neuer put into printe before this time

The title page of *A Very Proper Treatise* concludes with the words 'Cum Privilegio', Latin for 'with permission'. This indicates that the printer had the exclusive right and authority to print the work.<sup>494</sup> This monopoly was usually valid for a specific book title or a specific niche and for a limited period of time.<sup>495</sup> The title of the first edition of 1573 announces that this book was 'neuer put into printe before this time', a clause not repeated in any of the following editions. This formula is interpreted here as an indicator that the text existed in manuscript form before Tottel printed it for the first time. Since it was not printed before, it therefore existed in manuscript circulation. Tottel was probably well aware of the use of this formula. Several early modern editions convey the same message on their title page. A good example is *The works of Geffray Chaucer newly printed, with dyvers works whiche were never in print before* (1532), printed by Thomas Godfray. Critics have questioned the authenticity of this publication. Kathleen Forni follows philologist Walter William Skeat (1835–1912) in the disattribution of some works, meaning a rejection of the supposed authorship of a certain work. In this case, it is believed that certain works were not by Chaucer, contrary to previously prevailing opinions. Forni suggests that the printer published other medieval verse under Chaucer's name because of his fame and marketability.<sup>496</sup> This particular book title retained the formula in a second edition in 1542, printed by the future father-in-law of Richard Tottel, Richard Grafton.

A title and content search of early modern printed books in EEBO reveals more works with a similar message. Among these are recipes and sermons, which were presumably first available in manuscript before being published.

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494 Prytherch 2005 [1988], p. 187.

495 Carter and Barker 2004, p. 177; Kastan 2003, p. 94.

496 Forni 2001, pp. 26–27.

A clear example is found on the title page of Andrew Boorde's *The Breviarie of Health*. The first edition of this recipe book was printed in 1547, although the edition of interest is that of 1587. The subtitle added to the 1587 edition goes as follows: 'Now newly corrected and amended, with some approved medicines that never were in print before this impression, & are aptly places in their proper chapters, by men skillfull in phisicke and chirurgerie.'<sup>497</sup> The principal message is that some medicines, or recipes, were added that were never in print before. These medicines seem to have been in existence, as they are 'approved'. As we demonstrated in Part I, practical knowledge switches easily between oral and textual transmission. It does not specifically state that these 'approved medicines' were written down in manuscript, but it is not unreasonable to assume they were.<sup>498</sup> In another example from roughly a century later, the third edition of Matthew Norwood's *The Seaman's Companion* (1678), added a new part 'never in print before.'<sup>499</sup> In this case, instructions concerning navigation were acquired while at sea, and written down in manuscript. Later, once ashore, the navigator's writings were put into print.<sup>500</sup> What is important here is that the title page announced that existing work was published for the first time and sold on the book market.

It is presumed that the text of *A Very Proper Treatise* was created in 1573, and this is confirmed in the final paragraph of the text. The concluding words, referring to either its compilation or printing, are: 'Finished anno domini 1573'. The majority of the editions, those of 1573, 1581, 1583, and 1596, recognize the 1573 edition as a crucial year for *A Very Proper Treatise*. Two editions are different in this respect. The editions of 1588 and 1605 do not refer to the 1573 edition in their concluding lines, but give 1588 and 1605 respectively as their years of publication.

It seems that the editions that conclude with '1573', recognized that the text was produced in that year; while the two other editions of 1588 and 1605, refer to the year of the edition was printed rather than the year the text was created.

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497 Boorde 1587, sig. A1.

498 In other books the same formulation appears also in different parts, such as in the foreword for the reader, see Record 1582; or such as individual parts that were never in print before, such as in Foxe 1583.

499 Title page of Norwood 1678.

500 Logically, there were no active working printing presses at sea. Writings made at sea were reworked in order to be put to print once ashore. Writing pirates or buccaneers are the topic of the PhD dissertation by Daniel Lange, a TEEME fellow of the second cohort.

**Tab. 4:** Closing words of the various editions of *A Very Proper Treatise*

<b>Edition of <i>A Very Proper Treatise</i></b>	<b>Closing words of the text</b>
1st edition (1573)	Finished An domini 1573
2nd edition (1581)	Finished Anno Domini 1573
3rd edition (1583)	Finished Anno Dom. 1573
4th edition (1588)	Finished, Anno Dom. 1588
5th edition (1596)	Finished Anno Dom. 1573
6th edition (1605)	Finished Anno Dom. 1605

These differences could be simply due to the printer who actually carried out the manual task, taking certain information, such as the date the work was completed, for granted. This closing formula does not guarantee that the work came from manuscript tradition, but it also does not exclude it.

### 3.2 Concept of two layers

Throughout the work there is a strong sense of organization, coherence, and clarity, which is also reflected in the level of the order of the recipes and also in the structure of the book. The title gives an overview and served as a marketing tool to attract the interest of potential buyers. However, there are several inconsistencies in the text. This chapter argues that these internal disparities are the result of a specific editorial process initiated by the printer Richard Tottel. To better understand the various phases of this editorial process, the text is divided into two layers. The co-existence of the two layers is visually represented in the scheme below. The scheme shows the three main parts of the text: the title, the body, and the index. These three parts are subdivided into relevant categories. The first layer is not shaded and represents text provided from an existing source or sources that have been modified to make them publishable. The parts in bold may or may not have come from another text, but they certainly come from a different source altogether. These bold zones are textual additions consciously incorporated by Richard Tottel. Textual evidence is found to support the argument that the body and the indexes were transformed into a coherent part. More concrete information about this will follow below. The title and marginal information are the work of the printer. He made these additions in a purposeful way, in order to enlarge it and specify its public and interests. There are inconsistencies between both the title and the body, and the body and the index, and these will be explained below.

**Tab. 5:** Content matter of *A Very Proper Treatise*

Title	<b>Title, summary of subjects, intended public, use and concrete printing details</b>
Body	Sequence of recipes <b>Printed marginal notes</b> Conclusion: summary of actions, intended public
Index	Names of ingredients Chronological table of content

### 3.3 The allocated heraldic application

One characteristic of the sections of the table above, is that they provide heraldic information. The title introduces this work as painterly knowledge with a potential heraldic application. This heraldic layer is found in the body of the text, but only in the marginal notes. The heraldic layer is isolated from the rest of the text and does not interact directly with the recipes. In fact, a reader who skims the title page and fails to read the printed marginal notes, would not realise that the knowledge it contains could serve heraldic purposes.

The title of *A Very Proper Treatise* promises to teach ‘the order in drawing & tracing of [...] armes’, which is a work for ‘persones as doe delite in limming, painting or in tricking of armes in their right colors.’ Even though the booklet is concerned with the art of limming in general, rather than with heraldic painting, the title sells the book as a work ‘very mete to be adioined to the bookes of armes.’ This was discussed in the first chapter of Part II where we concluded that a group of works from Richard Tottel’s press, provide the context for understanding this clause, as he published other books about ‘armes’ and heraldry, as mentioned earlier.<sup>501</sup>

However, the printer also intentionally added suggestions in the margins about which colors could be used for the painting of arms. In total, nine of the marginal notes have indications for heraldic painting. These marginal notes indicate which colors can be used for the coloring of arms, being: azure or light blue, gold yellow, vermilion red, emerald green, pure white, sable or black, purple or violet, sanguine or murrey color, and orange or tawny. It should be stressed there is no explicit internal reference to arms in the text itself, with information and references to arms and heraldry being solely limited to the title and the marginal

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501 Legh 1562; Bossewell 1572.

notes only. The argument here is that these areas were the realm of the editor and printer, so the text could remain unchanged. The title and the marginal notes are simply additions that complement the original text.

There are numerous reasons why these additions can be attributed to Richard Tottel. The marginal notes connect the text to the title, which promises to teach the art of limning to people with heraldic interests. Without the marginal notes, there is no explicit reference in the book to heraldry; a consumer would have to rely on previously acquired knowledge in order to make the connection between making a black color and using sable in heraldry, the correct term for black in coats of arms. By reaching out to those with an interest in both heraldry and limning, Tottel enlarged his public. Lastly, he also promoted previous work about heraldry through this book title. Thus, we conclude that the heraldic layer in *A Very Proper Treatise* is a layer that has been added to the original manuscript, and is thus a product of the sales techniques of the printer Richard Tottel.

### 3.4 The internal editing process

The idea of order, structure, and navigation aids are already signs of editing, but the body of the text has other elements that reveal an editing process. We would argue that there is a difference between the body of the text and the indexes in this regard. The following two examples illustrate this.

The first index provides the names of the colors and the ingredients that one can acquire at the 'poticaries' or apothecary. This list purports to be complete and represents exactly those ingredients used in the recipes. However, it can be seen that not all the ingredients on the list appear in the body of text. This chapter argues that this disparity is a sign of editing. The following ingredients appear in the index, but cannot be found in the body of the text: resin, alabaster, cow milk, ewe milk, rue juice, red nettle juice, scraped cheese, and lye [alkalized water]. All of the ingredients had a potential purpose in art technology and applications in the medieval and early modern setting. Examining the vocabulary of the missing recipes, one can easily see that older knowledge appears to have been incorporated at some stage before editing. By 'older knowledge', we mean knowledge that had been in circulation for a longer time, possibly a very long time. An interesting illustration of this is the instance of rue juice.

The juice of rue was used to make a green color and green ink, and appears in the MS of Jehan Le Begue, the Padua MS, and Ruscelli's *Secrets* (1565).<sup>502</sup>

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502 Merrifield 1999 [1849], pp. 66, 80, 286, 650, 666, 684; Piemontese 1558b, fol. 95r.

The OED says that rue is a southern European plant species ‘which has yellow flowers and bitter, strongly-scented feathery leaves, and was formerly much used for medicinal purposes’. Spelling was not uniform in the early modern period but, from OED statistics, ‘rewe’ appears to have been a common variant spelling from 1425 until 1539, while after 1570, the spelling ‘rew’ became the common spelling. Richard Tottel used the spelling ‘rewe’ in the first two editions from his printing press.<sup>503</sup> All the subsequent editions were derived from Thomas Purfootes’ printing press. Purfoote copied the Tottel edition and, in all cases also included the ingredients not mentioned in the recipes. In all the Purfoote editions, from 1583 until 1605, the spelling variant ‘rue’ was used, which appears to be a more constant spelling throughout the history of the English language.

Most ingredients on the list are generally grouped by recipe, when possible. For instance, the recipe that prescribes how to make a ‘thinne sise’, proposes the following:

‘The like sise maye you make [...] with the milke of grene figges alone, or with the milke of spourge, or of wartwede, or with the yellowe milke of grene salendine, or with the iuce of garlike or of onyon heades or with the water and grease of snailes.’

A selection of these ingredients, from the milk of green figs to the onion heads, is listed in precisely the same sequence listed in the index, towards the top of the third column. In this chapter, we suggest that the grouped ingredients might belong to the same missing recipe. Since there are four groups of ingredients it is possible that four recipes or part of recipes were initially included and subsequently removed, without adapting the index.

The second example illustrating an internal editing process arises from the second index, which provides the recipe titles with a reference to their folio number. In most cases the titles are the same or very similar to the titles of the actual recipes. But in a few instances, there are some alterations worth mentioning. The index indicates two different ways of making ‘a grounde or a syse’. The actual recipes naturally prescribe how to make size, but the titles are more complex, longer, and introduce a more varied vocabulary. To show this schematically, the most exemplary instances are represented in the table below.

One can imagine two possible reasons for these differences. A) The recipes are the original text and the index was altered, or, B) conversely: the index maintained the original recipe titles, while they were adapted in the body of the text. Here, we favor the second possibility. The index contains more simplified

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503 This could be an argument that Tottel used an older source.

**Tab. 6:** Synopsis between the body and index of *A Very Proper Treatise* (1573)

<b>Synopsis</b>	
<b>Body of <i>A Very Proper Treatise</i> (1573)</b>	<b>Index of <i>A Very Proper Treatise</i> (1573)</b>
To make a dooble syse or bottome to laye or settle silver or goulde upon called an embossed ground	To make a grounde or a syse to lay golde or silver upon
To make a thinne sise or bottome to laye or settle silver or golde upon called a single grounde	To make synes other maner of wayes

versions of the titles, which is common in all-purpose recipe books. In this research, we encountered plenty of medical recipe books providing solutions to cure the plague, followed by many recipes ‘for the same’ and ‘in another way’. Moreover, *A Very Proper Treatise* was intended to teach an art, and contained an educational programme. Thus, to pursue its purpose of conveying information about limning in an accessible way for tis public, the internal editing process was primarily concerned with the text rather than the index.

*A Very Proper Treatise* was printed for the first time in 1573. This can be confirmed both through bibliographic research and by studying the title page. Most likely, the printer used an existing manuscript as a starting point and may have selected and added material from other sources, both manuscript and printed. After bringing the material together in a logical order, other phases of editing took place to harmonize the various parts. In the next section the visual layout will be examined.

#### **4 The visual design of practical knowledge: the title page as a visual marketing tool**

*A Very Proper Treatise* was a tiny booklet that presumably did not cost a great deal. But could this booklet be considered a ‘cheap print’? In this section, we will illustrate how the history of its visual aspect tells us more about the marketing of *A Very Proper Treatise*. The objects of examination are the title page, the type and the paper quality, all of which are part of the text’s material context.

The expression ‘don’t judge a book by its cover’ is a metaphorical expression that is used to warn against prejudging the intrinsic value of something based on its appearance alone. Isolating this from its metaphorical use, it reveals something about the book market today, where the cover is an important marketing tool. In fact, it is the first thing a potential buyer or user sees when he or she

picks up the book, or checks the book title on Amazon. In sixteenth-century England, books were sold unbound. The first thing a potential buyer would see was the title page and thus the title page was the prime instrument for seducing a potential buyer.

The first edition of *A Very Proper Treatise* has a very elegant title page (See Fig. 2). The text of the title page appears in three text blocks, of diminishing size. The title is the biggest text block, followed by the printing information, and concluding with a brief notice about its publishing rights. Two fonts are used, the beginning of each text block is in roman, followed by black lettering. The amount of roman type used decreases, like the text blocks. The first text block contains the title and has three lines in roman type, of which the first is bigger than the following two. The printing information uses two lines in roman and three in black lettering. Finally, the printing rights are explained in a single line that uses roman. The number of lines in roman decrease from three, to two, and to one on the title page. The title is long and forms an inverted triangle. To give the triangle a sharper point, the graphic feature ‘(:)’ is added after the last word. This addition makes the two sloping lines meet, to form a downward triangle. This elegant use of various fonts and the concept of incremental reduction makes the title page of *A Very Proper Treatise* clear and attractive.

The visual appearance of a title page was the first thing a buyer would register when encountering a physical copy. The second stage was reading the information in the title. Tottel managed to create a visual shape that guides the eye from the top to the bottom of the page. The content of the title was discussed in the first chapter of Part II, but it is still relevant here. The title gives a brief overview of the topics of the recipes. Furthermore, it contextualizes the book, to show it belongs to a group of books dealing with heraldry. Finally, it gives an indication of its audience. All these features have their proper place on the title page. In other books, this same information might appear in an introductory letter, for instance, but *A Very Proper Treatise* is a short book without an introduction, preface, or dedication. All the necessary information is kept brief and is communicated on the title page: the book’s topic, its use, its context, and its public.

The title page is the work of the printer, both in outlook and content. As discussed in the previous chapter, *A Very Proper Treatise* is an anonymous compilation drawn from various other sources. The title page is specific to a printed book, as most recipe books in manuscript culture had no title, and this particular title reflects the reality inside and around the book. This means that the title is very specific to this particular publication. Richard Tottel designed a title and title page suitable for the book he printed.



We must now return to the public of *A Very Proper Treatise*. Most likely the words ‘gentlemenne’ and ‘persones as doe delite in limming’ were Tottel’s choice of words to indicate the public he thought fit for this book. The connection between gentlemen and painting had already been made by Castiglione in his *Courtier* and finds a happy combination in *A Very Proper Treatise*. The precise words might have been borrowed from an older English volume that connected heraldry to gentlemen. The first publication of *The Book of Saint Albans* (1486)<sup>504</sup> used a similar structure to talk about its public: ‘In so moche that gentylnen and honeste persones have grete delyte in hawkyng.’<sup>505</sup> Tottel was well aware of this publication as he had got one of the editions of 1556, made by printer William Coplande for his own print shop. He might have taken the example of *The Book of Saint Albans* in his approaching to this public. The central words to describe the public in both volumes are the same. The public would be ‘gentlemen’ and ‘persons’ that take ‘delight’ in something, either hawking or limning.

Another aspect concerning gentlemen is pointed out by Wendy Wall, who notes that poets sold their work as a ‘gentlemanly pastime’ in order to acquire social and literary legitimation.<sup>506</sup> Painting belonged to the realm of gentlemanly activity, and the elevated status of gentlemen was invoked to enhance the status of the book. The title page is entirely due to the work of Richard Tottel. Tottel compiled a book and adapted the title page according to the content of the book and to an idealized idea of its public. Here lies one of the marketing techniques of Richard Tottel. He used the title page in a way that was likely to attract customers and formed a proper introduction to the work.

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504 The ESTC reports sixteen editions, spread over the years 1486, 1496, 1618, 1530, 1533, 1547 (two editions), 1556 (two editions), 1566, 1568, 1590, 1595, 1596, 1600, and 1624. Cf. ESTC. The author of this book has been prudently and cautiously identified as Juliana Barnes/Berners, which comes from the printed text itself: ‘Explicit Dam Julyans Barnes in her boke of huntyng’. According to the account of John Bale, she must have lived around 1460. According to a marginal note of William Burton (1575–1645) in the 1486 copy at the Cambridge University Library, the author is identified as ‘Lady Julian Berners’, daughter of Sir James Berners, prioress of Sopwell near St. Albans. Two manuscripts correspond to this reality, Lambeth Palace MS 491 and Bodleian MS Rawl. Poet, 143, but this might of course have been taken from the printed text. The same goes for Bale’s and Burton’s information. Prudence and caution are necessary, but this is certainly practical knowledge that travelled in the same way as we have described in the second chapter of Part I of this study. Cf. Boffey 2004.

505 Berners 1486, fol. Ai r.

506 Wall 1993, p. 56.

## 5 Cheap Print?

### 5.1 Popular print and preconceptions concerning typographical choices

Richard Tottel used three typefaces for the publication of *A Very Proper Treatise*. The main typeface is black letter, with minor sections printed in roman and italic. All three typefaces have their own history and reception history, but here attention will be focused on the black letter type and its reception.<sup>507</sup> Black letter was the very first movable type used in Europe. Early typefaces such as black letter sought to imitate handwriting and calligraphy.<sup>508</sup> The use of typeface, which appeared first in black letter, was developed by Johannes Gutenberg (between 1394/1399–1468) in the 1440s and spread through Germany, France, Hungary, Poland, Portugal, Spain, Italy, and England.<sup>509</sup> In the Netherlands, early printing also used black letter.<sup>510</sup> The term ‘black letter’ was coined in the seventeenth century, and was already in vogue in 1639. In *A large declaration concerning the late tumults in Scotland* (1639), written by Walter Balcanquhall (ca. 1586–1645), it is mentioned that the act of parliament of 1584 was ‘printed of old in black letter.’<sup>511</sup>

The black letter typeface is described in the OED as ‘a heavy, ornate, early printing type, in contrast to the later, lighter ‘Roman’ type.’<sup>512</sup> Synonyms indicating black letter are Gothic and Old English. Typographer Robert Bringhurst gives the following definition for black letter: ‘Blackletter is to typography what Gothic is to architecture: a general name for a wide variety of forms that stem predominantly from the north of Europe. Like Gothic buildings, blackletter types can be massive or light. They are often tall and pointed, but sometimes round instead.’<sup>513</sup>

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507 We use the spelling ‘black letter’ (cf. OED) rather than ‘blackletter’ or ‘black-letter’, unless in quotes.

508 Steinberg 1996, p. 10; Updike 1937 [1922], p. 6.

509 Bringhurst 2008, pp. 103; 266–268.

510 McKerrow 1994 [1927], p. 292.

511 Balcanquhall 1639.

512 OED.

513 The categories of black letter include *bastarda*, *fraktur*, *quadrata*, *rotunda*, and *textura*. See Bringhurst 2008, p. 323. To distinguish the different styles within black letter one has to observe the letter ‘o’. In the case of *textura*, the ‘o’ has a hexagonal shape. The *fraktur* black letter ‘o’ is normally flat on the left side and curved on the right. The *bastarda* ‘o’ is pointed at the top and bottom and is belled at both sides. Finally, the *rotunda* ‘o’ is essentially oval or round. See Bringhurst 2008, p. 268.

There is a healthy scholarly debate surrounding the significance of black letter during the seventeenth century. Earlier in this debate black letter gained a notorious status. In 1919, Hyder E. Rollins published an article on the black letter broadside ballad in which he proffered two unrelated conclusions.<sup>514</sup> He stated that the popularity of the black letter ballad was very stable,<sup>515</sup> and he also stated that common people loved ballads while great poets ridiculed them.<sup>516</sup> Ronald McKerrow observed that, with the ascent to the throne of Elizabeth I, black letter stopped being used in Latin works, plays, and 'higher kinds' of English verse, but its use continued for popular prose, ballads, and law books.<sup>517</sup> More recently, newer voices have gained ground in the discussion. In his article *Typographic Nostalgia* (2006) Zachary Lesser attributes a nostalgic function to the seventeenth century black letter, ignoring the debate about lower and higher readership.<sup>518</sup> Generally, during the twentieth century and even beyond, black letter was seen as associated with a popular readership.

A decisive publication by Charles C. Mish defines typographical distinctions for seventeenth century fiction and assorted reader groups. The upper class would read sentimental and heroic romances in folio editions with an exclusively roman typeface, while the middle class would read chivalric romances in quarto editions with an exclusively black letter typeface. By this time, the black letter had become an anachronism and therefore indicated the conservatism, aesthetic insensitivity, and cultural backwardness of a middle-class audience.<sup>519</sup> However, it was Mish's article that explicitly used the black letter as a social discriminant.

This theory has been widely and uncritically accepted, and still garners plenty of followers. In his work on English prose fiction, Paul Salzman follows Mish in the categorizing of readers into classes based on the use of black letter typeface.<sup>520</sup> Thomas Keith was followed by David Cressy in his article on literacy in context, in which he places readers into different groups.<sup>521</sup> The idea of identifying black letter prints with popular readers can also be found in Barry Reay's writing on popular culture.<sup>522</sup> These discussions generally deal with the seventeenth

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514 Rollins 1919, pp. 258–339.

515 Rollins 1919, p. 260.

516 Rollins 1919, p. 291.

517 McKerrow 1994 [1927], p. 297.

518 Lesser 2006, p. 116.

519 Mish 1953, pp. 627–630.

520 Salzman 1986, pp. 265–267.

521 Cressy 1993, pp. 305–319 (especially 312).

522 Reay 1998, pp. 56–57.

century, when the roman typeface was commonly used in England. Some scholarly editions use this social discriminant beyond the confines of the seventeenth century. In this introduction to *The Cambridge History of the Book in Britain*, John Barnard associates the use of the black letter typeface with a popular audience, as in the case of Tusser's *A Hundreth Goode Pointes of Husbandrie* (1557), which was reprinted well into the eighteenth century.<sup>523</sup> The stigmatization of the black letter as a sign of popular readership is a product of historiography.

This interpretation of black letter might have implications for the interpretation of the visual appearance of *A Very Proper Treatise* and other recipe books. Within the boundaries of this study, we see the use of black letter as a deliberate decision of the printer, because of the general accessibility of the work. Black letter was a recognizable and commonly-used typeface in England. As mentioned earlier, it imitated handwritten texts and invoked nostalgic associations with handwritten books. Since so many practical texts are in black letter, in this research we explored the idea that the use of black letter contributed to the notion that certain knowledge was ancient through its association with ancient things. Furthermore, as it turns out, many law texts were also printed in black letter, a trend stimulated by Tottel himself. Law texts were not categorized as popular texts, because they were part of a genre used by a specific niche of specialist practitioners. Ancient practical knowledge and the law shared an authoritative character, which was expressed in print through black letter. Thus, the public for these texts were not, by definition, 'popular', or poorly educated, but rather, learned and literate. The English sixteenth-century black letter was a widely accessible type that reminded cultivated users of handwriting in manuscripts. *A Very Proper Treatise* fits precisely into this category.

## 5.2 A paper story

In this study, we do not in any way pretend to write the history of papermaking, paper use, and paper conservation. However, we do consider the subject, because the material quality of the paper used by the printers can provide another context to understand this book and its history better. The study of the signatures of the book title, which remained unchanged for all editions, tells us that four sheets of paper were used to make a single book.<sup>524</sup> Studying the materiality of paper can

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<sup>523</sup> Barnard and McKenzie 2008, pp. 4–5.

<sup>524</sup> Signatures: A-C<sup>4</sup>. This means that *A Very Proper Treatise* contains three paper sheets that are all folded twice in order to make three gatherings of four leaves each. For calculations see Bowers 1994 [1949], p. 201.

actually tell us a lot about the printer's decisions about the market position of a book and its various editions. An initial distinction can be made between two groups of editions. The first five editions are somewhat similar when it comes to quality, while the sixth and last edition stands somewhat apart.

The paper used to print *A Very Proper Treatise* was generally not the best available on the market, but in the first group, failures and poor quality are not directly visible. If a doubtful page is held against a light source, irregularities may appear. In the Library of Congress, one can work with a light sheet and draw conclusions on how a book, such as *A Very Proper Treatise*, was made.

The first edition of 1573 at the Library of Congress<sup>525</sup> appears to be a relatively normal copy from the point of view of the paper. However, holding some pages with slight irregularities against a light sheet reveals two different patterns in the paper. Page ten has an irregular spread of the pulp towards the outer margin and page eleven has some irregular thinner spots spread over the surface of the page. This indicates that the whole of the first edition, which appears to have had the best paper of all the editions, might have used this slightly inferior quality of paper for the whole line.

The sixth edition, from 1605, tells a different story from the point of view of the paper. Here, the 1605 edition at the Library of Congress will be used as an example.<sup>526</sup> The Library of Congress copy has several wrinkles and other irregularities in the paper. The wrinkles were there before the printing process started because the ink sits on top of them. When backlit, one can see that some parts of the surface are thicker and more rigid. In this particular case, something must have gone wrong during the papermaking. It looks like the pulp was not properly amalgamated, and contained a piece of paper that did not turn into pulp. This defect is easily discovered by placing a light source, such as a light sheet, beneath the page, which reveals the structure of the sheet. The 1605 Washington copy has a specific pattern of wrinkled paper underneath the ink. The wrinkle is formed by two layers of paper, an upper and lower layer. These layers were compressed together in the printing press, when they received the ink. Once the paper came out of the press, the two layers of paper opened up again. This caused interruptions in the inked areas which appears as a narrow un-inked line on the letters corresponding to the wrinkle in the two layers of paper. We conclude that bad-quality paper caused uneven ink distribution on letters; in this case, a line with no ink.

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525 Appendix 2, no. 12.

526 Appendix 2, no. 37.

This same page is marked by another flaw of lesser-quality paper. Next to the wrinkles on the paper, there is a darker area. This is a piece of paper or rag that did not completely turn into pulp. Both the wrinkles and the unprocessed paper give an idea of the paper quality that was used for the last edition of *A Very Proper Treatise*. As mentioned above, the visual style of the sixth edition is different from the previous editions and the same is true of the paper quality of this last edition. This is why the edition of 1605, presumably the only seventeenth-century edition, could be seen as the edition which most differs from the others.

An analysis of the quality of the paper used for the making of *A Very Proper Treatise* shows that a moderate paper quality was used for the first five editions, and a rather poor-quality paper was used to print the last edition. Presumably the quality of paper reflected its price and therefore impacted the final price of the book. From the deficient quality of its paper, and also its small number of pages, it might be concluded that *A Very Proper Treatise* was sold for a low price. However, conclusions of this kind remain speculative and hypothetical, because of a lack of information concerning actual market prices and surviving copies.

### 5.3 New editions, new ways

The main focus in chapters one and two of Part II has been the first edition of *A Very Proper Treatise* (1573). In the section below, two observations will be made about subsequent editions. The five subsequent editions (1581, 1583, 1588, 1596, and 1605) are divided into two overlapping groups. The first group comprises all the editions that involved the printer Thomas Purfoote (1583, 1588, 1596, and 1605) and the second group contains the last publication (1605). The first group largely corresponds to those with moderate-quality paper discussed above, but does not include Tottel's editions. The second group here corresponds with the second group in terms of paper quality, which is the 1605 edition.

The 1605 edition appeared with the most visual and material alterations compared to previous editions. As mentioned earlier, the title changed, as did the layout and paper quality. The short title omits one word and its appearance is different. Furthermore, the title page does not contain the approval formula 'Cum Privilegio'. This edition may very well have been conceived as a different book for the authorities. Moreover, this edition leaves out Tottel's marginal words, and thus does not share the heraldic focus of the previous editions. In the same year that he printed his editions of *A Very Proper Treatise* and *A Proper Treatise*, Purfoote also produced a book entitled *A Profitable Boke* (1583). In this chapter, we argue that Purfoot printed these two book titles in the same year because they were intended to be sold together. Below, we will discuss the material indications

that both volumes belonged together or at least coexisted in the same binding from very early in their lives.

Several copies of *A Very Proper Treatise* show signs that are interpreted as traces of the work of collectors and their classification systems. Many of these signs are the result of nineteenth-century owners, but an early modern interest in the collecting and cataloguing of *A Very Proper Treatise* can also be glimpsed. Often, signs of collectors' interests lie in very tiny symbols such as numbering. A simple sequence of letters and numbers indicates a library classification system, as seen in the collection at Trinity College Dublin.<sup>527</sup> The 1573 copy in the British Library<sup>528</sup> has the collocation 'N.52' above the title, which is a similar way of attributing a place and order to books. In this case, the owner has not been identified. Both 1588 copies of the National Art Library<sup>529</sup> and the Bodleian Library<sup>530</sup> have been part of an eighteenth-century collection. William Herbert (1718–1795) left a sequence of letters and numbers, including the year of the volume. On the binding of the Bodleian copy<sup>531</sup> of 1583, which is an Ashmole item, there is a letter that was used to organize book titles. It can be argued that *A Profitable Boke* and *A Very Proper Treatise* were coupled together because *A Profitable Boke* was initially attributed the roman number five: 'V'. Another hand later added information to both *A Profitable Boke* and *A Very Proper Treatise*; with the latter receiving the code 'Vb', and the same hand then adding an 'a' to the existing code. This means that today *A Profitable Boke* is marked as 'Va' and *A Very Proper Treatise* as 'Vb'. Studying the signatures, the composition and the binding of the 1583 copy at the Bodleian Library it was possible to reconstruct the provenance of this precise copy, and two collectors emerged from it.

This Ashmole binding of the Bodleian Library keeps *A Very Proper Treatise* and *A Profitable Booke* of 1583 physically bound to 21 other printed items and some written excerpts. All the books were bound together around the end of the 1680s, probably after John Aubrey sent his collection off to the Ashmolean museum for cataloguing in 1689.<sup>532</sup> More than half of the volumes are signed by John Aubrey. The back panel of the Ashmolean binding has a library inscription 'A 1642', indicating the volume's position in the Ashmolean museum, which is still the current shelf mark. A few elements suggest *A Very Proper Treatise*

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527 Appendix 2, no. 13.

528 Appendix 2, no. 6.

529 Appendix 2, no. 21.

530 Appendix 2, no. 25.

531 Appendix 2, no. 19.

532 Fox 2008.

and *A Profitable Booke* were bound together prior to their current binding. The front pages of *A Profitable Booke* and *A Very Proper Treatise* show differing levels of wear. The title page of *A Profitable Booke* has been subjected to more wear and tear than the title page of *A Very Proper Treatise*, while the last page of *A Very Proper Treatise* has suffered more than its title page. Both the title page of *A Profitable Booke* and the final page of *A Very Proper Treatise* are darker, the paper is thinner and more flexible, and the corners are ruined. One other physical characteristic marks their interdependence. The cropping of the margins in the upper region is not straight. All the pages of the two volumes are marked by this characteristic. The cropping probably goes back to a moment long before the Ashmolean binding, as the cropping is not adjusted to the volumes that come before or after these two. When the volume was catalogued and bound, *A Profitable Booke* and *A Very Proper Treatise* were considered to belong together. They appear as the fifth book in the binding, *A Profitable Booke* is numbered 'V a' and *A Very Proper Treatise* is numbered 'Vb'. This is the only case in the whole volume where the roman numbering is supplemented by a roman letter. In conclusion, it can be stated that, prior to the Ashmole binding, these copies of *A Very Proper Treatise* and *A Profitable Booke* were bound together.

Very early bindings are rare, but they do appear in the landscape of copies of *A Very Proper Treatise*. A clear example of an early binding, presumably the original, is the Oxford copy of *A Proper Treatise* (1605).<sup>533</sup> The vellum binding has several material characteristics that point to this conclusion. The spine shows bulging bands because of the supporting structure that lies underneath in a similar fashion to that of a 1609 spine highlighted by David Pearson in his work about English bookbinding styles. Furthermore, the design of the front panel has four flower-in-vase images from around the turn of the seventeenth century and a centerpiece that was identified by Pearson as belonging to the period 1560–1620.<sup>534</sup> The bookbinding probably followed closely after the making and acquisition of *A Proper Treatise*. This particular volume shows signs of the specific living conditions of books in the early modern era. The bookbinding holds several books that were printed between 1574 and 1605:

1. Nicolás Monardes, *Ioyfull Newes out of the Newfound World*, London, translated by John Frampton, printed by William Norton, 1580
2. Nicolás Monardes, *A Booke which Treateth two Medicines most Excellent agaynest all Venome*, translated by John Frampton, 1580

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533 Appendix 2, no. 36.

534 Pearson 2005, pp. 9, 98, 119, 131.



3. Nicolás Monardes, *The Dialogue of Yron*, Seville, Alonso Escribano, (?)
4. Nicolás Monardes, *The Boke which Treateth of the Snow, and of the Properties & Virtues thereof and [...] the Seconde Dialogue of Yron*, 1574
5. Thomas Vicary, *The Englishmans Treasure, or Treasor for Englishmen: With the True Anatomye of Mans body*, London, printed by John Windet for John Perin, 1586
6. Thomas Raynalde, *The Birth of Mankinde, otherwise named The Womans Booke*, London, printed by Richarde Watkins, 1598
7. Leonard Mascall, *A Profitable Booke, Declaring Divers Approved Remedies, to take out Spots and Staines in Silkes, Velvets, Linnen and Woolen Clothes*, London, printed by Thomas Purfoot, 1605
8. Anonymous, *A Proper Treatise, Wherein is Briefly Set forth the Art of Limming*, London, printed by Thomas Purfoot, 1605

These eight book titles have something in common. They all reveal an interest in practical knowledge. The precise subjects can be situated within the medical field with a specific interest in anatomy, the field of natural philosophy, the art and artisanal field of colors for the dyeing of fabrics and leather, and book embellishment. The books can be subdivided in two realms of practical knowledge: 1) recipe books, giving shorter and longer instructions; and 2) more descriptive works, which give information at length on a particular topic of interest. The Oxford binding contains eight title pages, but originally these were not actually sold as eight books. Relevant to the understanding of this is the marginal note at the opening of the binding in the lower margin of the first flyleaf. It is written in an early modern hand and reads: '4 books.' The same hand also wrote a list of all seven book titles on the reverse of this page:

1. Newes of commodities brought from the West Indies
2. Of the Bezar stone and the hearbe Escuerconera.
3. A Dialogue of Iron.
4. Of Snowe and his properties.
5. A Treasure for Englishmen.
6. The birth of Mankinde.
7. To take out spots and staynes, and of dyenge.
8. The art of Limminge.

In this list, a librarian marked in pencil that the first four titles, from 'Newes' to 'Of Snowe', belong together. This could make sense considering that the first four book titles were sold together, as will be shown below, but we would argue that the division of books in this binding and the history of ownership should

be interpreted differently. The first title page of *loyfull Newes* indicates that this is a 'newly corrected' edition with the addition of 'three other books treating of the bezar stone, the herbe escuerconera, the properties of yron and steele, in medicine and the benefite of snowe'. This is exactly how the librarian interpreted the marginal note of '4 bookes', after all, the title page of *loyfull Newes* indicates that four book titles belonged to one item. This way of thinking implies that a book title obviously refers to an isolated physical item and that other cases are exceptions or peculiarities. However, this might not be how the early modern annotator saw it. The inscription '4 bookes' indicates the number of original groupings of books. In this sense the tiny marginal note might be the work of the bookbinder, leaving a payment reference, for instance. Below is a scheme showing how the books would be ordered if the binding contained '4 bookes' as indicated in the marginal note:

First book:

1. Newes of commodities brought from the West Indies
2. Of the Bezar stone and the hearbe Escuerconera.
3. A Dialogue of Iron.
4. Of Snowe and his properties.

Second book:

5. A Treasure for Englishmen.

Third book:

6. The birth of Mankinde.

Fourth book:

7. To take out spots and staynes, and of dyenge.
8. The art of Limminge.

Books were sold together, as in the case of *loyfull Newes*. Two other books that were presumably sold together are *A Very Proper Treatise* and *A Profitable Boke*. *A Profitable Boke* appeared in the same years as *A Very Proper Treatise*: 1583, 1588, 1596, and 1605. There are no signs of further editions of *A Profitable Boke* signalled in older catalogues or literature, meaning that the known ones are probably the only ones.<sup>535</sup> *A Very Proper Treatise* and *A Profitable Boke* are often found bound to each other. This is the case for the Oxford editions of 1583, 1588, and 1605<sup>536</sup>; the Paris copy of

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535 This might be taken as indication that all editions of *A Very Proper Treatise* and *A Profitable Boke* are known to us, however, eighteenth- and nineteenth-century literature was more focused on *A Very Proper Treatise* than on *A Profitable Boke*.

536 Respectively Appendix 2, nos. 19, 25 and 36.

1583<sup>537</sup>, the Folger copy of 1588<sup>538</sup>, and the Huntington copy of 1596.<sup>539</sup> In total, it is confirmed that there are six copies of *A Very Proper Treatise* that are, or were bound to *A Profitable Boke*. In each of these cases *A Very Proper Treatise* comes second. But many more potential pairs might have existed.<sup>540</sup> As discussed above, the Oxford copy of 1605<sup>541</sup> offers yet another example of *A Very Proper Treatise* and *A Profitable Boke* bound together. In the Oxford binding, they were considered one book, for reasons analogous to those described above.

Selling multiple book titles as a single book was a common practice in the early modern period, as is made clear on the title page of *loyfull Newes* (1580), which states that it is a 'newly corrected' edition with the addition of 'three other books'. The numerous instances of *A Very Proper Treatise* and *A Profitable Boke* being bound together provide a strong argument for concluding that both volumes were sold as one, or at least the editions of both volumes from 1583 onwards. This is due to the second printer Thomas Purfoot, who found new ways for selling books from other printers. He annexed book titles together and, in the sixth and last edition, also produced a more economical and simplified version of the book.

## 6 Conclusion: creating opportunities

As stated earlier in this chapter, *A Very Proper Treatise* is a printer's compilation. This signifies that the publication was the result of a printer's choices, decisions, and responsibilities. *A Very Proper Treatise* had two printers, both interacted significantly with the book. The first printer who compiled and edited the book was Richard Tottel. He was responsible for the first edition of 1573 and the second edition of 1581. The second printer was Thomas Purfoote, who was responsible for the third edition of 1583, the fourth edition of 1588, the fifth edition of 1596, and the sixth and final edition of 1605. The second printer's decisions modified the course of *A Very Proper Treatise*. Purfoot's way of dealing with work-related opportunities resulted in him printing another book to accompany *A*

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537 Appendix 2, no. 20.

538 Appendix 2, no. 27.

539 Appendix 2, no. 33.

540 A true image will only emerge from a material study of the remaining volumes. At least three other matches are possible. We refer to the pairs of 1583 and 1605 at the British Library, and the 1605 copy of the Library of Congress. Cf. Appendix 2, no. 18, 35, 37.

541 Appendix 2, no. 36.

*Very Proper Treatise*. In fact, from the third edition onwards (1583), *A Profitable Boke* routinely appeared alongside *A Very Proper Treatise*. The sixth and last edition of 1605 had the most alterations because of visual changes, and changes in its title and paper quality. In all cases, the printing of *A Very Proper Treatise* was a market-oriented venture of two printers. This chapter has shown the way printers made their living, either by gathering and editing information for publication or by reconceptualising selling conditions. Tottel, the first printer, identified a new public, one of a good social standing, as shown in the first chapter of Part II. This implied a high-quality book, but, the book was sold to a broader group, as suggested by its paper quality, and the book's actual public will be examined in the third chapter of Part II. Its presentation as a book for gentlemen was merely a sales strategy by the printer. The sixth and last edition of 1605 revealed a reduction in paper quality and in the complexity of the book, as the heraldic layer was removed. Presumably, this was to make the last edition cheaper. Possibly the volume was actually adapted to its true public, based on the actual customers of Tottel's, and later Purfoote's, print shops. These were not all people of high social standing, but simply people who could afford a book about limning, which expanded the group of potential buyers. This also means that the printers adapted their product to the market, as we have argued in this chapter.

### 3 Buying secrets. The audience and consumption of art technological literature

**Abstract:** This chapter studies the use of *A Very Proper Treatise*, examining all the extant copies, and forming an idea of its actual public.

**Keywords:** Book culture, use, religion, heraldry, Phebe Challoner, James Ussher

#### 1 Introduction

This chapter will focus on the fortune of the recipe book *A Very Proper Treatise* taking into consideration all known extant copies of the text. This means that twenty-four of the thirty-seven remaining copies were materially investigated. The examination was guided by two main questions: ‘Who used these books?’, and, ‘How were these books used?’. This was argued by the subsidiary questions: ‘Was there a unified image of its public or users?’, and, ‘Was the book used for its self-declared purpose?’.

The research questions guided the search for traces of consumptions, consumers and their interests, and the ways the books were handled. The outcome of this study will create various consumer profiles. As mentioned in the introduction to Part II, the public is discussed in all three chapters. The current chapter differs by tracing these consumers through material alterations made to particular copies. In this chapter, the readers studied are tangible, because its conclusions are based on a material study and are enriched with biographical studies. This contrasts with the readers considered in Chapter 2 of Part II, who were traced through the commercial and business network of the printer and thus remain more abstract and putative, but nevertheless form part of a potential real public.<sup>542</sup> The readers studied in the current chapter also differ from the public that emerges from the first chapter of Part I of this study, who represent the book’s intended public, an idealized abstract public transmitted via the book itself.

The detailed study made of certain volumes of particular interest will now be described. The audience of these particular volumes had three points or domains of interest in common: artistic, religious, and heraldic. In this chapter we argue

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<sup>542</sup> This is based on secondary sources and published research. Significant for this matter is the publication Warner 2013.

that the artistic interest of the public in a volume about ‘the art of limming’ might seem evident, but the narrative will be more nuanced, because there is a difference between intended and actual use.

Although this part of the study aimed to discover users, the main method used was the material study of early modern printed books, which is an enormously enriching pursuit. This approach encourages the researcher to undertake provenance research; deal with library and museum catalogues; search for people of various social classes; and appreciate the materialized past through books. Through this type of work a researcher engages in the study of books as material objects, and learns how to read and interpret material traces of human and non-human agency.

## 2 Contextualizing the concepts and material of the current chapter

### 2.1 The concept of consumption and consumers

First, a brief outline of the terminology used in the following discussion is due. This chapter proposes to use the term ‘consumption’ to talk about the interaction between human readers and *A Very Proper Treatise*. The consuming of books indicates a broad spectrum of interactions between humans and books, and as such, it is wise to express concern over the use of the term ‘reader’. A reader is somebody who reads a written text, where reading is the action of interpreting symbols or characters to produce meaning. In this chapter we argue that the concept of ‘reading’ is too narrow and therefore the concept of the ‘consumption’ of books will be applied here.

The action of reading does not satisfactorily cover how early modern people dealt with books. To demonstrate their attitudes towards books and their usage, some examples from early modern literature will be used. The schoolmaster and educational writer John Brinsley advises in his *Ludus Literarius*, or, *The Grammar Schoole* (1612):

For the manner of noting, it is best to note all schoole books with inke; & also all others, which you would have gotten *ad unguem* [italics ours], as we use to say, or whereof we would have daily or long practice; because ink will indure: neither wil such books be the worse for their noting, but the better, if they be noted with judgement. But for all other bookes, which you would have faire again at your pleasure; note them with a pencil of black lead: for that you may rub out againe when you will, with the crums of new wheate bread.<sup>543</sup>

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543 Brinsley 1612, pp. 46–47.

Brinsley prescribes three ways of marking books: with ink, with fingernails, which he indicates with the Latin *ad unguem*, and with a pencil of black lead. Later on he recommends that beginners should mark with their nail to make ‘some secret marks this at every hard word.’<sup>544</sup> The use of the fingernail, leaving a quasi-invisible trace was not meant to spare the copy from marking, it was meant to spare it from the markings of beginners. Brinsley was, according to the astrologer William Lilly who was Brinsley’s pupil, a ‘strict puritan’, ‘very severe in his life and conversation.’<sup>545</sup> The writer and illustrator Henry Peacham also gives advice on how to relate to books:

‘have a care of keeping your books handsome, a[n]d well bound, not casting away over-much in their gilding or stringing for ostentation sake, [...] for your owne use spare them not for noting or interlining (if they be printed).’<sup>546</sup>

Finally, the definition of ‘the Study’ in Johannes Amos Comenius’ *Encyclopaedia* (1659) states that marking is part of the habits and process of study:

‘a place where a Student, a part from man, sitteth alone, addicted to his Studies, whilst he readeth Books, which being within his reach, he layeth open upon a Desk and picketh all the best things out of them into his own Manual, or marketh them in them with a dash, or a little star, in the Margent.’<sup>547</sup>

Reading automatically comes with additional actions. Early modern readers did not only read their books, they marked them in many ways, both visibly or invisibly. Books were not spared. The study of these interactions is of vital importance for the study of actual consumers and book use.

In the history of reading, the emphasis is typically placed on the main action of the book’s user, which is of course ‘reading’. Bradin Cormack and Carla Mazzio in their *Book Use, Book Theory* (2005) and William Sherman in his *Used Books* (2008) use the concept of ‘reading’ books, although some thought is given to book ‘use’. These researchers use Geoffrey Whitney’s motto ‘*Usus libri, non lection prudentis facit*’ [‘The use of books, not the reading, makes us wise’] to support their concept.<sup>548</sup> Although both operate the term ‘use’, which is more applicable to the topic, they do situate themselves in the history of reading rather than material book history, but with a strong emphasis on the

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544 Brinsley 1612, p. 47.

545 Morgan 2009.

546 Peacham 1622, p. 54.

547 Comenius 1659, pp. 200–201.

548 This motto was a dedication to the Cambridge scholar Andrew Perne. Cf. Cormack and Mazzio 2005, 1–5; Sherman 2008, pp. xiii–xiv.

material aspect or material traces of interactions between book and reader. Obviously, reading history and material book history find a meeting point in the study of how books were used. Both approaches provided useful insights for the current research. Indeed, material traces bear witness to the interaction between people and books. Distinct types of reader behaviour have been determined in scholarship. Heidi Brayman Hackel in her *Reading Material in Early Modern England* (2005) takes an interesting angle on this issue. Brayman Hackel practices a material history of reading, distinguishing between earlier research in the history of reading focused on the 'goal-oriented reading of professional scholars' and her own research, which focuses on readers during their leisure time. Her readings include prose romances, poetic miscellanies, playbooks, and chapbooks.<sup>549</sup> Brayman Hackel makes a distinction between types of books and types reader actions. Her scheme does not apply directly to art technological literature, because this was read and used both by professionals and amateurs, and this is the main distinction between Brayman Hackel's work and the work of, for instance, Sherman regarding John Dee.

## 2.2 Measuring a universe of consumers

Initially this research started off with a list of twenty-eight copies of *A Very Proper Treatise* spread over fourteen libraries between the British Islands and North America, and spanning the five first editions of the text (1573, 1581, 1583, 1588, and 1596). The final results of this research are based on a study of thirty-seven copies and, additionally, take into account the 1605 edition. An overview of the total number of copies identified through this research, is provided in appendix two. The final results are primarily based on consulting the ESTC (The English Short Title Catalogue), the OCLC WorldCat, catalogues of individual libraries, consulting index card catalogues, internet search engines (Google), and the search for other book titles that coincidentally revealed copies of interest. Neither the short title catalogues nor bibliographical search engines provide a complete overview. Early in this research interesting discoveries were made concerning some libraries, such as the Bibliothèque nationale de France (BnF), which do not subscribe to the service of the ESTC service, despite holding early English prints. Other libraries do subscribe, but not all their physical copies are included in their virtual catalogue. For instance, the Library of Congress has one edition taken up in the ESTC, but the other two editions were only discovered through consulting the physical index card system. Finally, not all copies of early

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549 Brayman Hackel 2005, pp. 1–3.



**Tab. 7:** Tabel of the chronological and geographical distribution of extant copies per edition of *A Very Proper Treatise*

	1573	1581	1583	1588	1596	1605
<b>US</b>	8	1	0	5	4	1
<b>Europe</b>	4	3	4	2	3	2
<b>Total copies</b>	12	4	4	7	7	3

modern books are held by libraries or museums: an additional copy was traced to the hands of a professional bookseller. This kind of information is not indexed by public or private research institutions and is only accessible via search engines like Google. A complete overview of the material presence of an early modern printed book title is reconstructable through the consultation of various virtual and physical cataloguing and index systems. However, it must be stressed that this overview is based on accessible information. Copies in private hands and closed libraries or other institutions were not included in this survey.

The table above shows the number of copies per edition and their distribution over two continents.<sup>550</sup> Their survival is unevenly spread over the different editions. The 1573 first edition has the most surviving copies, standing at twelve.<sup>551</sup> Second position is shared by the 1588<sup>552</sup> and the 1596<sup>553</sup> editions, with seven copies each. Both the second edition of 1581<sup>554</sup> and the third edition of 1583<sup>555</sup> have four copies, while the 1605 sixth edition<sup>556</sup> is represented by three copies. The spread of the copies per continent is fairly uniform. Europe contains eighteen copies;<sup>557</sup> Northern America nineteen,<sup>558</sup> of which eighteen are institutionalized.<sup>559</sup> Within this, Great Britain has the most copies, standing at

550 Another graph of this material is published in a conference paper about *A Very Proper Treatise* given in 2015, see Leemans 2018. A further overview of the traced copies is found in Appendix 2.

551 Appendix 2, nos. 1 until 12.

552 Appendix 2, nos. 21 until 27.

553 Appendix 2, nos. 28 until 34.

554 Appendix 2, nos. 13 until 16.

555 Appendix 2, nos. 17 until 20.

556 Appendix 2, nos. 35 until 37.

557 Appendix 2, nos. 4, 5, 6, 9, 13, 14, 15, 17, 18, 19, 20, 21, 25, 28, 29, 30, 35, and 36.

558 Appendix 2, nos. 1, 2, 3, 7, 8, 10, 11, 12, 16, 22, 23, 24, 26, 27, 31, 32, 33, 34, and 37.

559 The only copy that is not conserved by a library or research institution is at New York, see Appendix 2, no. 23.

seventeen extant copies.<sup>560</sup> And within Great Britain, the British Library holds the majority of these, with a total of seven copies, and at least one copy of every edition, except that of 1588.<sup>561</sup> Among all the surviving copies, twenty-four copies were examined personally, meaning that close contact with the material object took place. In this research, all nineteen European copies and the five Washington copies were seen.<sup>562</sup> Furthermore, it was possible to study other reproduction copies. Full reproductions of the 1573, 1581, and 1596 editions held at the Huntington Library are available via EEBO.<sup>563</sup> The Public Library of Boston and the Getty had their respective 1573 and 1596 copies scanned and made available online at archive.org.<sup>564</sup> Some copies were only partially examined because of the sectional nature of the reproductions. This was the case with the Yale copies of 1573 and 1588, and the Chicago copy of 1573.<sup>565</sup> Contact with those institutions housing the remaining copies was established, but in each of these cases, the volumes seemed to have had no post-production human interaction. The material study of these copies could have been very useful, for examining their bindings or cropped margins, but a decision was taken to focus on the copies containing traces of users, readers or consumers, because that is the core focus of this chapter.

### 3 The early modern world of books

#### 3.1 The early modern book: a survey of bookbindings and book realities

Unfortunately, each of the early modern books that one can hold in one's hands today, also passed through the hands of nineteenth- and twentieth-century book dealers and librarians. Through their actions, much information was erased due to washing, cropping and rebinding, and other regrettable actions.<sup>566</sup> In fact,

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560 The only other European copies are in Ireland and in Paris, see Appendix 2, nos. 13 and 20.

561 May we point out that the copy for sale at the private bookseller is from the year 1588.

562 The five Washington copies are found in the appendix under nos. 11, 12, 27, 34, and 37.

563 Appendix 2, nos. 10, 16, 33.

564 Appendix 2, respectively nos. 1 and 31.

565 Appendix 2, respectively nos. 7, 22, and 3.

566 Violent and destructive actions were also common in earlier periods. For instance, in order to make a binding, much force had to be employed. In his description of crafts, Robert Campbell says that the bookbinder 'has not great ingenuity [...] and requires few talents, either natural or acquired, to fit a man to carry [the work] on; a moderate share of strength is requisite, which is chiefly employed in beating the books with a

most surviving copies of *A Very Proper Treatise* carry nineteenth- and twentieth-century bindings that in many cases replaced a more or less original binding. The Dublin copy of the 1581 edition, which will be further discussed later in this chapter, has a standard paperboard library binding, whose corners and joints have been strengthened with leather.<sup>567</sup> One can recognize its more contemporary fashion, not only on the outside but also on the inside of the binding. The inside of the binding is covered with a paper that united the book block to the binding. There are some material indications suggesting that the current binding replaced an earlier one. The binding houses three books, all three books have cropped pages of the same dimensions. The leaf edges are sprinkled with red paint, a habit specific to the seventeenth and eighteenth centuries. Many of the copies of *A Very Proper Treatise* are in a similar state, having received a new library binding during the last two centuries. Some bindings of that period contribute to the quality of the book. The binding of the 1605 edition held by the Library of Congress has a red leather binding with a red reading ribbon, which is an indication of a high-quality binding.<sup>568</sup> Yet, this copy was marked by bad paper quality at the time of printing.<sup>569</sup>

Continuing the subject of bindings, four specific conditions of the books provide a valuable insight into the material living conditions of *A Very Proper Treatise*. The first example of these, provided by the 1573 Folger copy, gives a glimpse of the material status of *A Very Proper Treatise* as it travelled between the print shop and its first owner's bookshelf.<sup>570</sup> This item is preserved unbound. It is unknown if this unbound condition was permanent, but it is likely, given the severe damage the copy has endured.

The second example also supports the argument that copies must have existed without bindings, with several copies of *A Very Proper Treatise* displaying horizontal fold marks. However, marks such as these were not always the result of folding. In the case of the Folger copy of 1588, the individual lines do not correspond to those on subsequent pages.<sup>571</sup> This volume also shows signs of

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heavy hammer, to make the sheets lie close together'. Here a description of a profession brings us closer to how books were treated. Paradoxically, in order to offer a book major protection, the book block had to endure violent beatings. Cf. Campbell 1747, p. 135.

567 Appendix 2, no. 13.

568 Appendix 2, no. 37.

569 Appendix 2, no. 37.

570 Appendix 2, no. 11.

571 Appendix 2, no. 27.

twentieth-century conservation measures. All the pages have been wrapped in a fine gauze or thin translucent fabric to preserve the paper. This means that the volume is no longer in its original state. An example offering clearer marks is the Liverpool copy of 1583, which has a corresponding horizontal line that is consistent throughout the whole volume.<sup>572</sup> The advantage of folding tiny books in half or smaller, was that it reduced their surface. This action obviously allowed the volume to fit into smaller spaces, which facilitated travelling or storage in boxes with drawers. This material condition is important because it gives an insight into the actual use of books.

The third condition that says something about the initial use of early modern printed books is holes in the margins, as can be seen in the 1605 volume in the British Library.<sup>573</sup> This copy is marked by its large, and possibly intact, original margins, which sets it apart from the majority of the other copies that have cropped margins resulting from rebindings. Every page belonging to the original volume is marked with four perforations. These holes are material evidence of the technique that kept the leaves together, a type of stitching called ‘stab stitching’. A needle with thread was passed through the inner margins of the text block or gathering of papers, close to the spine, two or more times. Sometimes a paper or vellum wrapper, which served as cover, was included in this process.<sup>574</sup> It seemed to be an economical method and was common for pamphlets, schoolbooks, and books for popular consumption.

Robert Akers notes that the practice of stab stitching was common from the last two decades of the sixteenth century onwards.<sup>575</sup> After 1586, the Stationers Company strictly regulated the ‘stytching of bookes’. Stitched books were not allowed on the market, unless under specific conditions. Stitching was allowed for folios with less than forty gatherings, for octavos with less than twelve gatherings and duodecimos with less than six gatherings.<sup>576</sup> It seems that quartos did not appear in the regulations of 1586. This might mean that stitching a quarto was not allowed; because it does not appear as a permitted exception. The stitching might have been done after the book was sold, either by a professional or at home, or alternatively, it might have been done illegally in the print shop. Stitching books

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572 Appendix 2, no. 17.

573 Appendix 2, no. 35.

574 Pearson 2005, p. 148.

575 Foot and Akers 2015.

576 Pearson 2005, p. 148.

was a cheap way of keeping the papers together, a practice also used for *A Very Proper Treatise*.

The fourth condition found in *A Very Proper Treatise* is a variant on the stitching of books. The National Art Library copy of 1588 has two bindings.<sup>577</sup> The first one is a grey carton board binding dating from before the copy entered the collection in 1904. This carton binding covers up an older blue paper binding.<sup>578</sup> The inside of the blue cover shows perforations that were torn further. The blue binding might have been commissioned by William Herbert (1718–1795), a bibliographer and bookseller of a certain fame.<sup>579</sup> These eighteenth-century blue wrappers were not the same as earlier temporary wraps or stab-stitched books, but they offer an image of what a cheap temporary binding should, or could, look like. The carton board binding was another cheap way of keeping the pages of a book together and protecting them, and this technique was also used on *A Very Proper Treatise*.

Through these few case studies, an overview of the landscape of early modern book binding and those of *A Very Proper Treatise* in particular, has been provided. Each bookbinding, or book with a missing binding, represents a physical reality of the book. All evidence points towards the fact that *A Very Proper Treatise* was sold unbound, alone or together with *A Profitable Booke*.<sup>580</sup> The first printer Richard Tottel might have offered a binding service at the time of first publication as he had a French book binder in his service around that time, named Peter Horsan or Harsaunte.<sup>581</sup> However, no material evidence of this fact survives. Volumes were kept unbound or put into temporary inexpensive bindings. Undoubtedly, unbound copies perished more easily, as they were more susceptible to external damaging factors and human usage. There is further

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577 Appendix 2, no. 21.

578 Gentlemen in the eighteenth century were advised to have their books sown in blue paper, see Pearson 2005, p. 159.

579 Herbert owned at least two copies of *A Very Proper Treatise*, both from 1588. Today, one is in the National Art Library; the other is in the Bodleian Library and is known as the Douce copy. Herbert often had his copies rebound and wrote about this practice. The flyleaves of the 1588 NAL copy and the Glasgow copy of pseudo Albertus Magnus' *Secreta mulierum et virorum* have a very similar watermark consisting out of a circular shape with a royal crown on top. Cf. the catalogue entry of Albertus Magnus' *Secreta mulierum et virorum* (Sp Coll Ferguson Ah-a.30) (<http://www.gla.ac.uk/services/incunabula/a-zofauthors-a-j/ah-a.30/>).

580 Conclusion taken from the previous chapter; this subject matter will be discussed further on in this chapter.

581 Byrom 1927–1928, p. 206.

evidence that booklets with a limited number of pages, such as *A Very Proper Treatise* could be folded. In almost all cases, the copies have been rebound at least once at a certain point in time, with mostly cropped or damaged pages, and occasionally significant loss of information. Further on in this chapter, we will use some more elaborate examples of the consumption of *A Very Proper Treatise*, bringing to light several other binding realities such as being bound to a specific selection of books, being bound to manuscripts or appearing with cheap bindings.

### 3.2 Early modern book consumers: a survey of book owners

Material investigation has brought the names of certain owners to light. Sometimes material evidence has perished through time and usage, while in other cases evidence has been intentionally removed. In the case of the 1573 Glasgow edition, the nineteenth-century bookbinder William Pratt did his best to remove all traces of the book's past.<sup>582</sup> The result is that only a monogram or abbreviation 'c.q.' is vaguely legible and at least one possible name and several other inscriptions have been rendered illegible to the naked eye and even modern technology.<sup>583</sup>

Happily, most names, if not lost by washing or cropping, remain decipherable. Most of the signs left by people in *A Very Proper Treatise* are of ownership, but of all the names that are in these copies, only a few are those of early modern users. Even though this group of eighteenth- and nineteenth-century collectors and owners is very interesting, it does not contribute to the historical understanding of the making and early use of the book. Within the boundaries of this chapter, only a few specific book owners of later periods will be discussed.

The importance of this research is that, for the first time, the consumers of *A Very Proper Treatise* are listed, identified, and studied. The actual audience of this early modern volume can be studied in different ways. One of these ways is focusing on the image of its public, who left concrete details and indications. The following section will focus on the audience as individuals interacting with the book. Among this category are users who did not necessarily leave their names behind. A comment on a recipe, for instance, might not be connected to a specific name, but it remains an interaction by a consumer with the book and therefore, can be considered when talking of the audience.

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582 Appendix 2, no. 4.

583 Appendix 2, no. 4, fol. 9v.

It was possible to attribute an identity to twelve subjects, although some of these identifications are non definitive. This means that there are more signatures, meaningful inscriptions, and monograms present in the studied copies, but these have become illegible through washing or cropping of the pages, or simply through the vulnerability of the ink. When compiling these twelve individuals for this chapter, we decided to consider only sixteenth- and seventeenth-century users and, as mentioned earlier, undeciphered monograms or illegible signs of ownership were not pursued.<sup>584</sup> Heirs are indicated with an arrow.

1. William Neile (1560–1624) (1573, Bodleian Library)
2. James Ussher (1581–1656) (1581, TCD)
3. Phebe Challoner (?) (1581, TCD) → daughter Elizabeth, wife of Timothy Tyrrel
4. William Le Neve (1592–1661) (1581, British Library)
5. Robert(us) Thorne (?) (1581, Huntington Library)
6. Elias Ashmole (1617–1692) (1583, Bodleian Library)
7. John Aubrey (1626–1697) (1583, Bodleian Library)
8. William Goodman (?) (1583, Bodleian Library)
9. John Dyson (?) (1583, Bodleian Library)
10. Andrew Astley (?-1633) (1588, Bodleian Library) → son
11. Jenny Mill (?) (1596, Cadbury Library Birmingham)
12. Brian Twyne (1581–1644) (1605, Corpus Christi Oxford)

All twelve names are connected to just eight copies of *A Very Proper Treatise*. Half of these copies are well preserved thanks to their early passing into the hands of collectors or institutions. This is the case for the 1605 copy owned by Brian Twyne, who bequeathed his collection of printed and manuscript books to Corpus Christi College, Oxford, where it remains today.<sup>585</sup> Elsewhere, the list contains ten consumers, who signed the volume with their names; one was traceable through the library reference number, and one was traceable through a manuscript catalogue. The list contains two female and ten male consumers. Among these twelve consumers, five have an entry in the Oxford Dictionary of National Biography, hereafter referred to as the ODNB (numbers 2, 4, 6, 7, 12). Two further subjects are mentioned in the ODNB (numbers 1, 3), meaning there

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584 In the case of ownership signs in another book title bound to the book title of interest, we have only taken up the name if there is a clear connection to the whole of the binding. For instance, we left a clear signature on the Glasgow copy (Appendix no. 4) out of the selection, because it belonged to an annexed part that was bound to *A Very Proper Treatise* after the early modern period.

585 Appendix 2, no. 36.

are five who are not listed in the ODNB (numbers 5, 8, 9, 10, 11). Of this last group, one subject had a traceable will (number 10) and two names are shared by multiple people, which results in multiple wills and documents (numbers 8, 9). This leaves the final list with two unidentified subjects (numbers 5, 11), of which one is situated in a family context (number 5). This leaves the current research with one name, that of Jenny Myll (number 11), which needs further investigation to better grasp its historical context.

The case of Jenny Myll is of interest because of the particular inscription she left on her 1596 copy of *A Very Proper Treatise*: 'Jeny Myll owe this booke/1596'.<sup>586</sup> She conveys the sense of ownership by explicitly building in a possession claim. Another interesting ownership claim is by William Le Neve, who wrote from the perspective of the book: 'Willym Le Neue me iure possidet' [William Le Neve is my legal owner].<sup>587</sup> Jenny Myll's inscription finishes with a date (1596), most likely the date of acquisition, which is also the year of publication of the fifth edition. This could mean that Jenny Myll was a customer at Thomas Purfoote's print shop. Finding a direct customer of one of the print shops is a very rare occurrence for this particular book title. The only other potential buyer at Purfoote's print shop is the Oxford student Bryan Twyne, who, according to his letters, went to London in 1605, the year of the sixth edition of *A Very Proper Treatise*, which is the one in his collection.<sup>588</sup> Jenny Myll, however, is more likely candidate, because she dated her copy of the book in the year it was printed. This leaves us with a female consumer of *A Very Proper Treatise*, who could have been a member of both the actual and circumstantial audience of the print shop.

The other case involving a female consumer hints at a love story and unexpected transmission dynamics. The signature of Phebe Challoner appears on the second leaf of *The Accedens of Armory* (1576), the first book of the TCD binding that holds the 1581 copy.<sup>589</sup> This precise copy has never been examined, although a lot of studies address the library of Phebe's father, Luke Challoner. Luke Challoner was vice-provost of TCD. He left part of his personal collection of books to Phebe, the 'sole executrix & administratrix' of Luke's testament.<sup>590</sup> The Latin books went to James Ussher, Phebe's future husband. Most scholarship suggests that the couple were married in 1614, but it could prove interesting to

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586 Appendix 2, no. 28.

587 Appendix 2, no. 14.

588 Gibson 1940, pp. 95–96.

589 Appendix 2, no. 13.

590 Appendix 2, no. 9; White 1927, pp. 22–23.



reinvestigate the wedding date based on our research findings. An autograph draft letter by James Ussher to Dr Arnold Boats contains a postscriptum stating that 'J' married in 1615, presumably referring to himself. This means that Phebe signed the volume before 1614/1615, using her maiden name. The volume in question did not come from the collection of Phebe's father Luke Challoner, as might be expected, but from James Ussher's collection. In 1608, James had already registered the three book titles of the actual binding: Gerard Legh's *The Accedens of Armory* (1576), John Bossewell's *Workes of Armorie* (1572), and the recipe book *A Very Proper Treatise* (1581).<sup>591</sup> In this chapter we argue that the volume containing *A Very Proper Treatise* was a token of friendship and affection, offered before their marriage, so the Dublin copy may hint at an underlying love story.

Some of the signatures in *A Very Proper Treatise* are worth mentioning. Phebe Challoner's signature in the Dublin copy is particularly clearly written in the annexed copy of *The Accedence of Armory* (1576).<sup>592</sup> The signature of William Neile in the 1573 Bodleian copy was an enigma that could only be deciphered thanks to his multiple signatures in another book: the Cambridge copy of *The Holy Bible* of 1602.<sup>593</sup> Rob'tus, or Robert, Thorne of the 1581 Huntington copy, is identifiable not only through his name, but also through his coat of arms.<sup>594</sup> Andrew Astley's signature in the Douce copy of the Bodleian Library is so faint that a cursory glance at the page would fail to discern any writing, but it did not escape a more scrupulous examination.<sup>595</sup>

The name Andrew Astely seems to be very uncommon, and there is very little to be found relating to it, although some other people went by this name. The will of Knight Andrew Astley of Writtle (Essex) is preserved at the Prerogative Court of Canterbury.<sup>596</sup> He was born in the second half of the sixteenth century and died on September 1st 1633, with probate granted on October 15th 1633. Sir Andrew Astley's will divided his money, land, properties, and goods between his sons, sons-in-law, daughters, wife, and brother. Sir Andrew seemed to have possessed a reasonable number of books, mentioning them on three occasions in his will. He bequests his 'Italian, spanish and french books' to his brother Thomas

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591 Dublin, TCD MS 793, fol. 184r.

592 Appendix 2, no. 13.

593 Preserved at Gonville and Caius College, Cambridge, H.25.25; see Scott-Warren 2010, p. 367.

594 Appendix 2, no. 16.

595 Appendix 2, no. 25.

596 The National Archives: Ref. prob/11/164/447.

Astley. He leaves his 'best latin books' to his son-in-law George Alrywood and goes on to conclude his will with 'all his goods [...] and books not by this my present will and testament bequeathed and disposed after my debts paid begaryes discharged and funerall rights performed, I doe give and bequeath unto my sonne Thomas Astley'.<sup>597</sup> The context created by the will appears to indicate that this is the right Andrew Astley in question.<sup>598</sup>

One of the recurring characteristics that connect many of the identified, and also unidentified readers, was an interest in heraldry. William Le Neve was a herald and genealogist.<sup>599</sup> The antiquary and astrologer Elias Ashmole had a specific interest in heraldry. During his life he became closely acquainted with the famous herald William Dugdale (1605–1686) and eventually became his son-in-law.<sup>600</sup> John Aubrey, who belonged to Elias Ashmole's circle of acquaintances and friends, also had heraldic interests. Thomas Gore, one of Aubrey's contacts, asked him to 'look out for any newly printed heraldry books', meaning that Aubrey was interested in the subject. Aubrey himself was a practitioner in the arts.<sup>601</sup> Outside of professional or other interests, there was another curious element that linked a certain person to heraldry. Nothing is known or written about Robert Thorne, so discussing his interests is difficult. However, the title page of his copy of *A Very Proper Treatise* contains his name and his coat of arms (Fig. 3). It can be concluded that Thorne acquired a volume for artistic-heraldic purposes and placed his coat of arms on the title page, which confirms that he at least had and used his coat of arms. The bibliographical interests in the couple Phebe Challoner and

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597 The National Archives: Ref. prob/11/164/447.

598 One encounters numerous difficulties in identifying the right person in historical research. Frequently, there are other people with the same name, for instance, one of Andrew Astley's sons was his namesake. But the case of Andrew Astley is relatively simple, as there are other situations where a multitude of people have the same name, such as John Dyson, for whom three wills survive. Furthermore, including other early modern documents, one must investigate eleven different entities without any clear link to books or painterly knowledge, and the book cannot be exclusively linked to any particular social status. Here, the researcher needs to go through becomes difficult. Identifying early modern subjects can be like looking for a needle in a haystack.

599 Wright 2004.

600 Hunter 2006.

601 Citation taken from Scurr 2015, p. 194. John Aubrey's correspondence is preserved in Oxford, Bodleian Library: MS Ballard 14, MS Ashmole 1814, MS Tanner 25, MS Tanner 456a, MS Wood F 39; and at London, British Library: MS Lansdowne 231, MS Egerton 2231.

**A**very proper treatise, wherein is briefly sett forth the arte of Limming, which teacheth the order in drawing & tracing of letters, vines, flowers, armes and Imagery, & the maner howe to make sundry siles oꝛ groundes to lay siluer oꝛ golde vppon, and howe siluer oꝛ golde shalbe layed oꝛ limmed vppon the sile, and the way to temper golde and siluer and other mettales and diuerse kyndes of coloures to wrytte oꝛ to limme wythall vppon belym, parchement, oꝛ paper, and howe to lay them vpon the woꝛke which thou entendest to make, & howe to bernish yt when thou hast done, with diuerse other thinges very mete and necessary to be knowne to all such Gentlemenne, and other persones as do delite in limming, painting, oꝛ in tricking of armes in their right coulours, & therefore a woꝛke very mete to be adioined to the booke of Armes.

(.◦.)



Printed at London in Flete  
 street within temple Barre at the  
 signe of the Hande & Starre  
 by Richarde Tottill.  
 An. 1581.

Cum Priuilegio.

Fig. 3: Title page with inscription and coat of arms of Robert Thorne from: Anonymous, *A Very Proper Treatise* (London: Richarde Tottill, 1581), Rare Books 60087, The Huntington Library, San Marino, California. (Appendix 2, no. 16)

James Ussher will be discussed later on in this chapter. Several links between the traced individuals and *A Very Proper Treatise* are evident.

As in many early modern books, several interesting signatures and names appear attached to various copies. This survey of book owners, shed light on the twelve early modern users who could be identified. Obviously the copies of *A Very Proper Treatise* were not just used by these twelve people. Unfortunately, lacunas are typical for this kind of material study of books, as it is rare for all copies of all editions of a single book title to survive. Nevertheless, the work for this chapter has aroused particular interest in one of the subjects, Phebe Challoner, who will be one of the main actors in this chapter.

#### 4 Early modern book consumption: a survey of attitudes and interests

Books are made of paper, and paper provides a common writing support. Whether books were printed, handwritten, or left blank, early modern people were keen to use whatever space was available to scribble poesies, recipes, and references. *A Very Proper Treatise* was certainly no exception. The Yale Center for British Art's 1588 copy contains a nice example of the religious life of an art technological print.<sup>602</sup> A verse written on the title page contains a lengthy religious text about tears, sin, pity, and fear, which will be discussed later in this chapter. The Bodleian copy of 1583 features a list of the ten plagues of Egypt on the blank page in between two books.<sup>603</sup> Consumption here is limited to the material aspect of the book. What is striking is the lack of interaction with the book's content. Historical traces with religious content point to an interest in the book as a material object, but these traces are not related in a direct way to the content of the book, and provided no certainty that the content of the book was actually used.

As with all books of practical knowledge, another way of consuming art technological sources was to reproduce their content. Earlier, we argued that *The art of making* has common roots or was a possible source for *A Very Proper Treatise*. In this case, the dynamic of knowledge transmission was from manuscript to print, but the reverse also occurred. British Library MS Harley 1279 offers a nice example of recipes that were copied from *A Very Proper Treatise*.<sup>604</sup> The synopsis of an example can be seen in the first chapter of Part II (see Tab. 3).

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602 Appendix 2, no. 22.

603 Appendix 2, no. 19.

604 London, British Library, MS Harley 1279.

Furthermore, BL MS Harley 1279, combines written art technological recipes with heraldic imagery. Here, we have arrived at the purpose of the little volume: to provide an art that can be applied for heraldic purposes. Several heraldic volumes consulted for this study contain colors added to their imagery. Of particular note, is the binding owned by Phebe Challoner, which contains alongside the added colors, other artistic techniques employed to transfer imagery (which do not appear among the recipes of *A Very Proper Treatise*).<sup>605</sup> The proposal and suggestion of the printer in the title, about the ‘tricking of armes in their right colors’ was heard.

Finally, we will summarize some of the practical uses made of the recipes of *A Very Proper Treatise*. One of the key questions concerning textual art technological knowledge is whether the knowledge was executable and whether it was put into practice. Owners’ interactions with *A Very Proper Treatise* might suggest answers to this specific question. One of the recipes describes how to make ‘white letters in a black feelde’.<sup>606</sup> A concrete example of a white letter in a black field is found in MS Sloane 3604, an autograph manuscript of Robert Freelove. An initial ‘T’ contains the portrait of King Henry VIII, and the white letters spelling out his name are incorporated in the black of Henry’s garment.<sup>607</sup>

However, the techniques used in the image did not follow the procedure described by *A Very Proper Treatise*, even though the end result was the same. Nevertheless, the procedure ‘to make white letters in a black feelde’, described in the recipe’s title in *A Very Proper Treatise*, seemed to be subject of interest. This particular recipe was successful and was most likely actually put into practice and experienced. This same recipe did not pass unnoticed by the consumer of the 1588 Yale copy, who wrote ‘aproved by me’.<sup>608</sup> Or, as the 1605 consumer of the BL copy wrote, the recipe ‘to make white letters in a blacke feelde’ was ‘a pretty exercise’.<sup>609</sup>

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605 Appendix 2, no. 13.

606 Anonymous 1573, sig. 2Cr.

607 London, British Library, MS Sloane 3604, fol. 9r.

608 Appendix 2, no. 22. The expression is written above the title of the recipe.

609 Appendix 2, no. 35, sig. C1r. The 1605 edition follows a different signature pattern than the first edition.

#### 4.1 Books as paper objects and the religious interest of early modern consumers

A feature of virtually all early modern books, and books in general, is that they contain not only text, but also empty pages, margins, and spaces between titles and text. These empty spaces were used as paper to write on, as space for comments on the text of the book, or for the owners' marks. They could be utilized for learning to write, to draw, to calculate, to copy from other works, and to write down lists of things, such as the people who borrowed the books. Anything could be written down. Plenty of books that were considered during our research project that developed into this book, whether or not connected to *A Very Proper Treatise* or practical knowledge, displayed similar characteristic marks of use.

Religion formed an integral part of the daily lives of most, if not all, early modern people. As discussed in the first chapter of this thesis, the timings included in recipes were often guided by references to common devotional prayers. Looking at the binding of the Dublin copy of *A Very Proper Treatise*, we can discern an interest in the image of a Madonna with Child, a very popular piece of Christian iconography. Other signs of religious interest around the volume are connected to the book itself or the larger context of the binding. The Bodleian copy of 1583 contains a list of the ten plagues of Egypt on a blank page between two books.<sup>610</sup> The list of the plagues, which appears in a numbered sequence, was drawn from the Book of Exodus. Elsewhere, the back of the title page of the 1588 Yale copy of *A Very Proper Treatise* contains a long prayer. The 1573 Glasgow copy also contains a prayer, but it is doubtful that *A Very Proper Treatise* and the prayer were bound together during the early modern period. Thus, it is generally true that the spare paper in books was written on, and religious items often appear in the blank space of printed books.

#### 4.2 How art, heraldry, a book collection, and a love story are connected in the case of Phebe Challoner and James Ussher

From the signatures found, the list of consumers of *A Very Proper Treatise* is marked by gender inequity, although this does not necessarily mean that women did not use the book. From the research undertaken on the surviving copies and signatures, we only found two female subjects (nrs 2; 11), while there are ten male subjects. However, through this research it was possible to reconstruct the

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610 Appendix 2, no. 19. The two books are *New Directions of Experience* (1613) and *A Brief Account of the Province of Pennsylvania* (1682).

story behind the book signed by one of the two female subjects, Phebe Challoner (nr 2). As mentioned in previous chapters, this copy of *A Very Proper Treatise* is bound to *The Accedens of Armory* (1576) and *The Workes of Armorie* (1572). We will build on what was briefly explained in the survey of book owners, earlier in this chapter. The study of this particular case is interesting from the point of view of social history, as it shows the habits of young people who later in life became book lovers and owners of an impressive book collection.

The history of the books at TCD is both complex and fascinating, but thanks to its personal story, this particular volume is a pearl in the collection. The old nucleus of TCD was started by Phebe Challoner's father, Luke Challoner. Through the marriage of his daughter Phebe Challoner, the library passed into the hands of her husband James Ussher. Both Luke Challoner and James Ussher dedicated much effort to buying books for TCD, but when the Ussher family left Ireland for England in 1641, they took their collection of books with them. After Ussher's death in 1656, the library passed to his daughter and only child, Elizabeth, who was married to Timothy Tyrrel. The Tyrrel family wanted to sell the collection, and there was soon interest from abroad, from the king of Denmark and from Cardinal Mazarin, but the English government prevented the collection from leaving the kingdom. There was interest in England from Thomas Barlow, the Bodleian librarian and a contact of Ussher, and from Sion College London. But eventually Henry Cromwell decided that Dublin would be the best destination for the library, and finally, in 1656, the Irish army bought the collection for TCD.<sup>611</sup> TCD does not own the entire Ussher collection, as part of it still to be found in the Tanner collection at the Bodleian Library.<sup>612</sup> A significant part of the special collections in TCD started in the same location; the nucleus of the collection was temporarily removed and then returned, never to leave again. The history of the entire book collection is the context for further understanding of the particular volume EE.k.19, containing the three books mentioned in the previous paragraph.

When starting this research on the copy of *A Very Proper Treatise* in Dublin, we had to consider the general flow of books between Luke, Phebe, and James. However, this investigation revealed that this movement of books did not always follow the same pattern, as the story of volume EE.k.19 shows. While most books were passed indirectly from Luke to James, over Phebe, the volume EE.k.19,

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611 Carr 1895, p. 375.

612 Barnard 1971, pp. 9–14; Boran 1998a, pp. 75–115; Boran 1998b, pp. 116–34. See also regarding Ussher's library: Lawlor 1900.

which is part of the core collection of TCD, was passed from James to Phebe. This volume contains the clearest and most prominent signature of any of the copies of *A Very Proper Treatise*: ‘phebe challoner.’<sup>613</sup>

The signature indicates that Phebe signed this book prior to her marriage, because she used her maiden name. From our research for this book, evidence was found to suggest an unexpected dynamic in this story. Our hypothesis is that this volume was a gift from James Ussher to Phebe Challoner before they got married. Based on textual evidence alone, one might easily conclude that EE.k.19 was acquired by James Ussher in or before 1608, and remained in his collection until his death, after which it was eventually annexed to the library of TCD together with the whole of the Ussher collection. However, when one considers the material evidence of this volume, it becomes apparent that the edition probably left Ussher’s collection for a period, and its story takes a rather unexpected and surprising turn. The second page of *The Accedens of Armory* holds the signature of Phebe Challoner, James Ussher’s future wife.

Little information survives about Phebe Challoner. She was the daughter and only surviving child of Luke Challoner and his first wife Rose Ball. Phebe’s mother died of the plague on October 25th 1604, and Luke remarried Elizabeth Percevall, who would go on to survive him. The marriage did not last a decade, with Luke composing his will and testament on March 18th 1612, and probate being granted to Phebe on May 5th the following year. Phebe inherited ‘towe houses [...] on the merchant key’, ‘the house in the Castell streat’ with ‘all the furniture impelments stuff & utensills [...] as also the new gallery added this last year’, ‘the newe house’, ‘the farme in Ballegalls’ and, finally, her father left her ‘all my books except thes folloing which I shal dispose by legacy’.<sup>614</sup>

Luke’s daughter Phebe was made the ‘sole executrix & administratrix’ of his will and testament.<sup>615</sup> Because of this, it is suggested by a Challoner family website that Phebe was responsible for the commissioning of the monumental memorial brass for her father, mother, and siblings.<sup>616</sup> Today, this monument, can be found in the smallest graveyard in Dublin, but it has been weathered by time. The funeral brass was noticed in 1680 by Thomas Dingley, a visiting antiquary, whose work include a useful drawing of the tomb, containing an effigy of

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613 Phebe’s signature is written in pen with tall, slender, forward-slanting strokes across the lower margin of the page.

614 White 1927, pp. 22–23.

615 White 1927, p. 24.

616 <http://challonerfamilyireland.wordpress.com/luke-challoner/>.



Luke Challoner.<sup>617</sup> A Latin inscription seen in the drawing reads ‘Conditur hoc tumulo Chaloneri triste cadaver /Caijus ope et precibus conditur ista domus obiit xxvii aprilis /Anno Domini M D.C XIII’ [Hidden in this tomb, the sad corpse of Chaloner remains, whose helping hand and prayers helped build this house. He died on April 27th of the year 1613].<sup>618</sup>

Despite being an unmarried woman at that time, Phebe was endowed with significant responsibility over her father’s properties and his book collection. Several volumes were bequeathed to leave the collection, such as the twenty books for Phebe’s stepmother. Luke Challoner specified that the choice of these books would be determined by both Phebe and her stepmother. This seems to be a tendency running through the whole of the will. For instance, in another case concerning the library, Phebe had to agree with James Ussher who would get which Latin books. By setting such a proviso, Challoner’s will, intentionally or not, facilitated future contact between his daughter and James Ussher. According to Richard Parr, an early biographer of James Ussher, Phebe ‘punctually obeyed’ her father’s recommendations on his deathbed. He would have wanted to see a marriage between both concluded before he died, but this did not come to pass and thus ‘he charged her upon his Death-bed, that if Dr. Usher would marry her, she should think of no other person for a Husband’, advice that would be followed not long after, in 1614/1615.<sup>619</sup> This image of a father’s dutiful daughter, lovingly obeying his deathbed commands, might be a matter of narrative.

There is enough proof to suggest that Phebe and James were on good terms in the years prior to their marriage. In 1610, Phebe lent a book to Ambrose Ussher, and James Ussher was listed as the person to return the book to Challoner. This list of loaned books became part of Luke Challoner’s catalogue TCD MS 357.<sup>620</sup> In a letter from James Ussher to Luke Challoner on November 11th 1612, written from London, James extended his greetings to Phebe, and a third instance where the two were probably in touch, was the passing on of the heraldic volume, item EE.k.19. As mentioned before, in 1608, this volume, which contains Phebe’s signature, was part of Ussher’s collection. What is remarkable is that Phebe signed with her maiden name. Conventionally, women adopted their husband’s name after marriage, which is accepted in this thesis as an early modern truth. In this case, Phebe would have signed the volume at some time between 1608, when

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617 <http://challonerfamilyireland.wordpress.com/luke-challoner/>.

618 The inscription is taken from the image; the translation is ours.

619 Parr 1686, p. 14.

620 Dublin, TCD MS 357, fol. 8v. This will be discussed further on.

it was registered as part of Ussher's collection, and 1614/1615, when she was married.

#### 4.2.1 *The Ussher couple*

In scholarship, it has been accepted that James and Phebe would have married shortly after Luke Challoner's death in 1614. Richard Parr reports that Phebe had been James' wife for about forty years, and later on he states that she died about eighteen months before her husband. James Ussher died in 1656, so calculating back from then, it seems likely she married either in 1614 or 1615, which could be a possible date for marriage. An interesting postscriptum to a draft letter of James Ussher to Dr. Arnold Boats can be found. The letter is not dated, and it is a rather sloppy document, but concludes with a postscriptum from James that he underlined, saying: 'J. married an.° 1615 post Apr. 14'.<sup>621</sup> The inscription is remarkable for several reasons. It seems to be in James Ussher's handwriting, but the content seems impersonal, as he identified himself as 'J.' and was supposedly referring to his own marriage. In addition, the text does not contain the precise date of his wedding, but merely that it took place 'after' April 14th 1615. The key to understanding this might lie in the writing, which is perhaps indicative of the more formal way of introducing a marriage used in certain circles, or, for instance, when personal matters were not readily discussed in a letter.<sup>622</sup>

The information about J's marriage in this draft letter is worth considering. The precise date could be relevant when considering a woman's personal library: in the case of Phebe, her personal library, meaning the library separate from that of her future husband and that of her father. Phebe would have had a personal library between 1613 and 1615. Documents from this period may hold information about Phebe as an individual standing separate from her future husband and her father. After considering the results of our research, we conclude that Phebe was always an active consumer of books. This means that both partners,

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621 Dublin, TCD MS 454, fol. 200v.

622 Unfortunately, I cannot provide the current study with a picture, but we have carefully examined James Ussher's handwriting in different occasions, being his letters, his scribbles and annotations in books and in his catalogues. This draft letter is marked by the same style as all his other writings, which is recognizable at the minuscule small letters. I have discussed my findings with Dr. Jack Cunningham, who gave positive feedback and to whom I owe thanks. Dr. Cunningham is a church historian at Bishop Grosseteste University; he published on James Ussher: Cunningham, Jack, *James Ussher and John Bramhall: The Theology and Politics of Two Irish Ecclesiastics of the Seventeenth Century* (Aldershot: Ashgate Publishing, 2006).

Phebe and James, were already active book consumers before their marriage, when they were young people.

#### 4.2.2 *Phebe Challoner's Books*

Phebe Challoner's collection is now subsumed in James Ussher's own collection, housed in the Long Room of TCD. Other parts might have gone to the Bodleian library, but that is another area of research. As a result of the days spent in TCD studying over two hundred twenty-five printed books, and several manuscripts, we were able to identify a nucleus of seven books containing Phebe's signature, and there is further evidence of other books used and owned by Phebe.<sup>623</sup>

Amongst the TCD books, there is a large portion that belonged exclusively to Phebe for some period of time. For a start, all the books that belonged to Luke Challoner at the time of his death went to Phebe and remained hers until her marriage. Among this collection Phebe left her signature in at least 6 volumes. She put her signature over her father's, who usually signed his books with 'L Challeneri' or 'L Challoneri'; Phebe would turn the 'L' from Luke into a 'P'. She would proceed according to the space left between the 'L/P' and 'Challoneri', adding either a 'Phe' or 'Phebe' in front of the family name. There are many other books that belonged to Luke Challoner that were left unsigned. In these particular volumes, Phebe seems to be silent as well. Her signing of this specific category of books appears to be quite straightforward. Of the books she inherited from her father, she signed the ones he had signed, making use of his signature.<sup>624</sup> This double signature is always positioned in the upper margin of the title page of the first book of a volume.

There are other characteristics shared between the books bearing Phebe's signature. All the signed books are English, and were printed in the 1570s and 1580s. Luke Challoner did not sign all his English volumes from those years, and the

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623 For a schematic overview see Appendix 4.

624 These six volumes represent 2,73 % of the total volumes that we studied. It is rather difficult to distinguish Luke Challoner's volumes in Ussher's collection. The manuscript lists of Challoner's books in MS 357 offers material to compare the actual Ussher collection with the parts that belonged to Challoner. However, both men often had the same books, and, in many cases, the author is given in his list without a title. The collection holds more than one book by the same same author. In these cases, it is particularly unclear which volumes belonged to Challoner before they belonged to Phebe and then Ussher. One can get an idea of his interest but calculating the percentage of books we saw that belonged to Challoner is impossible.

Latin volumes checked revealed no signatures.<sup>625</sup> It is unclear why Luke signed only a very select number of books in his collection. There might have been some organisational purpose to it, such as books he had lent for instance. Apart from this, five of the six volumes have a very similar binding and treatment of paper, a feature that is very frequent in the collection. The binding of one volume is different because it has its original binding, and this will be discussed later. Five volumes have a calf binding with dark sprinkling, and the edges of the panels are embellished with a leaf motif. The book blocks have a very similar visual aspect. The leaf-edges are sprinkled with red and blue. These are all rebindings from the second half of the seventeenth century and show signs of being TCD's standard library bindings at that time. The shelf mark would have been gilded on the back of the book, but this information is mostly lost today. Two other volumes that are associated with Phebe share these material features. One of these books was definitely an Ussher volume because it was printed long after Challoner died, confirming that these bindings date from around or after the 1660s, when the Usshers' collection joined TCD.<sup>626</sup>

Among those volumes that contain the double signature of Luke and Phebe Challoner is item BB.h.31, *A Hundred Sermons upon the Apocalypse of Iesu Christ*. It was printed in London by John Daye, 'dwellyng over Aldersgate', in 1573. The double signature is partly lost by the cropping of the pages, but it is still identifiable. The book was read by James Ussher, who left a few marginal notes. Item BB.ii.48 contains two books: *A Confutation of monstrous and horrible heresies* (1579) and *The Pope Confuted. The Holy and Apostolique Church Confuting the Pope* (1580). An earlier shelf mark on the book block is quite remarkable: 'H. 5 5' has been written upside down, meaning that the book would have been preserved with its back to the wall and with the text upside down, a common practice at the time. There are other signs of things being written on the book block, but they have become rather unclear. This is the volume with the double signature that presumably has its original binding. The centerpieces of both panels of the binding contain the portrait of a lady in profile. The inside of the binding used paper from an old manuscript that used blue and red ink for its initials.

The following is a list of the volumes that contain Phebe's signature: 1) Item CC.1.57 has one book entitled *A Faithfull and Familiar Exposition upon*

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625 The current research focussed mainly on books in English or about certain topics such as heraldry and art. Books in Latin appeared among the selection but form a minority.

626 Confirmed by the librarian of TCD.

*the Prayer of Our Lorde Iesus Christ* (1582). The double signature suffered only slightly from cropping. 2) Item CC.l.29 contains the book *Master Bezaes Sermons upon the Three First Chapters of the Canticle of Canticles* (1587). This is another volume with the clearly-legible double signature that enjoyed the specific attention of James Ussher. The volume is filled with marginal notes and the marking system which is typically for Ussher. 3) Item BB.n.7 contains the book *A Profitable Exposition of the Lords Prayer, by Way of Questions and Answers for most playnnes* (1588). It was signed by an earlier user with the initials 'R.S', who is yet to be identified. 4) Item BB.kk.19 contains the book *The Summe of the Conference Betweene Iohn Rainoldes and Iohn Hart* (1588), and was probably used by another, maybe earlier reader than Challoner, Phebe, or Ussher. There is an inscription of an unknown hand on the final leaf of the book. Ussher left some marginal notes. The title page contains an earlier shelf mark 'A:5:66' which still has to be verified.

The majority of these volumes show signs of being used by readers before Challoner, Phebe, or Ussher. Different types of shelf marks in books provide strong indications of this. In these cases, the previous owners remain unknown, except when they have left their full name. This means that most of the books Luke Challenor purchased were second-hand, although it is unknown when he acquired these books printed during the 1570s and 1580s.

The TCD collection keeps a little book with the title *A Closet for Ladies and Gentlewomen. Or, the Art of Preserving, Conserving, and Candyng* (1611). The volume appears in Ussher's full catalogue of 1666, meaning that it was part of his collection at the time of his death.<sup>627</sup> Considering the nature of this book, for ladies, it is very likely that this copy belonged to Phebe.<sup>628</sup> It seemed to have been a successful book in term of publishing, as it had at least fifteen editions between 1608 and 1656.<sup>629</sup> Two other books contained large sections of *A Closet for Ladies and Gentlewomen*. Both *The Ladies Cabinet Opened* (1639) and *The Ladies Cabinet Enlarged and Opened* (1654) contain elements of the earlier text. Often this work is ascribed to Sir Hugh Plat, because he published similar topics such as *Delight for Ladies* (1602). Both volumes were often bound together.<sup>630</sup> It

627 Dublin, TCD MS 6.

628 In the 1606 catalogue of books bought in England by James Ussher, there is a book called *The Jewel of Health* (4°). We could not find a publication that corresponds to this title.

629 *A Closet for Ladies* had editions in the following years: 1608, 1611, 1614, 1618, 1624, 1627, 1630, 1632, 1635, 1636, 1641, 1644, 1647, 1651, and 1656.

630 Holloway 2011, p.11.

is very likely that in 1611 or shortly thereafter, a young eligible Phebe would have shown interest in what a lady would need in order to become a proper housewife.

There is a final book title from Phebe's personal collection, identified by a marginal note in one of Luke Challoner's notebooks. On the back of a page with lists of borrowed books abroad from 1601, Luke wrote the following declaration in name of Ambrose Ussher: 'I promise to restore Scapula to P. Challenor at Mr. James Usshers comming'. The declaration is signed by Ambrose Ussher himself. Scapula is the Latin word for shoulder, but Ambrose Ussher probably didn't borrow an anatomic part; Phebe was probably not a bone collector. Scapula was the name of an author, used to refer to the book *Lexicon Graeco-latinum* of Johannes Scapula. A copy of this book appears in Luke Challoner's list of language books.<sup>631</sup>

Two questions remain concerning Phebe's copy of Scapula. The first is whether Luke Challenor included Phebe's books in his catalogue, and if there were one or more copies of the same book in the collection. The second question is whether Phebe's copy of Scapula is still held by TCD. Currently TCD contains other copies of this book title, one of them is from 1609, which could be Phebe's copy. In fact, there is a pencil note in the margins of this precise copy saying '1610 May', on a page containing information about Phebe lending a book to Ambrose Ussher. This note might have been made much later; it looks like a library pencil note, but earlier librarians might have had information that is unavailable today. Item 21.W.52, the Scapula version of 1609, used to be catalogued as XX.cc.31. The XX books are Ussher's books that were held in a special room for student consultation once the Long Room had ceased to function as a reading room in the 1970s. In fact, this item has been restored relatively recently, yet signs of more recent use, such as several damaged leaves, are apparent. Unfortunately, a signature on the title page has been removed and is illegible. It is very likely that item 21.W.52 is Phebe's Scapula, but it cannot be confirmed with certainty.

Thus, we were able to establish a list of seven books containing Phebe's signature, along with some other books that were part of her library. Within the scope of a larger project, involving TCD, the Dublin archives, and the Bodleian Library Oxford, there is a good chance that more books could be attributed to the personal library of Phebe Challoner, and the specific books she actually owned and used identified.

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631 Dublin, TCD Ms 357, fol. 5r.

### 4.2.3 *A reader profile of Phebe Challoner*

Based on this nucleus of books, Phebe's reader profile can be discussed, starting with the question of whether she could read and write. Literacy came in various degrees and women, even noblewomen, did not necessarily benefit from an education, but nevertheless, considering Phebe's environment and circumstances, one can assume that Phebe could read and write. There is also proof to sustain this assumption. A letter from James Ussher to his daughter, Elizabeth Tyrrell, written in London on July 27th 1654, gives us an insight into this matter. James concludes his letter to his daughter with a postscriptum: 'Your mother's writings are in my cousin Arthur Trevor's custody'. This attests to the fact that Phebe wrote letters to her daughter, and thus could write. In early modern England writing was taught after reading.<sup>632</sup> This probably applied to Phebe, who was most likely taught how to read and write at a young age. Her signature as an unmarried lady confirms this hypothesis.

With respect to Phebe's profile as a reader, it is generally possible to attribute books to Phebe in two ways. The first is through the double signature in which Phebe's signature overlaps that of her father Luke. This overlap might be seen as the recycling of an old signature and clearly indicates the transfer of ownership from one to the other, described in Luke Challoner's will and testament.<sup>633</sup> It is not known if Phebe had any interest in reading these books beyond confirming they were her property. The works in question are all of theological interest. The ownership of some books is not only confirmed by this signature, but often by Luke's catalogue.

The ownership of the second group of books linked to Phebe Challoner is attributed for different reasons, either by signatures, textual references, or the nature of their subjects. Phebe was probably interested in a broad range of subjects. Her ownership of *Scapula* indicates that she probably studied Greek and, given that the *Lexicon Graeco-latinum* was written in Latin, Phebe had presumably mastered Latin as well. In this case, Phebe would have known at least three languages: English, Latin, and Greek. Phebe was also interested in practical information about the domestic arts and domestic medicine. Finally, her interest extended to heraldry and/or art production. From these three volumes, containing five books, it can be concluded that she had a broad range of interests, from highly scholarly subjects to works of everyday wisdom and practical value.

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632 Bland 2010, pp. 84–96; Brayman Hackel 2005, p. 57; Hosten 2002, p. 142.

633 The will and testament of Luke Challoner are published in White 1927, pp. 22–24.

#### 4.2.4 Heraldic and artistic knowledge for James Ussher

Before Phebe and James Ussher got married, they probably shared similar interests, among which heraldry was surely one. In Ussher's list of books bought in England in 1606, is the 'book of the armes of the Gentrye of Ireland', which could not be traced.<sup>634</sup> In his catalogue of 1608, there are many more heraldic books, such as the well known and popular contemporary book 'The Gentleman Academye, or the book of S-Albans, compiled by Juliana Barnes, an<sup>o</sup> 1486 of Hawking; Hunting; and Armorye. Lond. 1595 4<sup>o</sup>.'<sup>635</sup> The book of Saint Albans contains three essays, one of which addresses heraldry and is, again, untraceable in the collection. There is also 'The Armes of diverse Kings, Dukes and Earls, and an Alphabet of the armes of the principall families in the low countries. sett owt by John Hautte; at Gant. 1567.'<sup>636</sup> This book does not appear in the collection either. In addition, there are 'Two bookes of blason, in Frenche, printed at Paris 8<sup>o</sup>.'<sup>637</sup> These most probably are *Le blason des armoires* (1581) and *De la primitive institution des roys, herauldz, & poursuivants d'armes* (1555). Finally, the list contains the volume with Phebe's proper signature, which is the volume containing two heraldic works, Gerard Legh's *The Accedens of Armory* (1576) and John Bossewell's *Workes of Armorie* (1572), and the recipe book *A Very Proper Treatise* (1581), which prescribes artistic procedures with heraldic interest.<sup>638</sup>

Apart from the books found in Ussher's early catalogues, there is another work concerning art and heraldry belonging to his collection. Item EE.1.34 contains three works of Henry Peacham: *The Complete Gentleman* (1622), *The Art of Drawing* (1607), and *Graphice* (1612). Ussher's pressmark in this volume has been lost, but its former presence is known thanks to a library annotation on the flyleaf. The volume was bound in or after 1622, the year in which the most recent of the three books was first published by Richard Grosvenor (1585–1645), the owner of this volume prior to James Ussher.<sup>639</sup> Ussher bought this volume after 1622, because the three titles are listed on the first fly leaf in Grosvenor's handwriting.<sup>640</sup> During his lifetime, James Ussher acquired several books with

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634 Dublin, TCD MS 790, fol. 49v.

635 Quote taken from Dublin, TCD MS 793, fol. 182r.

636 Dublin, TCD MS 793, fol. 183v.

637 Quote taken from Dublin, TCD MS 793, fol. 184r.

638 Dublin, TCD MS 793, fol. 183v.

639 Cust 2004.

640 His library and/or other goods might have been sold in these years to pay his debts. Cf. Cust 2004.



heraldic and artistic interest, which demonstrates a modest but persistent interest in the topic.

#### 4.2.5 *Consumption: artistic interest in heraldic books*

This section will rely on findings gleaned from TCD items EE.k.19 and EE.l.34, both of which are volumes containing multiple texts concerning heraldry and art. Both had been part of James Ussher's collection, and at least one has been in Phebe's personal collection. While it is likely that Phebe used the publications of Peacham, there is little to no material evidence to prove it. Instead, we must rely on their content, which displays a common thread, alongside which we can identify some common physical features of use. Both volumes have traces of paint left on the visual imagery of one of the title pages. Two shields depicted on the frontispiece of *The Accedens of Armory* are marked with yellow paint, although one is only partly painted; while the bird on the title page of *The Art of Drawing* has an added spot of blue paint. There is a difference in the intention of these paints. The yellow was used in a precise fashion; the coloring is quite neat. In contrast, the blue seems to have been applied with a single stroke of the brush. In *The Complete Gentleman* there are three coats of arms, all of which have been painted with black, but the discovery of paint in heraldic texts is more commonplace.

Another feature that the two volumes have in common is the reader's interest in transferring images, and we can find three different examples of its use among the different volumes. *Workes of Armorie* contains two kinds of image transfers. The coat of arms on folio 79v with 'the virgin Marie, with her chylde, standing in the sonne', has been marked with a grid drawn over the coat of arms. This grid is numbered horizontally and vertically, mimicking a system used by artists to transpose an image to another surface, and allowing artists to scale the image up or down.

The second image transfer process appears to have involved the application of oil or another solvent. Through burnishing the paper with printers' ink soaked in oil and pressing it onto another surface, the image is reproduced. This procedure can be repeated several times, although the image will become weaker each time. In contemporary terms, this was referred to as a ghost image. Examining the images in *Workes of Armorie*, all of those with oil-like stains are 'ghostlike' – the ink of those images is darker and better defined than the ink of the adjacent text. Furthermore, apart from one instance, the stain covers the image completely. When the stain covers text, the ink of the text loses a little of its intensity.

The third method of transferring images that appears, is that of taking the image to a window or other illuminated surface and tracing the image on the reverse side of the paper. In the case of the bird on the title page of *The Art of Drawing*, the tracing was made on the reverse of the paper. This technique can be used to obtain a mirrored image, or when two papers are kept together, to transfer the image.

*A Very Proper Treatise* opens the procedures for limning or book painting with:

‘The order of drawing or tracing. First thou shalt with a pencell of blacke lead, or with a cole made sharpe at the poynte trace all thy letters, and sett thy vinetts or flowers, and then thy imagery yf *thy* wilt make any. And then shalt thou *with* a small pen drawe al *thy* hast portred, then make thy sise on this wise.’<sup>641</sup>

Here, there are two terms used to describe the action of creating an image: tracing and drawing. In the OED, tracing has two suitable meanings, it means either ‘to draw; to draw an outline or figure or; also, to put down in writing, to pen,’ which comes from the French verb ‘tracier’. The second meaning given for tracing is ‘to copy (a drawing, plan, etc.) by following the lines of the original drawing on a transparent sheet placed upon it; to make a tracing of.’<sup>642</sup> This last meaning is the kind of tracing used in *The Art of Drawing* to reproduce the bird of the title page.

*A Very Proper Treatise* gives lengthy advice on how to proceed when first creating an image. For letter forms, the user is advised to trace. So far, it is unclear whether tracing was used because letters were associated with writing, or whether standard patterns or models were used for letter forms. One of the findings from the University of Glasgow suggests the use of model books for the creation of letters in book painting. A model book made in 1578, by the limner and possible scribe Guilielmus Middelborch, contains numerous copies of letter forms.<sup>643</sup> Using model books containing innumerable variations on visual imagery was common practice.

Among the heraldic-artistic bindings EE.k.19 and EE.l.34 of TCD, there are textual and material elements that connect artistic production to heraldic interests. It is unknown whether Phebe Challoner, or her husband James Ussher, made any of these interactions with the volumes, but these volumes were certainly part of their library.

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641 Anonymous 1573, fol. 2r.

642 OED.

643 The model book makes part of the Glasgow binding containing *A Very Proper Treatise*, see Appendix 2, no. 4.

#### 4.2.6 *Artistic and practical interest in A Very Proper Treatise*

One of the questions about the public we want to answer in this book is whether there was interest in recipes concerning art or, conversely, in knowledge of heraldry. It is possible to respond to this question in two ways. Through biographical research, one can discover a great deal about the life and interests of early modern people. The person who owned the British Library copy of 1581, Sir William Le Neve, was a herald.<sup>644</sup> John Aubrey, owner of the Ashmole copy, was also skilled in the arts, leaving many drawings, watercolor paintings, and sketches.<sup>645</sup> It is quite possible that Aubrey maintained an interest in heraldry. He was part of a network that included many heralds and other owners of *A Very Proper Treatise*, such as John Aubrey, who was in contact with Elias Ashmole (1617–1692) and William Dugdale (1605–1686). Elias Ashmole, the founder of the Oxford's Ashmolean museum, was both a herald and an antiquary, and was the son-in-law of William Dugdale, also a herald and antiquary.<sup>646</sup> To this circle, one can add Brian Twyne from Oxford and James Ussher who also resided in both Oxford and London for a time.<sup>647</sup> It is quite possible that James Ussher and Richard Neile, the brother of William, also knew each other, having both occupied the position of archbishop.<sup>648</sup>

In this research, we found the Dublin volume EE.k.19<sup>649</sup> to be the most interesting early modern volume that combines artistic and heraldic interest and contains *A Very Proper Treatise*. However, although less interesting, there are other copies of *A Very Proper Treatise* containing similar signs. Two of the copies examined contain stains of paint or brushstrokes on at least one of the pages of *A Very Proper Treatise* itself. The Bodleian copy of 1573 contains reddish and brownish marks with some hints of green.<sup>650</sup> Plenty of copies have stains, notably one interesting ink stain where a dirty finger leafing through left its mark on two pages.<sup>651</sup> Although unsurprising in a booklet that contains several ink recipes, ink stains are common to early modern books in general. The Birmingham copy

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644 Appendix 2, no. 14.

645 Appendix 2, no. 19.

646 Hunter 2006.

647 Gibson 1940, pp. 94–112; Wright 1889, pp. 88–91; McCafferty 2013.

648 A possible connection between Ussher and Neile still has to be verified.

649 Appendix 2, no. 13.

650 Appendix 2, no. 9, fols 5v, 7r, and 9r.

651 Appendix 2, no. 9, stain on margin of fol. 8v, and partially, in the margin of fol. 9v.

of 1596 contains the clearest signs of paint use.<sup>652</sup> Thick brown brushstrokes are found on the title page; they served as a kind of *probatio pennae* or pen trial of the paintbrush. One of the strokes fills one of the printed floral motifs.<sup>653</sup> Another one, the 1583 copy of the Bodleian, contains very faint small stains of a red watercolor on the book block and also on the front page of *A Profitable Boke*, which was bound together to *A Very Proper Treatise*.<sup>654</sup> These red paint traces are due to the sprinkling of book blocks, a later habit. A small number of copies exhibit the actual use of paint in *A Very Proper Treatise*. The book details precisely how to make paint. However, as shown in the previous section, although the exact coloring and transferring of models was more applicable to heraldic volumes, this still fell within the scope of *A Very Proper Treatise*.

Another question in this study broaches two topics simultaneously. It concerns indications of whether the recipes included in *A Very Proper Treatise* were routinely put into practice. If they were, it would mean that there was an artistic interest in the volume and also, that the volume contained effective practical knowledge. Here, three instances of an early modern person interacting with a recipe will be discussed. The first comes from the 1573 Boston copy.<sup>655</sup> The recipe to 'lay golde or silver on sise' contains an added instruction from a consumer.<sup>656</sup> The procedure proposed is, in short, to cut a piece of gold or silver, wet a brush with the mouth and wet the piece of gold or silver with the pencil, after which it can be applied to the prepared paper. At this point in the recipe, the early modern consumer writes that, before you bring it to the paper, presumably, you need to 'lay it on iiii'.<sup>657</sup> The subsequent information in the recipe has been lost. What is of importance here though, is that the consumer had access to other practical knowledge, which he or she added to the recipe.

The two other cases both concern the recipe 'to make white letters in a blacke feelde'.<sup>658</sup> In the Yale copy of 1588, the consumer says that this recipe is 'aproved by

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652 Appendix 2, no. 28.

653 Appendix 2, no. 28, fol. 1r.

654 Bound to Appendix 2, no. 19.

655 Appendix 2, no. 1.

656 Unfortunately, the exact information has been lost because of the cropping of the margins. Appendix 2, no. 1, fol. 3r.

657 Appendix 2, no. 1, fol. 3r.

658 Anonymous 1573, fol. 10r.

me, and unfortunately part of the inscription has been lost through cropping.<sup>659</sup> In the 1605 British Library copy, the consumer judged that this was ‘a pretty exercese.’<sup>660</sup> Considering statistics and content on early modern consumers, the logical conclusion is that either the recipe or, alternatively the topic, of white letters upon a black background was a popular one. A clear example of a white letter in a black field made by Robert Frelove, can be found in MS Sloane 3604, and was discussed earlier in this study, in the context of the precise practice and technique for making these figures.<sup>661</sup> Here, the significance of this case is that a consumer left traces of their interaction with the text. The manuscript MS Sloane 3604 contains an example of the letter ‘T’ featuring King Henry VIII.<sup>662</sup> The letter contains the inscription ‘Henricus VIII’, which is a white inscription against a dark portrait of Henry VIII. The white letters on a black surface, in this case, are the initials of Henry VIII, and were probably produced following a different procedure from that described in *A Very Proper Treatise*. The technique from folio 9v is also used in the illuminated initial on folio 97r. The initial D is in a dark purple and has white writing. This case is not one of white on a black surface, but on a dark surface, which follows the same principle. Robert Frelove employed a technique to make white letters on a black or dark surface. Here, the question of whether recipes were actually put into practice is answered affirmatively. From the similarity of these examples of material culture to those described in the recipe, and from the reactions to it, it can be concluded that this recipe had the potential to be actually put into practice and that there was an artistic interest in *A Very Proper Treatise*.

## 5 Conclusion

We sought to build up a picture of the actual audience of *A Very Proper Treatise*. In seeking to characterize consumption and consumers of this book, we were guided by the questions: ‘Who used these books?’ and ‘How were these books used?’. Of the twelve consumers that were traced, some could be studied in depth, while others could barely be identified at all. From this study, one can conclude there was no unified image of the public for *A Very Proper Treatise*, because there was more than one consumption profile. There were subjects of all ages, both genders, and varying backgrounds. One factor connecting many

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659 Appendix 2, no. 22, fol. 10r.

660 Appendix 2, no. 35, p. 17.

661 London, British Library, MS Sloane 3604.

662 London, British Library, MS Sloane 3604, fol. 14v.

of these profiles was an interest in arts and heraldry. Another factor, concerning books in general, rather than this recipe book in particular, was writing on their pages, which frequently resulted in religious texts. As expected, there was a clear artistic-heraldic interest in *A Very Proper Treatise*, but interests were certainly not limited to this area.

## **General conclusion**





## Conclusion: A story of practical knowledge

We will now draw some conclusions about contextualized practical knowledge in early modern Europe. In the summary of our findings, we will address three main topics that served as guidelines during the research phase: 1) the creation, 2) the transmission, and 3) the use and public of practical knowledge. These three topics recur in both parts of this study. Part I focusses on practical knowledge in general, and examines texts of both manuscript and printed books. Part II applies the three topics in the study of a specific volume, *A Very Proper Treatise* (1573), and examined the text of the book and each material copy.

The first chapter of Part I deals with the origins of practical knowledge. This chapter serves as an introduction to the topic, and also to the whole thesis. Previous studied examples are used, but also some lesser or previously unknown examples. In this chapter we broach the premises of practical knowledge in an early modern setting, showing that the various branches of practical knowledge were interrelated and interdependent. After establishing these premises, a working definition of the term 'practical knowledge' is established. In this section various congruent terminologies that have been used in scholarship are investigated. The contribution of this study to the field is not only that it profiles the topic as practical knowledge, but also it introduces the argument that practical knowledge is a suitable umbrella term to cover a whole series of terminologies used in other studies and wider scholarship. The term 'practical knowledge' overarches practice-based knowledge, secret knowledge, technical and technological knowledge, silent or tacit knowledge, useful knowledge, and common knowledge. Offering an encompassing term helps to determine certain phenomenon and trends in the history of science and of knowledge. This is especially valid in the light of new tendencies, which recommend working interdisciplinarily and the re-enacting of early modern practices. These challenging new approaches require a theoretical framework that, in this case aimed to be overarching. This chapter also theorizes instructive literature, taking the recipe as the basic textual unit and working around its form, conventions, and functionality. With these aspects of premises, definition and situating of terminologies, and theorizing on the textual aspect, the first chapter provides a long introduction to the whole of this study, but it also respects the study's structure, and issues regarding the creation or origin of practical knowledge.

In the second chapter of Part I, the transmission patterns of practical knowledge are examined, building on a philosophical concept of Deleuze and

Gilles: the rhizome theory. This theory was found useful to interpret a case study of art technological literature by William Eamon. We took the innovative step of interpreting Eamon's work using Deleuze and Gilles's theory, meaning, that we inserted practical into this philosophical discourse. We then contextualize the transmission by examining writings about processes of learning- and experimenting, and modes of transmission. A unique aspect of this part of our study is its investigation of how historical fictional literature can be useful for historical arguments.

The third chapter of Part I explores the consumers of early modern practical knowledge, and, more precisely, the various functions a single user could have. We argued that among the many people involved in the transmission of knowledge there was a category of people who were involved professionally in the dissemination of practical knowledge, and we describe this group as mediators. Mediators used print to spread their recipe books. Some of them were practitioners in their area of practical knowledge, such as medicine. Others were professional writers and collected material with the final aim of publishing it. The study and description of this group is important because they were responsible for multiplying the dissemination of practical knowledge, often at a national or international dimension. To understand its transmission patterns, this art technological knowledge spread through printing, is studied from a textual point of view, in the second chapter of Part I. The third chapter, we study the people behind these kinds of dynamics. Both approaches provide a context for practical knowledge in the early modern times.

In the first chapter of Part II, we examine the origin of the text of *A Very Proper Treatise* (1573). This includes the texts that provided the basis for the printed version of *A Very Proper Treatise*, along with texts that copied from it. This study reveals an interesting circulation of texts, which can be associated with the rhizome patterns, discussed earlier. Within the scope of this textual study, the topics 'public' and 'material culture' are explored. With regard to its intended public, we argue that *A Very Proper Treatise* was intended for two different audiences, described separately in two places in the text: one based on their social status, and the other on professional occupation. We also consider an aspect of materiality in the text: colors. The concept of colors in *A Very Proper Treatise* not only includes colors and pigments for paint but, as we argue, also included varnishes and ink.

In the second chapter of Part II, there is an examination of an anonymous text, which we attribute to the printer Richard Tottel, thereby contributing to the field of textual studies of art technological sources. We describe how this text was turned into a book, and we bring together the three topics discussed earlier: the origin of practical knowledge, the dissemination of practical knowledge,

and the users of practical knowledge. We argue that *A Very Proper Treatise* is a printer's publication, and examine how the printer Richard Tottel adapted the publication to its intended and circumstantial public. By publishing a collection of recipes, Tottel revived and circulated, which makes him a mediator, a category we identified earlier. We then explain how the text can be divided into two layers; one containing the original text that was later adapted, and the other side, the printer's additions. The attribution of the sections on heraldry to Richard Tottel are entirely new and unique to this study. This chapter also incorporates a study of the evolution of the six editions of *A Very Proper Treatise*, involving the second printer Thomas Purfoote. Our contribution to the study of Richard Tottel is to examine his approach to publishing practical knowledge, whereas previous studies have focussed mainly on Tottel's *Miscellanies* (1557), his law book publications, and Thomas Tusser's *A Hundreth Pointes of Husbandrie* (1557).

The final chapter of this book, studies the actual public of *A Very Proper Treatise*, taking every single surviving copy of the book into consideration. After carefully studying each copy, we were able to decipher the names of twelve owners of *A Very Proper Treatise*. We argue that the actual public of *A Very Proper Treatise* was interested in the heraldic side of the work, as Tottel had intended and worked for. This was confirmed by the connections with the heraldic world or heraldic interests of some of the identified users. We also demonstrate that, like other books at that time, this volume was used, for its paper, and that one of the things people wrote in books, came from their religious interests, such as prayers. Furthermore, this chapter contributes to one of the general questions about practical knowledge, which is: 'Were the recipes actually used?'. We argue, using evidence left by users, that at least some of the recipes were actually used. Finally, this chapter contains an interesting and extended case study of two of the owners of *A Very Proper Treatise*, Phebe Challoner and James Ussher. What is interesting from the point of view of social history, is that a binding containing heraldic books and a recipe book with art technological knowledge served as a gift from a young man to a young woman, who later got married. In this case, *A Very Proper Treatise* served as a token of love. Our contribution to the field of book history is an unprecedented material examination of copies of *A Very Proper Treatise*. Moreover, this study is unique in studying the actual public of art technological literature for a single recipe book title.

Arguments made in various places in this study, are valid for the whole publication. We argue that recipe books are compiled; they contain fragments of different collections of recipes. This tendency towards fragmentation and re-organization is present in both manuscript and print. Our research contributes to the discussion about the relationship between manuscript and print. It is generally

accepted that, following the rise of printing, the manuscript production of books declined. However, we argue that the invention of print did not initially diminish the practice of copying, which declined, remarkably slowly. Furthermore, as this study of *A Very Proper Treatise* (1573) points out, texts that originally existed as manuscripts continued to exist in manuscript form, even after the spread of the printed book. Moreover, printed books soon became templates for creating new manuscripts. The manuscript versions that circulated after the first printed edition, were copied from both manuscript and printed versions of the text. Our conclusion is that the coming of print did not preclude the manuscript production of practical knowledge and, furthermore, print was instrumental in the subsequent manuscript production of practical knowledge.

Various examples of practical knowledge being transferred from manuscript to manuscript, from manuscript to print, from print to manuscript, and finally, from print to print are illustrated throughout this study. There was an infinite variety of ways of transferring information via these four standard combinations. Obviously, oral transmission was also a factor, making this scheme even more complex and dynamic. This is the essence of practical knowledge transmission: it is complex. To address this complexity, in the second chapter of Part I, the rhizome metaphor of Deleuze and Guattari is introduced, because it evokes an image of infinite variations and complexity. This metaphor is suggested on a theoretical level and applied to the transmission of knowledge between texts.

Wherever there is knowledge transfer, there are the actions of people and another argument made in this study is that practical knowledge did not travel simply for the sake of the knowledge itself. In particular, printed recipe books were associated with writers and printers who needed to earn a living. The printed recipe books were typically compiled from manuscripts and other printed recipe books, and these products were specifically adapted to make them more saleable on the early modern book market. This means that books underwent changes to suit the market. In the case of *A Very Proper Treatise* (1573), there were several examples of such changes or shifts. The first shift was in its intended public. The source, or sources underlying the book's title suggest that it was intended for painters and scribes, and would thus cover subjects relevant to their occupation; however, the printer also targeted a new, broader public, who had a non-professional interest in these subjects. The second shift was in the content, as the printer added a heraldic function to the book. The third shift was making the book a more consumer-friendly product by adding various indexes to facilitate the consumption of the book's practical knowledge.

Our study also investigated the people who interacted with practical knowledge, shedding light on the role played in its dissemination by mediators, who we

identify as writers and printers. They are seen as the mediators of practical knowledge because, through them, practical knowledge found a process for broader dissemination. The other people who interacted with practical knowledge were its actual public, or the people who wrote down recipes and bought recipe books. The study of the material book, with a view to its actual consumers, revealed that recipes were, in fact, commonly put into practice. Some marginal notes suggest that recipes were successfully recreated, and other interactions point to their varied results. These are textual and material ways to understand the practical side of textual practical knowledge, which is a prime concern of this study. In the first chapter of this book, we argue that practical knowledge was based on actual practice. Recipes contained practical knowledge and were, by definition, executable. However, in this same chapter we show that some recipes may have been or may have become dysfunctional. There are various possible reasons for this, such as a lack of information, either through problems with copying or because of silent knowledge, which was never explained in the texts, or because they were coded, or, had symbolical value. We therefore introduced an umbrella term to refer to recipes that cannot be executed: dysfunctional recipes. This overarching term covers all the various terminologies that refer to recipes that do not give the desired result.

Recreating a world remote in time, is one of the chief aims of historical research. In this study, we sought to put issues about daily life in the past into context. The contextualization of specific art technological knowledge, serves as the basis for greater understanding of the nature of practical knowledge and its working. This study uses a case study of a particular book title, *A Very Proper Treatise* (1573), which is unprecedented in this field. As discussed earlier, the historiography regarding this book is very poor. The only study worth mentioning is Susan E. James' which attributes its authorship to Flemish miniature painter Levina Teerlinc. Our study takes a completely different view of the notion of authorship and, as we maintain, it was the printer Richard Tottel who was responsible for the creation of the book. In addition to contributing to the historiography in its discussion of authorship, this research has greatly expanded the scope of earlier scholarship concerning *A Very Proper Treatise*. Each individual copy of each edition was taken into consideration and examined, and three of the six chapters in our study take *A Very Proper Treatise* and its context as their central topic.

*A Very Proper Treatise* merits a unique place in the history of books, as the first printed book of its genre in England. Unfortunately, the tendency has been to study famous authors, ignoring anonymously published booklets such as *A Very Proper Treatise*. In this study, we offer two solutions to this problem.

First, we propose that the printer was the initiator of the printed book, not only because he printed it, but also because he was the one collecting and adapting knowledge to present it as a publishable and marketable product. This is exactly the point of practical knowledge: knowledge about how to do things does not belong to anyone in particular; it is rarely the exclusive product of one person's mind. Practical knowledge builds on previously acquired knowledge, and in the case of *A Very Proper Treatise*, this research sheds light on one significant potential source for its text: *The art of making*.

Second, we have used *A Very Proper Treatise* as a case study for investigating practical knowledge, in other words, our study provides a proper context for reading and understanding a single small anonymous book. This case study individuates the title and studies the three main topics that contextualize the book: its origin, its dissemination, and its users. In Part II, this involves a textual study in the first chapter, a historical approach in the second chapter, and a material study in the third chapter.

Finally, the title of this conclusion is 'a story of practical knowledge', or a single potential history. Writing history is based on the outcome of research and the selection of data, all of which depend on sources, research questions, and methods. As such, this publication presents a narrative, a *potential* story line. Other stories could be told about practical knowledge, or about *A Very Proper Treatise*, but this current one is ours.

# Appendix

## Appendix 1: Various editions of *A Very Proper Treatise*

### The first edition (A)

Title:

A very proper treatise, wherein is briefly sett forthe the arte of Limming, which teacheth the order in drawing & tracing of letters, vinets, flowers, armes and Imagery, & the maner how to make sundry sises or grounds to laye siluer or golde uppon, and how siluer or golde shalbe layed or limned uppon the sise, & the way to temper golde & siluer and other mettales and diuerse kyndes of colours to write or to limme withall uppon velym, parchement or paper, & howe to lay them upon the worke which thou entendest to make, & howe to vernish yt when thou hast done, with diuerse other thinges very mete & necessary to be knowne to all suche Gentlemenne, and other persones as doe delite in limming, painting or in tricking of armes in their right colors, & therefor a worke very mete to be adioined to the bookes of Armes, neuer put in printe before this time.

Running title:

The arte of limming

Year of publication:

1573

Publisher and place of publication:

Imprinted at London in Flete strete within temple Barre at the signe of the Hande & starre by Richard Tottill.

### The second edition (B)

Title:

A very proper treatise, wherein is briefly sett forth the arte of Limming, which teacheth the order in drawing & tracing of letters, vinets, flowers, armes and Imagery, & the maner how to make sundry sises or groundes to laye siluer or golde uppon, and howe siluer or golde shalbe layed or limned uppon the sise, and the way to temper golde & siluer and other mettales and diuerse kyndes of coloures to writte or to limme wythall uppon velym, parchement, or paper, and howe to lay them upon the worke which thou entendest to make, & howe to vernish yt when thou hast done, with diuerse other thinges very mete & necessary to be knowne to all such Gentlemenne, and other persones as do delite

in limming, painting or in tricking of armes in their right colours, & therefore a worke very mete to be adioined to the bookes of Armes.

Running title:

The arte of limming

Year of publication:

1581

Publisher and place of publication:

Imprinted at London in Flete strete within temple Barre at the signe of the Hande & starre by Richarde Tottill.

### **The third edition (C)**

Title:

A very proper treatise, wherein is breiefely set fourth the arte of Limming, whiche teacheth the order in drawing & tracing of letters, Vinets, Flowers, Armes and Imagery, & the maner how to make sundrye syses or groundes to laye siluer or golde upon, and how siluer or golde shall be layed or limmed upon the syse, & the waye to temper golde and siluer and other mettals and diuerse kyndes of colours to write or to limme withall uppon Velym, Parchment or paper, and how to lay them uppon the worke which thou entendest to make, and how to vernishe it when thou hast done, with diuerse other thinges verye meete & necessary to be knowne to all such Gentlemen, and other persons as do delight in Limming, paynting or in tricking of armes in their colours, and therefore a worke very meete to be adioyned to the bookes of Armes.

Running title:

The arte of Limming

Year of publication:

1583

Publisher and place of publication:

Imprinted at London by Thomas Purfoote, the assigne of Richard Tottill.

### **The fourth edition (D)**

Title:

A very proper treatise, wherein is breiefely set fourth the art of Limming, which teacheth the order in drawing and tracing of leters, Vinets, Flowers, Armes and Imagerye, and the maner how to make sundry syses or groundes to lay Siluer or Golde upon, and how siluer or Gold shall be layed or limmed upon the syse, and the waye to temper Gold & Siluer and other mettals and diuerse kindes of colours to write or to limme withall uppon Velym, Parchment or Paper, and how



to lay them upon the worke which thou intendest to make, and howe to vernish it when thou hast done, with diuerse other thinges very meete and necessary to be knowne to all such Gentlemen, and other persons as doe delight in Limming, painting or in tricking of Armes in their colours, and therefore a woorke very meete to be adioyning to the bookes of Armes.

Running title:

The art(e) of Limming

Year of publication:

1588

Publisher and place of publication:

Imprinted at London by Thomas Purfoote, the assigne of Richard Tottill.

### **The fifth edition (E)**

Title:

A very proper treatise, wherein is breiefely set forth the art of Limming, which teacheth the order in drawing and tracing of letters, Vinets, Flowers, Armes and Imagery, and the maner how to make sondrye syses or groundes to lay siluer or gold upon, & how siluer or gold shall be layed or limmed upon the sise, & the way to temper gold and siluer and other mettals and diuerse kindes of colours, to write or to limme withall upon Velym, Parchment, or Paper, and howe to lay them upon the worke which thou entendest to make, & how to vernish it when thou hast done, with diuerse other things very meete and necessarie to be knowne to all such Gentlemen, & other persons as do delight in Limming, paynting or in tricking of armes, in their colours, & therefore a worke very meete to be adioynd to the bookes of Armes.

Running title:

The art of Limming

Year of publication:

1596

Publisher and place of publication:

Imprinted at London by Thomas Purfoot.

### **The sixth edition (F)**

Title:

A proper treatise, wherein is briefly set forth the Arte of Limming, which teacheth the order in drawing and tracing of Letters, Vinets, Flowers, Armes and Imagerie: And the manner how to make sundrie Syses or grounds to lay Siluer or Golde vpon: and how Siluer or Gold shall be layd or limmed vpon the Size;

and the way to temper Gold & Siluer, and other mettals, and diuers kinde of colours to write or to limme withall vpon Vellam, Parchment or Paper, and how to lay them vpon the worke which thou intendest to make; and how to varnish it when thou hast done: With diuers other things verie meete and necessarie to be knowne to all such Gentlemen, and other persons as doe delight in Limming, Painting, or in tricking of Armes in their colours, and therefore a worke verie meet to be adioyned to the Bookes of Armes.

Running title:

The Art(e) of limming

Year of publication:

1605

Publisher and place of publication:

London. Printed by Thomas Purfoot.

## **Appendix 2: Physical presence and reproductions of *A Very Proper Treatise*<sup>663</sup>**

**1573**

Boston, Boston Public Library

1) Q.56.55<sup>664</sup> [reproduced on archive.org]

Cambridge MA, Harvard University, Houghton Collection

2) STC 24252, barcode 4484347

Chicago, The Newberry Library

3) VAULT Case Wing Ricketts W 915 .048

Glasgow, Glasgow University Library

4) Sp Coll S.M. 1161

London, British Library

5) 1327.b.1.

6) 1044.h.38

New Haven, Yale Center for British Art

7) ND3305 V4 1573

New Haven, Yale University, Beinecke Rare Book and Manuscript Library

8) Jdf20 573V

Oxford, Bodleian Library, Special Collections

9) Mal. 642 (6) [Society of Scribes and Illuminators 1979]

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663 Reproductions are shown between square brackets.

664 The ESTC reports this copy erroneously as a 1596 copy.

San Marino CA, The Henry E. Huntington Library

10) Rare Books 60092 [Ann Arbor Microfilm 471:3; EEBO]

Washington, Folger Shakespeare Library

11) STC 24252 1/24/41

Washington, Library of Congress

12) ND3305.V4 1573 (Rosenwald Coll.) Rosenwald 1242

### 1581

Dublin, Trinity College Library

13) EE. K. 19. N°. 3.

London, British Library

14) 1044.h.37

Manchester, Chetham's Library

15) RADCLIFFE 2.F.1.9

San Marino CA, The Henry E. Huntington Library

16) Rare Books 60087 [Ann Arbor Microfilm 362:1; EEBO]

### 1583

Liverpool, University Library, Sydney Jones

17) SPEC RYL.N.5.31

London, British Library

18) 1044.h.36

Oxford, Bodleian Library, Special Collections

19) Ashm. 1672 (5) [Ann Arbor Microfilm 1611:24; EEBO]

Paris, Bibliothèque National de France

20) V11170-11171

### 1588

London, Victoria and Albert Museum, National Art Library

21) 6.D.141

New Haven, Yale Center for British Art

22) ND3305 V4 1588

New York, Jonathan A. Hill (Bookseller)

23) Item for sale

New York, Metropolitan Museum of Art, Thomas J. Watson Library

24) 272.2 V62

Oxford, Bodleian Library

25) Douce M 397

Princeton NJ, Princeton University

26) ND3305.V62

Washington, Folger Shakespeare Library

27) STC 24255 6/23/43 [Ann Arbor Microfilm 862:04; EEBO]

## 1596

Birmingham, University Library

28) Special collections 15.V481

London, British Library

29) C.31.c.21.

30) C.31.e.37

Los Angeles, The Getty Research Institute

31) ND1510.A78 1596 [reproduced on archive.org]

New Haven, Yale University, Beinecke Rare Book and Manuscript Library

32) Jdf20 573Vd

San Marino CA, The Henry E. Huntington Library

33) 29605 [Ann Arbor Microfilm 334:11; EEBO]

Washington, Library of Congress

34) ND3305.V4 1573 (Rosenwald Coll.) Rosenwald 1242

## 1605

London, British Library

35) C.31.c.25 [Ann Arbor Microfilm 1174:4]

Oxford, Corpus Christi

36) Delt.22.15(4)

Washington, Library of Congress

37) ND 3305.V4 1605 Rare Bk Coll

## Appendix 3: Collation of *A Very Proper Treatise*

### The rationale of the collation

This collation is intended to be a transcription of the printed text of the various editions of *A Very Proper Treatise*. Therefore, it assembles and illustrates the variations between various editions. Below, we will explain the criteria that we have followed. First off, we have taken the text of the first edition as the point of departure for this transcription. The variations within other editions are then taken up in the footnotes. These footnotes, that indicate changes, follow a specific

procedure. First, the piece of text that is altered in other editions is shown, followed by closing brackets: ]. The closing brackets announce the edition or editions with a difference in the form of a capital letter between B and F. The first appendix attributes a letter to each surviving edition. This collation is consistent with the system of the first appendix. Following this letter is information about the differences in the other editions. If more editions contain a difference, more letters appear after the closing brackets. These letters will be divided with a horizontal dash. If more editions have different information from one another, the different letters with the relevant information are separated with a semicolon. Differences are given in italics. Differences in spelling are not recorded, unless the different spelling would signify a different word. Omissions are indicated with the abbreviation ‘om.’ Additions are indicated with ‘add.’ Abbreviations are written fully, using italics to indicate the abbreviated part. Capitals, and the use of ‘u’ instead of ‘v’, has been preserved. Signs and embellishing elements are taken up in the footnotes as well. Within the text the foliation is taken up in bold, between brackets. This information is anticipated first by the signature and the catchword and followed by the running title, all in between brackets.

We will illustrate this system with an example: doe] D *put*. The verb ‘doe’ is present in the editions A-B-C-F. In edition D it is replaced by ‘put’. We would like to use the following example: neuer ... time] B-C-D-E-F om. *neuer ... time*. The suspension mark indicates that the text is longer but for reasons of economy, it has been left out. So, ‘neuer put in printe before this time’ or ‘neuer...time’ only appears in the first edition, in all the subsequent editions, from B until F, it is omitted.

## The collation

[fol. 1r]<sup>665</sup> A very proper treatise,<sup>666</sup> wherein is briefly sett forthe the arte of Limming, which teacheth the order in drawing & tracing of letters, vinets, flowers, armes and Imagery, & the maner how to make sundry sises or grounds to laye siluer or golde uppon, and how siluer or golde shalbe layed or limned uppon the sise, & the waye to temper golde & siluer and other mettales and diuerse kyndes of colours to write or to limme withall uppon velym, parchment or paper, & howe to lay them uppon the worke which thou entendest to make, & howe to vernish yt when thou hast done, with diuerse other thinges very mete & necessary to be knowne to all suche Gentlemenne, and other persones as doe

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665 E Band vignet in upper margin.

666 A very proper] F om. *very*.

delite in limming, painting or in tricking of armes in their right<sup>667</sup> colors, & therefor a worke very mete to be adioined to the bookes of Armes, neuer put in printe before this time<sup>668</sup>. (:)<sup>669</sup>

Imprinted<sup>670</sup> at London in Flete strete within temple Barre at the signe of the Hande & starre by Richard Tottill.<sup>671</sup>  
An. 1573.<sup>672</sup>

Cum<sup>673</sup> Priuilegio.<sup>674</sup>

[**fol. 2r**]<sup>675</sup> [The arte of limming. Fol. ij.]<sup>676</sup>

The<sup>677</sup> order of drawing or tracing.

First<sup>678</sup> thou shalte with a pencell of blacke lead, or with a cole made sharpe at the poynte trace all thy letters, and sett thy vinetts or flowres, and then thy imagery yf *thy* wilt make any. And then shalt thou *with* a small pen drawe al *thy* hast portred, then make thy sise on this wise

¶ To make a dooble syse or bottome to laye or settle siluer or goulde uppon called an embossed ground.

Take vennys cereuse, white lead, the plaister of an old image or chalke, any of thease made in fine poulder, and then ground with the glayre of an egge and a little water on a painters stone maketh a good bottome to laye under siluer. But when you shall use any of them to laye under golde, doe<sup>679</sup> to yt a litle saffron therewith to make yt some what yellow. But beware you put not to much water thereto, for then will yt be ouer weake, and yf you doe ouermuch glayre to yt,

667 Their right colours] C-D-E-F om. *right*.

668 neuer ... time] B-C-D-E-F om. *neuer ... time*.

669 (:)] B (:); C-D-E [vignet]; F om.

670 Imprinted] B-C-D-E ¶ Imprinted.

671 Imprinted at London ... Richard] C-D Imprinted at London *by Thomas Purfoote, the assigne of Richard Tottill*; E Imprinted at London *by Thomas Purfoot*; F *London Printed by Thomas Purfoot*.

672 An. 1573] B *An. 1581*; C 1583; D 1588; E 1596; F 1605.

673 Cum] B ¶ Cum.

674 Cum priuilegio] E om. *cum priuilegio*.

675 F Band vignet in upper margin.

676 Fol. ij.] F om. *Fol. ij.*

677 The] B ¶ The.

678 Initial embellished with floral motives in A-B.

679 doe] D *put*.

then will yt be ouer stiffe, therefor minge it after discretion, and looke thy sise be thicke standing, and sett the<sup>680</sup> sise thus tempered & couered in a horne or a shell in some seller or shadowyd place, or under the earthe where it maye stand moyste by the space of vii<sup>681</sup> daies untill it be perfecte clammy & rotten, & euerye daye once stirre it about, & you shall wel understand that al the sises the elder they be & the more clammy, & rotten they be, the better they be, for all the crafte is in well making & tempering of the sise, and if there stand any belles uppon the sise, put in eare waxe, for it ys a remedy therefore, and before you laye it on your worke, first lay the sise on a scrow [A. ij.]<sup>682</sup> [and drye] [fol. 2v]<sup>683</sup> [The arte of limming.] and drye it, and when it is drye, bend it, and if it bend, & breake not, then is it good and perfecte, & if it breake put thereto a litle water to make it weaker, and proue if it cleueth fast to the booke, & if it do not, then put glaire thereto, and make it more stedfast. The like sise maye you make with Gypsum boole Armoniake<sup>684</sup>, red or yellow okir orpiment or masticot with browne of Spaine or with red leade if euerye of them be ground by him selfe & tempered and ordred in maner & forme aboue written.

¶ To make a thinne sise or bottome to laye or settle siluer or golde uppon called a single grounde.

Take the newe shreds of glouers leather or of newe parchment for that is best, and seeth them in faire water from a quarte to a pinte that the liquor be somewhat thicke and clammie betwene your fingers, then straine the liquor from the shreds, and put it being hote in some stone vessel and soe worke it furth before it be colde, and when you lay en your siluer or golde, see that your syse be nether to moiste nor to drye, but in a meane betwene both for dreade of appaying your worke. The like sise maye you make (without heating them at the fyre) of glue water made of parchment glue for that is best, or with water gummed somewhat thick with gumme arabecke or of good olde glaire, or with the milke of grene figges alone, or with the milke of spourge, or of wartwede, or with the yellowe milke of grene salendine, or with the iuce of garlike or of onyon heades or with the water and grease of snailles. Uppon euery of these maye you laye your leaues

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680 the] B-C-D-E-F *thy*.

681 vii] F 7.

682 A. ij.] F om. *ij*.

683 F indicates page number 2 in the upper left corner.

684 Gypsum boole Armoniake] C *Gypsum, boole Armoniake*.

of siluer or golde hauinge regarde that your grounde be nether to moyste nor to drye, when you shall laye or settle the same thereuppon.

¶ To laye a dooble syse on letters or vppon other thinges.

[You] [fol. 3r] [The arte of limming. Fol iij] You shall with a pencell made of graye amys or calliber tyles laye on thy syse somewhat substancially or if thou wilt first thinne and after thicker, and then drye it, & when it is drye wet it lightly with thy spettle, & then shaue it with a sharpe knife untill it be euen without hilles, and yf there shall any default therein, or else there is more in one place then in another, laye againe thy sise on it, and drye it & engrosse it as is saide before & when it is engrossed & made plaine then burnishe it with the toothe of a calfe, of an oxe, or of an horse that is made therefore standing in a crooked sticke, and when it is burnished and made euen and shining, then is it readye to laye on it thy golde or thy siluer.

¶ To laye golde or siluer on sise.

Firste cut the leaues of golde or siluer in peces with a sharpe knife or a knife made of a great reede uppon a litle borde as broade as a trencher couered with a calues skin rayseed or understuffed with wolle or flexe or else unstuffed, then shalt thou with a pencell wette lightly on thy mouthe wette thy syse, so it be a litle moyste, and then wette thy pencell again in thy mouthe on the same wise, and touche thy golde or siluer that thou haste cutt by a corner lightelye, and laye it on thy sise, before made a little moyste, and then thou shalt take the taile of an hare, of a conney or a pece of cotton & lightely presse it downe on thy sise, & when thou haste thus done let it drie untill it be wel dried, then burnishe it: for if thou shalt burnishe it wett thou shalt rubbe of all, and when it is well dried, take the taske that thou doste burnishe with and drye it & beat it well on thy cheke, then burnishe thy golde first softly, and then harder untill it shine, but burnishe it not ouer longe, for drede of apparinge. And when thou haste well burnished it, then take a white wollen clothe or an [A. iij.]<sup>685</sup> [hares] [fol. 3v]<sup>686</sup> [The arte of limming.] hares foote, and rub all awaye, saue it which cleueth to the sise, & if ther be any place faltie, so that the golde faile for dryenes of the syse, then wett it againe and laye on the golde, & drye it and burnish it as you did before.

¶ To make gumme water to temper colours with all.

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685 A. iij.] F A 2.

686 F indicates page number 4 in the upper left corner.



Take cleane water, & do it in a vessell & put thereto a porcion of *gumme Arabecke* & let it stand until the *gumme* be well desolued & molten in the water, but looke it be not ouer thicke of *gumme*, for then it is euill to worke with, & if it be to thinne of *gumme* then will the coloure fade & fall of, therefore kepe a meane & temper thy coloures therewith, such as it serueth for best. [Nota.]<sup>687</sup> Note the best *gumme* is clere and brittle *that* in stamping it, it becometh pouder easly without clouing together.

¶ To make *glaire* for the like purpose.

Take the whyte of newe laide egges as many as you thinke good, and straine them throughe a linnen clothe to take out the cocke treadings, then put them in a dish and wringe them through a sponge or a white wollen clothe untill they be as thinne as water, then washe the sponge or clothe & drye it. And put the *glaire* to thuse aforesaide in a stone pott or a glasse faste stopped, and spend it as soone as you can, for yt will not kepe aboute three dayes, but it wil haue an ill sauor excepte they be ordered as foloweth.

¶ To kepe whites of egges as longe as you wil without corrupting or putting of Arsenicke to them.

Take the whites of egges not breaking them in anye wise, but take out the cocketreading, and put to them as much of the best white vineger as shall suffice the *quan*[tite of] [fol. 4r] [The arte of limming, Fol iiij]<sup>688</sup> *tite* of the whites, leuing it so the space of two daies, then passe it throughe some linnen clothe without breaking or beating the white of the egges leauinge it so the space of viii. dayes, then straine it againe and put it in a viall well stopped, to occupie for the purposes aboute writen.

¶ To temper golde or siluer wherewith you may write with a pen or painte with a pencell.

[Golde and siluer.]<sup>689</sup> Take fiue or sixe leaues of beaten golde or siluer, and grinde them well & finely on a painters stone with a litle honnye, then put it into a glasse with a quantitie of faire water, & let it stande one nighte, then draine the water & the honnye afterwarde from the golde, & put to the golde *gumme* watter, & then write with it, and when it is drye burnish it with an oxe toothe, also if

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687 Nota.] F om. *Nota*.

688 Fol. iiij] F 5.

689 Golde and siluer.] F om. *Golde and siluer*.

you grinde your leaues of golde with glaire onelye without honnye putting to it you maye well write therewith in adding to it a little *gumme* water, & with your gold tempered in manor abouesaide you maye diaper with a small pen or pencell uppon colours. [Diaper.] [Shell golde and shall siluer.]<sup>690</sup> If you will buye at the Potecaries shell golde or shellsiluer, with the which (being tempered with *gumme* watter) you maye verye well write a pen, or painte with a pencell.

¶ To temper azure or byze.

[Azure or lighte blewe for armes.]<sup>691</sup> Grinde azure or bize on a painters stone with clene water then put it in a broade glasse or in a broade shell, & when it hath stand a while all the dregges will flete aboue, and all the clene coloure will fall to the bottome, then poure out the water with the dregges, & put the azure in clene water againe. Then sturre the coloure & the water together, & let it stand & fine, & after that poure out the water & the dregges againe, and doe thus untill it be well purged & clarified, for the Potecaries minge chalke there[with]<sup>692</sup> [fol. 4v]<sup>693</sup> [The arte of limming.] with to multiplie it to there profit, but thus you muste do to clarifie it to the first kinde if nede be, then shal you grind it againe uppon a painters stone with gummed water, then put it into a horne or a shell, and when you will write or painte. Then sturre it with a sticke, & let the sticke dropp into the pen, for vermillion & this coloure will fall to the bottome & sincke as leade. His false coloure, Two parts azure and one of cereuse and sadded with the same azure or with blacke incke, or with Indebauidias.

¶ Howe to make azure and bize sadder yf they be of a lighte coloure.

Take good blewe tournesoll & wet it in *gumme* water and then wring it, and with that water temper the azure or byze, or else yf thou wilt thou maye with a pencell drawe with thy turnesoll ouer the bize when it is drye whether it be vinet or imagery.

¶ To temper Indebauidies.

[An Indian blacke.]<sup>694</sup> Grinde Indebauidies on a painters stone, with *gumme* water, & put it in a shell to worke with all.

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690 Diaper...siluer] F om. *Diaper...siluer*.

691 Azure...armes.] F om. *Azure...armes*.

692 F add. A 3.

693 F indicates page number 6 in the upper left corner.

694 An Indian blacke.] F om. *An Indian blacke*.

¶ His false coloure, Two parts Inde, & the thirde parte white leade or cereuse and sadded with the same Inde or with sad Inke Indebaudias of it selfe maketh a darke & sad blacke, but being grounde with white leade or cereuse as is afore saide it maketh a browne blewe. [Browne blewe.]<sup>695</sup>

¶ To temper smalte or florrey.

[Blewe colour.]<sup>696</sup> Smalte or florrey being tempered in a shell with gumme water maketh a blewe, but not so perfecte a coloure as azure or bize dothe make. The Poticaries doe put to it often times fine sand or chalke to multiplie it to their pro[fit, there] [fol. 5r] [The arte of limming. Fol. v.]<sup>697</sup> fit. Therefore in chusing of it, take that which is bright of colour, and not harshe, but softe betwene the fingers.

¶ To temper Orpyment or Masticot for a yellowe.

[A gold yellowe for armes.]<sup>698</sup> Grynde Orpyment and Masticot eche by it selfe on a Painters stone with Gumme water, & in gryndinge adde to the Masticot a litle Saffron, and the colour wil be the liuelier: and when they be wel ground, put them seuerally in shelles to worke withal.

Orpyment may be elayed with Chalke, and dimmed, that is to lay, sadder, or darked with Oker de Luke, or with Browne of Spaine.

¶ To temper Vermelion.

[A Vermelion redde for armes.]<sup>699</sup> Grynde Vermelion on a Painters stone, firste drye, & then do therto a litle glayre of egges, & grinde it againe, untill the brightnesse be fordonne, with a litle of the yelke, and let is stand a day or more, untill it be wel fyned. And when thou dost worke therewith, stirre it well together, and if it be thicke as lyme, doe a litle water thereto: and if it shall haue an ill sauour, then put into it three chyues of Saffron, and it will take awaye the euil sente.

His false colour, two parts Vermelion, and the third parte Cerius, and mingle them together, if thou wilt, with the same vermelion.

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695 Browne blewe.] F om. *Browne blewe.*

696 Blewe colour.] F om. *Blewe colour.*

697 Fol. v.] F 7.

698 A gold...armes.] F om. *A gold...armes.*

699 A Vermelion...armes.] F om. *A Vermelion...armes.*

¶ To temper Turnesoll.

[Turnesoll.]<sup>700</sup> Wette Turnesoll once or twice, in good thinne glere and let it lye therein untill it be well steeped. Then wringe it into a dishe, untill the colour be good & sadde. With this you may florishe redde letters, or vestures. [B. i.]<sup>701</sup> [And] [fol. 5v]<sup>702</sup> [The arte of limming.] And this colour shalbe enewed (that is to say) darked or sadded with blacke ynke.

His false colour, two partes Turnesoll, & one of Cerius, and it shal be sadded with the same Turnesoll.

¶ To temper good Roset.

[Roset color]<sup>703</sup> Take the finest & beste coloured Roset, and grinde it with gumme water on a Painters stone, & so worke it forth. This colour may be elayed with chalke or Cerius, and sadded with him selfe.

¶ To temper Brasill wherewith to write, florishe, or rule bookes.

[Brasill,]<sup>704</sup> Take Brasil finely scraped, or grossely beaten to poulder, and put thereto the glayre of an egge, or gumme water, and a litle Alam made in poulder, and lett them steepe a night and a day: and then straine out the liquor, and keepe it to the use aforesaid.

¶ To temper good Synapour.

[Bloudy<sup>705</sup> colour.]<sup>706</sup> Grind Synapour lake, & Synapour topes ech by him selfe on a Painters stone with good glayre. Then put them in seueral shelles, & worke them forth: and if they be too light, put to them a litle Turnesoll.

His false colour two partes Synapour, and a thirde of Cerius, and laye it on thy Vinettes, and when it is drye, sadde it with good Synapour, and diaper ouer it with white Cerius.

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700 Turnesoll.] F om. *Turnesoll*.

701 B. i.] C B.; D-E B; F om. *B. i.*

702 F indicates page number 8 in the upper left corner.

703 Roset color] F om. *Roset color*.

704 Brasill,] F om. *Brasill*.

705 Bloudy] D *Blood*; E *Blood*.

706 Bloudy colour.] F om. *Bloudy colour*.

¶ To temper redde Leade.

[Redd leade]<sup>707</sup> Grynde redde Leade well with gumme water, and then put it in a shell: and when you worke with it, [stirre] [fol. 6r] [The arte of limming. Fo. vi.]<sup>708</sup> stirre it as you doe Vermelion.

Of this you shal make no false color, but of him selfe, and sadde it with Synapour, or with good Browne of Spaine, or with light blacke, or with Vermelion.

¶ To temper blacke Leade.

[Crane colour.]<sup>709</sup> Grynde well blacke Leade with gumme water on a Painters stone, and then put it in a shell to worke withal. This is a perfite Crane colour of it selfe.

¶ To temper Browne of Spaine.

[Browne colour] Grind good Browne with gumme water on a Painters stone, & when it is very wel ground put it into a shel.

His false color two parts Browne, & the third part of white Leade, & sadded with *the* same sad color of browne.

¶ To temper Oker de Luke & Oker de Rouse, which make browne colours.

[Goodcolours for heare.]<sup>710</sup> Oker de Luke, and Oker de Rouce shal firste be seuerally broken in a brasenmorter, & after ground ech by him selfe on a Painters stone with gumme water, & mixed with a litle Chalke, and enewed or sadded with good Oker, or with Browne, either of them maketh a good colour for heare on heades, or on beardes.

¶ To temper greene byze-

[Greene Byze.]<sup>711</sup> Take greene Byze that is soft, and not harth between the fingers, for if it be harshe, it is mixte with sande, whiche the Apothecaries do use oftentimes to multiply it to their gaine. And temper it in a shel with gumme water, and it wilbe perfite to worke withall. And when you wirt, stirre this colour as you do Azure, and wash it, and dresse it in forme aforesaide: as you doe yours Azure, before you grinde it with gumme water. [B. ij]<sup>712</sup> [To]

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707 Redd leade] F om. *Redd leade*.

708 Fo. vi.] F 9.

709 Crane colour.] F om. *Crane colour*.

710 Goodcolours for heare.] F om. *Goodcolours for heare*.

711 Greene Byze.] F om. *Greene Byze*.

712 B. ij] F B.

[**fol. 6v**]<sup>713</sup> [The arte of limming.]

¶ To temper Vertgrese, called Spanishe greene.

[An Emeraud greene for armes.]<sup>714</sup> Take Vertgrese well cleansed and piked from drosse and motes, and grynde it on a Paynters stone first drie, and put thereto a litle of the gall of a Neate, & of the ioyce of Rue, with a litle Safron, & braye all these together on the same stone. Then put it in a horne, or shell until it be dry. And when you wil occupie it, take part thereof and grinde it againe with vineger or vergis, or with the pisse of a yong childe, euery of them hauinge gumme Arabike dissolued in them.

[Light grene]<sup>715</sup> His false colour two partes, good greene, & the third of Cerius, and sadded with a good greene, and Diaper ouer it with Vennis Cerius.

¶ To temper Safron.

[Safron.]<sup>716</sup> Steepe Safron in good glayre, and so worke it forthe *with* a smal pensel. And if thou wilt thou maist enew it *with* good Vermelion, with Safron also you may enewe or florish ouer letters, or any other thing thou wilt.

¶ To temper Vennis Cerius, and white Leade.

[A pure whit for armes.]<sup>717</sup> Grynde Cerius, or white Leade, eche by him selfe on a Painters stone, with cleare water, and therewith thou shalt diaper and florish aboute all thy colours with a purselour made of a small pensell. And this colour is tempered onely with water, or with water lightly chasticed with gumme, for they stand aboute al other colors that be gummed.

¶ To make a Fume blacke called Sable.

[A Sable or blakce for armes.]<sup>718</sup> Take a cleane Lattin bason, and holde a burnynge torche under it, until the bottome be blacke: and then [take] [**fol. 7r**] [The arte of limming. Fol. vij]<sup>719</sup> take of that blacke, and temper it with glayre, or with gumme water, and so worke with it.

713 F indicates page number 10 in the upper left corner.

714 An Emeraud greene for armes.] F om. *An Emeraud greene for armes.*

715 Light grene] F om. *Light grene.*

716 Safron.] F om. *Safron.*

717 A pure whit for armes.] F om. *A pure whit for armes.*

718 A Sable or blakce for armes.] F om. *A Sable or blakce for armes.*

719 Fol. vij] F 11.

¶ To make an excellent blacke like Veluet.

[A veluet blacke.]<sup>720</sup> Take Hartes horne, and burne it to cole on a Coliars harth, then make fine powder thereof, and grinde it on a Painters stone, with the gal of a Neate. Then put it in a shel to drie in a shadowy place. And when you will occupye the same, grynde parte thereof againe with the glayre, or with gumme water: and worke it forthe.

¶ To make a blacke colour, or an ynke of a good perfection, wherewith you may write with a penne or pensel.

[Black ynke.]<sup>721</sup> Take a pounce and a halfe of rayne water, with three ounces of the waightiest galles you can gette. Bruse them in smal pieces, and poure them into the saide water, and so let it stand two daies in the sunne. Then put to it two ounces of greene Coporas, or els of Romaine Vitrial, whiche is beste, well coloured and beaten smal: and stirre al these together with a sticke of hard woode, and let it stande againe twoo daies more in the sunne, puttinge to it one unce of gumme Arabike, that is clere and bright, and beaten in poulder, and one unce of the peeles of Pomergranades, and then boyle al a litle on a slowe fire. That donne, straine it, and keepe it in a vessell of leade or of glasse, and it will be very blacke and perfite good ynke. And if you finde it thicke, and that it bee not flowinge yenoughe, putt to it a litle cleare lye, whiche will make it liquide and thinne. And if it be too cleare, adde to it a litle gumme Arabike. And to have your ynke to continue longe, and not to hore, put therein bay salte. [Nota.]<sup>722</sup> Note that the galles must be smal curled, [B. iij.] [and] [fol. 7v]<sup>723</sup> [The arte of limming.] and massive within, if they be good. The good Vitriall is alwaies within, of a color like the element. The best gumme is cleare & brittle, that in stampinge it becometh pulder easily, without cleauing together.

[Nota]<sup>724</sup> Thus is taughte the waye howe to temper Goulde, Sylver, and Colours to lymme, or to write withall upon velym, parchement, or paper. That is to say, Vermelion, Turnesoll, Synapour, and Saffron, with good glayre. Syse with glayre chasticed with a portion of water, Azure, Byze, greene Byze, red Leade, roset Smalt, black Leade, Browne, Oker, Orpyment, Masticot, and Indebaudias with gumme water, Vertgrese with vineger, vergys, or with the pisse of a yonge childe,

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720 A veluet blacke.] F om. *A veluet blacke.*

721 Black ynke.] F om. *Black ynke.*

722 Nota.] E-F om. *Nota.*

723 F indicates page number 12 in the upper left corner.

724 Nota] F om. *Nota.*

Cerius and white Leade, with cleare water, or with water lightly gummed, Brasil, and Fume blacke with glayre, or *with* gumme water, which you thinke best for your purpose.

[Nota.]<sup>725</sup> Also there is an other way which is used amongst *the* excellent sort of Painters, that is, to grind & temper al colors for limming (sauing such as be white) first *with the* gall of a Neate, & then let them dry, & after when you wil work them, take part therof, & grind it againe *with* glayre, or *with* gumme water, as the colour requireth, and so worke it forth. It is said, that water killeth & darkeneth *the* brightnes of most colors that be tempered therwith. But this gal preferueth *the* brightnes, & maketh them more liuelier to beholde: which thing experience wil teach you more perfitley.

[Nota.]<sup>726</sup> Note that al colours to limme or to write withal should neuer be tempered with any kind of oyle, for oiles serue most aptly for to temper colors to lay upon stone, timber, yron, lead, coper, & such like. And oyle of Linseed, which is called flaxe seed, & oyle of walnuts are most used, & be most best of al other oyles for the same purpose.

Also<sup>727</sup> al colors to limme or write withal when they be tempered, would be put in shelles, in vessels of stone, lead or of glasse, & kept under *the* grounde in some seller, or in [some] [fol. 8r] [The arte of limminge. Fo viii]<sup>728</sup> some moyst or shadowy place, for drying ouer fast: and *the* elder they be the better they be, if they be kept couered from filth & dust. And note *that* there is great regard to be had to *the* wel grinding & *tempering* of the colours, & to the placing of them upon the worke.

¶ The maner how to florishe or diaper with a pensel ouer siluer or goulde.

If you wil diaper ouer gold, take yellow Oker, & ther with draw ouer thy gold with a pensel what thou wilt.

If thou wilt diaper upon siluer, take Cerius *with* a pensel and draw or florish what thou wilt ouer thy siluer.

If thou wilt diaper with gould or siluer upon colors, take the ioyce of garlike, with a pensel drawe ouer thy colours what thou wilt. Then take and lay the gold upon it, and presse it downe lightly with an Hares tayle, & let it dry halfe a day or more. Then rubbe of the golde which cleueth not to the garlike.

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725 Nota.] F om. *Nota*.

726 Nota.] E-F om. *Nota*.

727 Also] E [*Nota*.] *Also*.

728 Fo viii] F 13.



¶ The waies howe to make sundry kindes of colours by tempering & mingling of colors together.

[Purple, or Violet colour for armes.]<sup>729</sup> If you will temper Azure with Turnesoll, and grinde them together on a Painters stone with gumme water or glayre, you shal make thereof a perfit Purple or a Violet colour. And the like colour you maye make with good redde Roset, if it be mingled with Azure, & tempered with gumme water in maner aforesaide.

[Sanguine. Or Murrey for armes.]<sup>730</sup> If thou wilt put to a good quantity of Synapour, a litle portion of blacke, & grinde them together *with* glayre, you shal make therof a Sanguine, or a Murrey colour.

[Oreng tawney for armes.]<sup>731</sup> If you will mingle a bright redde with a bright yellowe, and grinde them together with glayre, you shall haue thereof an Oreng Tawney.

[Lyon tawney,]<sup>732</sup> If you mingle redde Lead and Masticot together, you shal haue therof a Lyon tawney.<sup>733</sup> [If] [fol. 8v]<sup>734</sup> [The arte of limming.]

[Incarnation and fleashly colour]<sup>735</sup> If you wil make incarnations for visages, or a fleshly colour for Images, firste lay on the white, and enew it with vermilion, or els take two partes of Vermilion and one of Cereuse, and mingle them together, and so laye it on thy worke, and enewe it if thou wilt, when it is dry with good Vermilion.

[Peach color]<sup>736</sup> Also if you mingle Vermilion with Cereuse, by discretion you may make thereof a Peache flowre colour.

[Sky colour.]<sup>737</sup> Also by mingling Vermilion and Azure together, by discretion you may make thereof a Skye colour.

[Bloude red.]<sup>738</sup> If you will make a bloude redde, take of the best Synapour, and sadde it at the sides with Browne, or Vermilion, or with blacke.

729 Purple, or Violet colour for armes.] F om. *Purple, or Violet colour for armes.*

730 Sanguine. Or Murrey for armes.] F om. *Sanguine. Or Murrey for armes.*

731 Oreng tawney for armes.] F om. *Oreng tawney for armes.*

732 Lyon tawney,] F om. *Lyon tawney.*

733 F add. B 3.

734 F indicates page number 14 in the upper left corner.

735 Incarnation and fleashly colour] F om. *Incarnation and fleashly colour.*

736 Peach color] F om. *Peach color.*

737 Sky colour.] F om. *Sky colour.*

738 Bloude red.] F om. *Bloude red.*

[Lincolne greene.]<sup>739</sup> If you mingle good greene and Safron together, by discretion you shall haue thereof a perfitte Lincolne greene.

[Popiniay greene.]<sup>740</sup> If you mingle Azure and Masticot together, you shal haue thereof a perfite Popiniay greene.

[Motley greene.]<sup>741</sup> If you mingle red with greene, you shal make thereof a Motley greene.

[Blacke vesture.]<sup>742</sup> If you wil make a blacke vesture, take and laye firste a champe of light blacke mingled with white Leade, & sadded with good blacke.

[Marble or ashe colour.]<sup>743</sup> If you wil mingle blacke with a portion of white, you may make thereof a Marble, or an Ashe colour at your discretion.

[Ruffet or sadd brown]<sup>744</sup> If you will mingle a litle portion of white with a good quantitie of redde, you may make thereof a Russet, or a sadde Browne, at your discretion.

[Nota.]<sup>745</sup> Thus by minglinge of colours, you may make them of sundrie colours, and by proufe you maie come to the perfite knowledge, howe to make them on the beste manner. [Note]

[fol. 9r] [The arte of limming. Fo. ix.]<sup>746</sup>

[Nota.]<sup>747</sup> ¶ Note furthermore that thereis a certein colouring which is called Vernix that is more noble and excellen than all other colours. And so much the more excellent in that it is set aboue all colours. And as the daye becommeth more light and brighter by the shining of *the sonne* euen so all colours that are vernished do shewe furth a better glosse or luster, and become more brighter by the shyning of the same. And it is made in maner & forme folowing.

¶ To make a kynde of colouring called Vernix wherewith you may vernishe golde, siluer, or any other colour or payntinges, be it upon velym, paper, tymber, stone, leade, copper, glasse & c.

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739 Lincolne greene.] F om. *Lincolne greene*.

740 Popiniay greene.] F om. *Popiniay greene*.

741 Motley greene.] F om. *Motley greene*.

742 Blacke vesture.] F om. *Blacke vesture*.

743 Marble or ashe colour.] F om. *Marble or ashe colour*.

744 Ruffet or sadd brown] F om. *Ruffet or sadd brown*.

745 Nota.] F om. *Nota*.

746 Fo. ix.] F 15.

747 Nota.] F om. *Nota*.

Take Bengewyn & bray it well betwixt two papers. then put it in a vyall & power upon it good Aquavite that it be aboute the Bengewyne three or foure fyngers, and let it steepe so a day or two. Then put to it for halfe a vyoll of such Aquavite, fwe or sixe chyues of Saffron slenderly stamped. This done strayne it, & with a pencil vernish therwith any thing gilted which will become bright & shyning drying it selfe immediatly, and so wil continue the brightnes many yeres. But if you will vernishe on Siluer, then take the almon of Bengewyne, that is to saye the white that is founde in the middest of Bengewyne, and dresse it with Aquavite in the foresaid maner, leauing out the Saffron. And the saide vernishe made with Bengewyne & Aquavite onely is very good to vernishe all thinges aswel paynted as not painted, for it maketh tables & coffers of walnuttree & hebeny to glister if it be laide upon them, and all other lyke thinges, as woorkes of Iron, copper or tynne, gilted or not gilted, for it maketh bright, preserueth, aydeth the colour & dryeth incontinent wythout [C. i.]<sup>748</sup> [taking] [fol. 9v]<sup>749</sup> [The arte of limming.] taking any dust or fylth, you may make it cleane wyth a lynnyn cloth, or with wyping the worke with a Foxe tayle the which is better.

¶ To make vernix another way for the purposes aforesaide.

Take two onces of harde mastike and stamp it, & putt in into a litle newe pot, and so melt it on a soft fire, this done, put to it one once of the oyle of a Fyrre tree, and so let them boyle a little euermore stirring them together, but let it boyle almost nothing, for if it boyle too much the vernish wilbee too clammy, and to knowe when it is boyled ynough, put into it a hennes fether, & if it burne by & by, it is a singe that it is *perfect*. Then take it from the fyre, & put it into a stone pott, & kepe it well from dust: and when you will occupye it, take so much therof as will serue your tourne, & heat it a lytle at the fyre, then spread it upon your woork *with* a pencil as thin as you may, & it shall haue a verry faire glosse or luster, & it will dry incontinent if you shal sett it in the sonne.

¶ To make colours of all kynd of mettalles.

Take a beade of Christall or a Paragon stone & beate eche of them by him selfe in a brasen mortar to fyne poulder, then grynde them drye eche by him selfe on a painters stone until the poulder be very fine & small, then grynde them again on the same stone ech by hym selfe with good glayre and lay some one of them on the woork wyth a penne or a pencell, and when it is well dryed, then rub it

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748 C. i.] C-D-E C; F om. C. i.

749 F indicates page number 16 in the upper left corner.

ouer with golde, or with anye other mettall, and you shall haue the same colour that the metall is of. [To]

[**fol. 10r**] [The arte of limming. Fo. x.]<sup>750</sup>

¶ To make letters of the colour of gould wythout gould.

Take one unce of Orpyment and one unce of fyne Christall, and beate eche of them by him selfe to poulder in a brasen mortar. Then grynde them wel together wyth glyre upon a paynters stone, then it ys perfect to write withall.

¶ To make letters of the colour of siluer wythout siluer.

Take an unce of tynne, two unces of quicke siluer, and melt them together, then grynde them well on a paynters stone wyth gumme water, and wryte with it.

¶ To make white letters in a blacke feelde.

Take the yelke of a newe layde egge and 'grynde it upon a paynters stone with faire water, so as you may well write with it out of a penne, and when you haue so done, you may with the same liquor drawe or write with a penne great or small letter upon paper or parchement, and when they be dry, then may you with Inke black ouer the letters and paper so muche as you shall think good. And when the blacke is through drye then maye you with a white wollen clothe or a knyfe rubbe of all the saide letters written with the yelke of the egge, and then the letters underneath will appeare all white, because they were preserued with the saide liquor: So that you shall haue faire white letters in a blacke field.

¶ To make staunche graine, or a poulder to amende the parchement and to receiue Inke. [C. ij.]<sup>751</sup> [Take]

[**fol. 10v**]<sup>752</sup> [The arte of limming.] Take two partes of rosen & one parte of allowe, and beat eche of them by him selfe in a brasen mortar all to powder, & put the same powders togeather in a fyne lynnyn clothe & rub your vellym, parchement or paper therwith when you begin to write. And when the writing is drye, you may rub it ouer againe with a whyte wollen cloth, and the letters wilbe neuer the worse, but more fayrer & brighter to see to.

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750 The arte of limming. Fo. x.] F 17 *The arte of limming*.

751 C. ij.] F D.

752 F indicates page number 18 in the upper left corner.

¶ To renewe olde & worne letters.

Take of *the* best galles you can get & bruse them grosly then lay them to steepe one day in good whyte wine

This done distill them with the wyne, and with the distilled water that commeth of them, you shal wet *handsomly* the olde letters with a little cotton or a small *pencil*, & they will shewe freshe & newe again in suche wyse as you may easely reade them.

¶ To take grease out of parchement or paper.

Take shepes burres & burne them to poudere and laye the saide poudere on bothe sydes the *parchement* or paper betwene two paper bourdes & presse them by *the* space of two dayes or more, and it will drye & soke out all the grease.

¶ To make red and greene sealing waxe.

Melt a pound of waxe & two unces of turpentyne together, & when they be well molten, take them from *the* fyre & put to them an unce of vermilion while it is luke warme, & stirre it well together in the keling, and then make it up in rowles, and in like maner shal you make greene waxe by putting Vertgrese into it. Note if you will take ii. partes of rosyn & one parte of turpentyne, adding to it Vermilion, as is aforesayd it maketh *the* better waxe. [A]

[fol. 11r] [The arte of limming. Fol xj]<sup>753</sup>

¶ A pretie deuise to take out the true forme & proporcion of any letter, knott, flower, Image or other worke. Be it printed, drawen *with* a pen or pencell upon paper or parchement *without* rasing blotting or hurting the right paterne or picture it selfe.

Take oyle, or other licours that make smoke & burn them in a lampe, then holde ouer the lamp a sheete of cleane paper, & blacke as much of the same lyghtlye as wil receaue the ful proporcion of the worke that you do meane to take out, that done lay the blacked paper under the backe syde of the worke, the blacked syde upwarde, laying a thyn white paper betweene the worke & it: and with a small pencell made of harde wood or of bone you shall drawe lightly ouer the letters, knott, or worke which you desire to take out, pressing it softelye. Thus doing ye shal see the very forme & proporcion of the same worke remaining on the thin white paper.

Then with a small pen & ynke, you may trace & drawe ouer the woorke remaininge on the white paper; that done, the ynke will sett out the very print & forme of *the*

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753 Fol. xj] F 19.

worke (as farre as you touched the same with your pencell in euery *proporcion*. You may also for the same purpose (if neede bee) blacke ouer your paper with the leye or a kandle or of a lynke, or of a new torche, or such likewhich is a very redy way and a perfect.

¶ Another pretie deuise to take out the true forme and proporcion of any flower Image or such like.

Take a clene and thin lanterne horne, & lay it upon the letter, Image or other woorke that thou wylte take out, and it will appeare through the horne, so as thou mayst drawe with a small pen upon the horne [C iij.]<sup>754</sup> [all] [fol. 11v]<sup>755</sup> [The arte of limming.] all the proporcion of the woorke at thine owne pleasure, euen as thou lust. And when thou hast drawne it all out, then let it drye uppon the horne in the sunne, and when it is through drye, then breath upon it twyse or thryse, and then laye it downe upon thy booke. And then presse it downe (the letters being next the paper) with a lynnyn clothe, and the same letters or work shal remaine upon the paper whiche thou didst drawe upon the horne, then drawe it faire againe with blacke Inke.

¶ Here haue I taught you (besydes the temperinge of goulde, of siluer, and of colours) dyuers thinges, veye meete and necessarie to be knowne to paynters & scriueners. And nowe will I rehearse briefely all that I haue written before touching lymming. First draw thy worke with a pencell of blacke lead, and then with penne and Inke. Then lay thy syses for thy gould and siluer. Then ingrosse them wyth a sharpe knyfe, then wet them ouer lightly with thy pencell, then being dry burnish it with a tooth. Then wet thy size again lightly Then touch thy gould and lay theron. Then presse it lightly with an Hares taile, then let it drie, then burnish it with a tooth, then rubbe it with a white wollen cloth or an Hares foote untill all go of, but that which cleueth unto the size. Then lay thy colours: First thy false colours and after thy sadd, then purple them about the sides with blacke Inke, then mayst thou diaper them ouer with whyte coloure if thou wilte, then vernishe them ouer wyth good old grayre, & then hast thou done all that belongeth to lymmyng. Finished *Anno domini* 1573.<sup>756</sup> [The]

[fol. 12r] [fol. xii]<sup>757</sup>

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754 C iij.] F D 2.

755 F indicates page number 20 in the upper right corner.

756 1573] D 1588; F 1605; All copies finish elegantly, with the last lines centered.

757 fol. xii] F om. fol. xii.

¶ The names of all suche colours & other things, as are mencioned & containyd in this perfect booke of lymming, and are for the moste parte to be solde at the Poticaries.

Gould foyle	Booll Armoniacke	Milke of greene figges.
Syluer foyle.	Gumme Arabeck	Mylke of spurge
Shell gould	Galles	Milke of warte-
Shell siluer.	Greene coporas	weede
Azure.	Romayne vytrioll	Mylke of Salendyne
Byze	Rozen.	Iuce of garlyke &
Indebaudias	Alam	of Onyon heads.
Smalt florrey.	Waxe.	Iuce of Rewe
Orpyment	Honnye	Iuce of red nettle.
Masticot	Turpentyne	Scraped Cheese
Vermelyon	Quicke siluer	Whyte wyne
Turnesoll.	Tynne.	Whyte Vineger.
Rosett	Pomegarnard pillz	Vergis
Brassyll	Christall stone	Chyldes pisse
Sinapor lake	Paragon stone	Lye
Sinapor topias	Chalke.	Oyles and liquors
Red lead.	Allabaster	that make smoke.
Blacke lead.	Playster of an olde	Glouers shredes and
Browne of Spayne	Image.	shredes of newe
Okir de luke.	Vnslickt lyme.	parchement
Greene byze.	Poulder of white	Water & grease of
Vertgrese.	bones.	snayles. Glue
Saffron	Poulder of shepes burres.	water.
Vennys Cerius	Netes gall.	Aquavite.
White leade	Whytes of egges	Bengewyne.
Fume blacke	yelkes of egges.	Oyle of lynseede
Blacke ynke.	Cowes mylke	Oyle of walnuttes
Hartes horne Gypsum.	Ewes milke.	Baysalte

[**fol. 12v**]<sup>758</sup> A table of suche things as be containyd in this present booke. The order of drawing or tracing. folio 2<sup>759</sup>

758 Omission of fol. 12v in C.

759 folio 2] F *Fol 1*.

To make a grounde or a syse to lay golde or siluer upon eodem  
 To make syses other maner of wayes eod<sup>760</sup>  
 To lay syse on letters or upon other thinges eod<sup>761</sup>  
 To lay gold or siluer on syse 3<sup>762</sup>  
 To make gumme water to temper colours with all eod  
 To make glayr for the like purpose eod  
 To kepe whites of egges as long as you wil without corrupting or puttinge of  
 arsenicke unto them eod  
 To temper gold or siluer wherwith you maye write *with* a pen or paint with a  
 pencell 4<sup>763</sup>  
 To temper azure or byze eod  
 Howe to make Azure and byze sadder & gladder if they bee of light colour eod<sup>764</sup>  
 To temper Indebaudias eod  
 To temper smalte eod  
 To temper orpyment or mastick for a yellow 5<sup>765</sup>  
 To temper Vermilien eod  
 To temper turnsoll eod  
 To temper good Roset eod<sup>766</sup>  
 To temper brasyll wherwith to write, florish, or rule books eod  
 To temper good Sinapor eod  
 To temper red lead. 6<sup>767</sup>  
 To temper blacke lead eod<sup>768</sup>  
 To temper brown of Spayn eod  
 To temper Okyr de Luke. eod  
 To temper grene byze eod  
 To temper vertgrese called Spanish greene eod<sup>769</sup>  
 To temper Saffron. Eod  
 To temper Venyce Cerius & whyte leade. eod

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760 eod| F 2.  
 761 eod| F 3.  
 762 3| F 4.  
 763 4| F 5.  
 764 eod| F 6.  
 765 5| F 7.  
 766 eod| F 8.  
 767 6| F eod.  
 768 eod| F 9.  
 769 eod| F 10.



To make a fume blake called Sable. eod

To make an excellent black like veluet. 7<sup>770</sup>

To make a blacke colour or an ynke of a good perfeccion wher with you maye write wyth a pen or pencell. eod

The maner how to diaper or florishe with a pencil ouer gold, filuer or colours 8<sup>771</sup>

The waies how to make sondry kyndes of colours by *tempering* & menginge of coloures together. eod

To make a kynd of colourynge called & c. 9<sup>772</sup>

To make colours of all kyndes of mettals eod<sup>773</sup>

To make letters of the coloure of golde without gold 10<sup>774</sup>

To make letters of the coloure of syluer without siluer eod

To make whit letters in a blak field. eod

To make staunche graine or a poulder to amende the parchement, & to receiue ynke eod

To renewe olde and worne letters eod<sup>775</sup>

To take grease out of parchement & paper. eod

To make red or greene sealinge waxe eod

A pretie deuise to take out the true forme & proporcion of any letter, knotte, flower, Image, or other woorke, bee it printed, drawne *with* a pen or pencell upon paper or parchement *without* rasyng, blottinge or hurting the right paterne or picture it self. fo. 11<sup>776</sup>

FINIS.<sup>777</sup>

## Appendix 4: Phebe Challoner's personal library

This appendix contains the list of books that we consider part of the personal library of Phebe Challoner (later Phebe Ussher).<sup>778</sup> The title, reference number

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770 7] F 11.

771 8] F 13.

772 9] F 15.

773 eod] F 16.

774 10] F 17.

775 eod] F 18.

776 fo. 11] F 19.

777 F adds a floral vignet under the text.

778 This list does not pretend to be complete, as we have only been able to study a good two-hundred and fifty books of the core collection of TCD. Further research might bring new results.

and relevance will be systematically handled. All books come from the collection of Trinity College Dublin, which will be abbreviated as TCD.

### Signed and annexed books

1. Gerard Legh, *The Accedens of Armory*, 1576 (TCD EE.k.19.N°.1., signature)
2. John Bossewell, *Workes of Armorie*, 1572 (TCD EE.k.19.N°.2., annexed to no. 1)
3. Anonymous, *A Very Proper Treatise*, 1581 (TCD EE.k.19.N°.3., annexed to no. 1)
4. Gervase Babington, *A Profitable Exposition of the Lords Prayer*, 1588 (TCD BB.n.7, signature)
5. Henry Bullynger, *A Hundred Sermons upon the Apocalypse*, 1573 (TCD BB.h.31, signature)
6. John Knewstub, *A Confutation of Monstruous and Horrible Heresies*, 1579 (TCD BB.ii.48, signature)
7. John Rainoldes, *The Summe of the Conference Betweene John Rainoldes and John Hart: Touching the Head and the Faith of the Church*, 1588 (TCD BB.kk.19, signature)
8. John Harmar, *Master Bezaes Sermons upon the Three First Chapters of the Canticle of Canticles*, 1587 (TCD CC.l.29, signature)
9. Peter Viret, *A Faithful and Familiar Exposition upon the Prayer of Our Lorde Iesus Christ*, 1582 (TCD CC.l.57, signature)

### Unsigned books

10. Henry Peacham, *The Complete Gentleman*, 1622 (TCD EE.l.34. N°.1, pressmark of James Ussher)
11. Henry Peacham, *The Art of Drawing*, 1607 (TCD EE.l.34. N°.2., annexed to no. 10)
12. Henry Peacham, *Graphice*, 1612 (TCD EE.l.34. N°.3., annexed to no. 10)
13. Anonymous, *A Closet for Ladies and Gentlewomen*, 1611 (TCD EE.ii.68, suitable subject, missing marginal notes from James Ussher)

### Books mentioned in documents

14. Johannes Scapula, *Lexicon Graeco-Latinum Novum*, first ed. 1580 (reference in TCD Ms 357, fol. 5r; physical copy might be TCD 24.W.52, which replaces the older catalogue reference XX.cc.31, a typical Ussher reference)

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