

Metalanguages for Dissecting Translation Processes

Theoretical Development and Practical
Applications

Edited by

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1 Introduction

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1 Introduction

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1.1 Understanding – or lack thereof – of translation

In 2016, Google shifted its default machine translation (MT) from statistical MT (SMT) to neural MT (NMT) for many language pairs. The noticeable improvement of target language fluency triggered much speculation about the future of translation, including claims that NMT would achieve human parity. In such speculation, translation performance was frequently evaluated in terms of language proficiency.¹

Both translators and researchers in translation studies understand that translation cannot be reduced to language proficiency or linguistic processes. This is reflected in the famous proposal by Holmes (1988), in which he emphasised the necessity of meta-discussions and specifically added that there would be “scholars who would object, particularly among the linguists,” to accepting this. Translators, when they explain what they translate, would say, for instance, “technical documents,” “novels,” “patent documents,” etc. but would not say “sentences,” “paragraphs,” or “texts.” This implies that translation deals with documents rather than languages. But this understanding is not necessarily widely shared. Regarding translation as a linguistic operation, perhaps unconsciously, is common and persistent among NLP researchers. This also is more or less the case for lay people, including clients who use translation services.

The lack of common understanding of translation hinders translation services from performing at their full potential and makes it difficult for societies and industries to gain the full benefit from translation services. It also negatively affects such related areas as translator training and relevant technology development. As the translation market grows rapidly and translation technologies are being introduced into translation industries, it is essential for relevant actors and society at large to share a proper understanding of translation. To promote this understanding, we contend that explicating knowledge of translation processes and developing detailed terminologies is essential.²

This book focuses on the types of translation loosely called commercial, industrial, or practical translation which are carried out by translation service providers and which deal with patents, manuals, and technical, business, or legal documents, etc. (ISO, 2015). This type of work constitutes the bulk of the translation

industry, and it is in this work that issues such as incorporating translation technologies and obtaining a sufficiently large number of translators with satisfactory skills manifest most clearly. We nevertheless hope that some part of the research reported in this book will be of use for other types of translation.

1.2 Explicitating knowledge of translation

1.2.1 *The status of explicit knowledge*

To examine the status of knowledge of translation, we take as a point of departure a comment made by Noam Chomsky, in his answer to a question concerning the possibility of applying findings in theoretical linguistics to such practices as language teaching or translation:

People who are involved in some practical activity such as teaching languages, translation, or building bridges should probably keep an eye on what's happening in the sciences. But they probably shouldn't take it too seriously because the capacity to carry out practical activities without much conscious awareness of what you're doing is usually far more advanced than scientific knowledge. The history of the physical sciences is interesting in this respect. ... It wasn't until the mid-nineteenth century that physics began to catch up and to provide some understanding that was actually useful for engineers. Now physics in the nineteenth century was vastly more advanced than our understanding of languages today, and building bridges is much less complex than what is actually taking place in the teaching of languages or translating. So I think the answer to your question is, I don't think modern linguistics can tell you very much of practical utility. (Chomsky, 1987, p. 180)

We adopt here the usage of “knowledge” and “understanding” in this quote, namely, “knowledge” to refer to explicit forms of knowledge, and “understanding” to refer to taking something as explicit and manipulable knowledge. These contrast with “carry out practical activities without much conscious awareness.”

Two insights can immediately be drawn from this quote. First, translation is regarded as one of the practical activities “carried out without much conscious awareness.” This reflects an aspect of reality in translation. Expert translators produce high-quality translations, but they may not be able to describe what they are doing in the process. Translation training has traditionally been carried out as “learning through practice,” although this situation is changing (cf. EMT, 2017; Venuti, 2016). A common and persistent misunderstanding about translation may be correlated with the lack of detailed knowledge about translation processes; our knowledge about translation may fall behind what expert translators can do.

Second, linguistics as a system of scientific knowledge is not regarded as relevant to providing an understanding of translation. Although Chomsky attributes the reason for this to the stage of development linguistics is in, we observed in the

previous section that what linguistics deals with in regards to language is different from, or only a part of, what translation deals with.

Translation studies have developed substantially since the latter half of the twentieth century. We are witnessing a growing interest in theorisation and formalisation of practical translation processes in translation studies (e.g. Chesterman, 2016; Newmark, 1988; Nord, 2018). While these recent developments in translation studies are highly promising, as of now they are still not fully connected with translation practices, except perhaps with regards to translation quality assurance (Burchardt & Lommel, 2014; Castagnoli et al., 2006). Common knowledge that would form the basis for understanding and communicating about the process of translation at a fine-grained level is yet to be established. Given this situation, one of the tasks that needs to be carried out, we observe, is to give detailed and systematic descriptions of the processes involved in translation.

One final point needs to be clarified in relation to the quote from Chomsky. Descriptive clarifications of translation processes certainly amount to – or at least lead to – explicit(ating) knowledge. But do they deserve to be called scientific, or theoretical? We contend that they do. Johannes Kepler’s celebrated law of planetary motion was possible only after meticulous observations and descriptions of planetary motions had been made by Tycho Brahe. Brahe’s contribution was at the same time descriptive *and* scientific.

1.2.2 *The role of metalanguages*

As explicitating translation knowledge requires explicit descriptions of translation processes (Davies, 2001), we set as a concrete goal the establishment and systematisation of *metalanguages*, consisting of terms and guidelines for their application. Existing dictionaries (Shuttleworth & Cowie, 1997; Laver & Mason, 2018) and glossaries or lists of terms provided in textbooks and handbooks of translation studies (e.g. Baker, 2011; Gambier & van Doorslaer, 2010–2013; Millán & Bartrina, 2016; Laviosa & González-Davies, 2019; Munday, 2016; Newmark, 1988; O’Hagan, 2019) cover mostly terms that represent concepts in translation studies. To the best of our knowledge, there are no organised terminologies that focus on terms describing practical translation processes. Systematic terminologies or languages not only constitute an essential pillar for explicitating knowledge of translation but also contribute to systematising communications among related actors and in translation education and training.

We use the word *metalanguages*. In a strict sense, a metalanguage is defined as a language used for describing languages. Translation is more than a linguistic process, so our usage of the term is a little stretched. Gambier and van Doorslaer (2009) also adopted the term metalanguage in a broader sense. We find this term fit to use here as it emphasises the necessity of explicitly introducing languages suitable for describing the target phenomena (cf. Ford & Peat, 1988; Petersen, 1963). Although full elaboration of the nature, status, and role of metalanguages will be given in Chapter 2, let us briefly observe the status and role of metalanguages in translation studies and related areas here.

First, that metalanguages constitute an essential pillar to explicitate knowledge of translation is the theoretical contribution of metalanguages in the immediate context of the present work. In this sense, they are essential for the scientific understanding of translation processes. Establishing basic metalanguages will also help mitigate common and persistent misunderstandings about translation by related actors and in society in general.

Second, metalanguages also make a practical contribution to improving translation activities. As will be examined in detail in Chapter 4, the range of translation competences have been widened to cover not only those involved in the act of translation in its narrower sense but also such areas as finding information, dealing with technologies, managing cultural differences, and properly handling specialised knowledge (cf. ISO, 2015). Also, competences are recognised more and more as externalised processes of dealing with documents and observable acts (Piao & Kageura, 2018). The importance of so-called *translator* competences, which include the ability to talk about and explain translations and related acts, is recognised in addition to traditional *translation* competences, which are concerned with the ability to translate. The EMT Competence Framework lists, as one of the target competences that students must acquire, the ability to “analyse and justify their translation solutions and choices, using the appropriate *metalanguage* [emphasis added] and applying appropriate theoretical approaches” (EMT, 2017); being able to use metalanguages is a part of translator competence.

Third, metalanguages contribute to translation education and training. In educational research, metalanguages are widely held to be important in promoting teaching and learning. Much work has been carried out on the role of language and vocabulary in teaching and learning in the field of science education (e.g. Cohen, 2012). In L2 or academic language teaching and learning, there has long been a debate between grammar-based language teaching and practice-based teaching. We are witnessing a re-evaluation of the importance of metalanguages in language education (e.g. Berry, 2010).

1.3 Technologies of translation

In the current context of translation, technologies of translation mean computational technologies related to translation (Alcina, 2008; Chan, 2017; O’Hagan, 2019; TAUS, 2013). Some typical technologies are translation management tools, computer-assisted translation tools (Bowker, 2002), translation memory tools (Mosavi Miangah, 2008), term extraction and management tools (Kageura & Marshman, 2019), and machine translation (Poibeau, 2017).

From a completely different point of view, “technologies of translation” can be understood as translation *as* a technology or a composition of technologies. Because translation is a practical act, scientifically explicitating translation processes is very close to revealing the technologies at work in the process of translation.

Though it may sound odd at first glance, much work has been devoted to clarifying the technologies involved in the learned or scholarly use of language,

which linguists do not address. This work can be divided into two types. On the one hand, there is a long history of efforts to clarify or improve our way of thinking based on languages or symbols in their abstract sense (e.g. Aristotle, ca. 340 B.C.; Leibniz, 1696; Boole, 1854; Sayers, 1947). Abstract theories of computation can be included in this tradition (Petzold, 2008). There is also work that regards language as a technology for communication (Dor, 2015). On the other hand, there has been much work on tangible technologies related to languages and language use. Characters, writing, reading and/or literacy are all regarded as technologies (Plato, ca. 360 B.C.; Havelock, 1981; Ong, 1982; Manguel, 1997; Cormack, 2001). Typography and fonts can also be regarded as a technology (Clair & Busic-Snyder, 2005). In addition, there are technologies related to documents, some of which have been consolidated in the form of editors' manuals or technical writing manuals (e.g. Butcher et al., 2006).

Interestingly, current NMT cannot properly manipulate some of these technologies. For instance, as of June 2021, no major NMTs can properly translate all of the following:

“Human” consists of five letters.

“What the heck,” she said.

“It’s strange,” she said.

Bloomfield stated that, as language constitutes “a great part in our life,” we “rarely observe it, taking it rather for granted, as we do breathing or walking” (Bloomfield, 1933, p. 3). Having native-level bilingual language proficiency does not mean being able to translate. To that extent, translation, even if translators may not be able to explain what they are doing, involves some elements that are complex and, perhaps, systematic. If these are attributed to individual people, they can be regarded as competences. But we can also attribute these specialised elements to the system of manipulation of symbols, languages, and documents; we can then call these “technologies” of translation. Interestingly, the two human acts Bloomfield listed, i.e. breathing and walking, have been scientifically studied and now we have so-called technologies in both senses, i.e. technologies to support breathing or walking, and technologies of breathing or walking.

Our scientific enterprise of describing the translation process and defining met-languages can thus be regarded as being connected to a viewpoint of seeing translation as a composition of technologies. Though we do not explicitly explore this viewpoint in the rest of the book, it will form a useful guideline in making sense of the discussions in Chapter 16, the final chapter, in which natural language processing technologies are examined.

1.4 Organisation of this book

This book consists of three parts. Part I is devoted to defining contexts within which the tasks of explicating translation knowledge and developing meta-languages are situated. This part forms the basis for Parts II and III. Part II

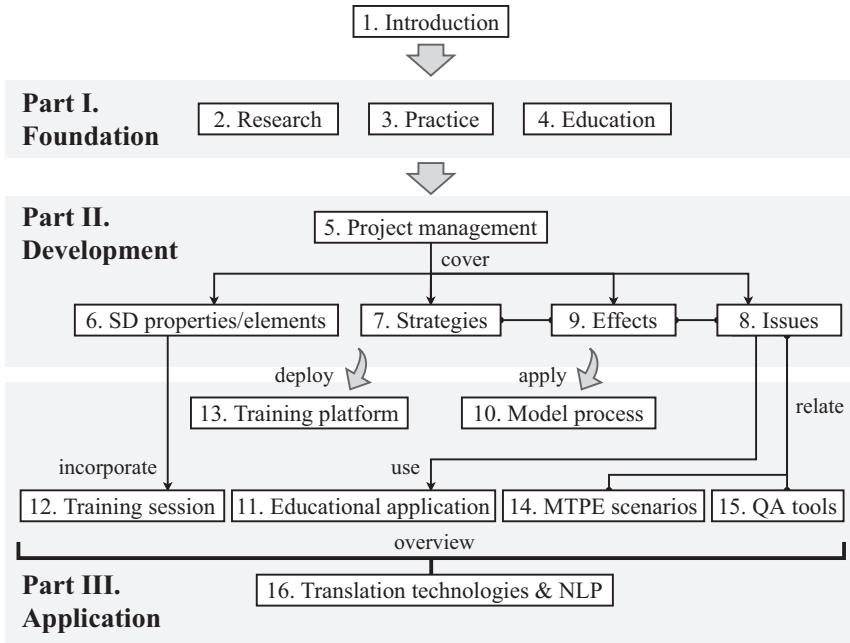


Figure 1.1 Chapter organisation.

presents core sets of metalanguages for core parts of translation processes. These metalanguages are the chief outcomes of our research. Part III covers use of metalanguages and related technologies from practical and broader points of view. Figure 1.1 depicts the chapter organisation of this book. Authors from diverse backgrounds, including researchers in the fields of translation studies and natural language processing, translation practitioners, and tool developers, have gathered together to contribute relevant chapters.

Part I consists of three chapters, i.e. Chapters 2–4.

Chapter 2 by Kageura et al. elaborates on the essential standpoint of the research presented in this book. It defines metalanguages and places them in the historical context of translation studies. It also explains the general requirements and building procedures of metalanguages. These lay conceptual and methodological foundations for the work in Part II.

Chapter 3 by Yamada and Onishi provides an overview of the translation process in commercial environments, while positioning it in the context of descriptive translation studies (Toury, 1995) and functionalist approaches (Vermeer, 1989/2000). The framework of translation processes in this book based on the ISO 17100 standard will be elaborated on (ISO, 2015). The framework consolidates the relationship between the chapters in Part II and facilitates schematic understanding of the chapters in Part III.

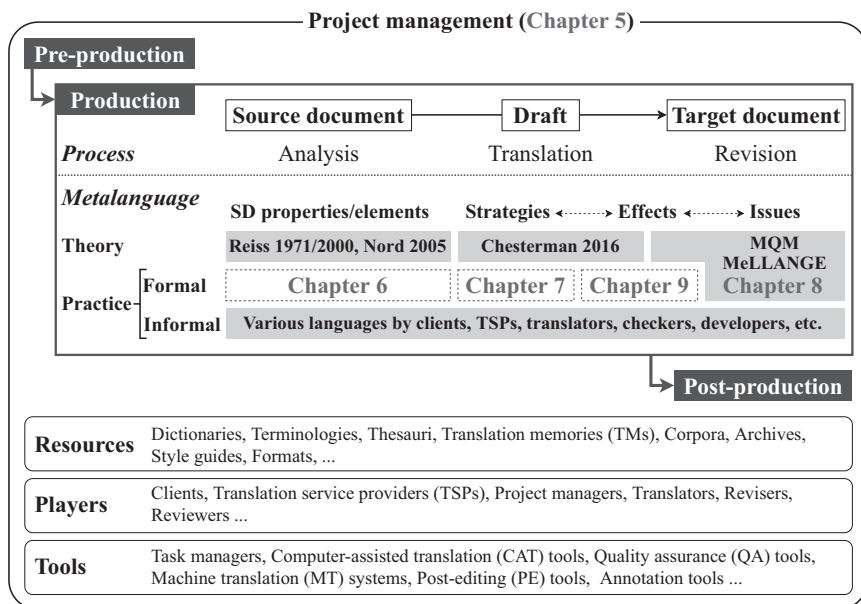


Figure 1.2 Overview of the translation process covered by this book and core metalanguages with the corresponding chapters in Part II.

Chapter 4 by Piao et al. summarises the role and position of metalanguages from a pedagogical point of view. It shows that the explicitation of translation knowledge through metalanguages enables the democratic transferring of knowledge and skills and improved self-analysis in training. This chapter provides a theoretical background to Chapters 12, 13, and 14 in Part III.

Part II consists of five chapters, i.e. Chapters 5–9.

These chapters present metalanguages for the parts of the framework of the translation process as shown in Figure 1.2. This framework is based on ISO 17100 (ISO, 2015), with modifications. Chapters 3 and 5 will elaborate on the translation process fully.

Chapter 5 by Onishi et al. defines tasks, items, and players involved in the translation process, based both on literature surveys and on interviews with ISO 17100-certified translation companies. The general framework defined here governs the core processes and metalanguages of translation discussed in Chapters 6–9.

Chapter 6 by Miyata and Miyauchi deals with the metalanguages involved in source document (SD) understanding, an important starting point of translation. Emphasising the concept of *documents*, it provides typologies of SD properties and SD elements as metalanguages, referring to literature in translation studies and related fields, such as linguistics and technical writing.

Chapter 7 by Yamamoto and Yamada focuses on the bilingual transfer of source content into target content. Adapting the translation strategy categories from Chesterman (2016), it defines a typology of translation strategies as a metalanguage, together with a procedure for applying these strategies.

Chapter 8 by Fujita et al. presents the design, development, and validation of a metalanguage of translation issues that are to be deployed in the revision process. Based on the existing frameworks of quality assessment and translation issues, it defines an issue classification scheme with a decision tree for consistent use of the metalanguage.

Chapter 9 by Miyata and Miyauchi covers the effect of revisions, which is also related to translation. It analyses the instances of document-level post-editing of machine-translated target texts, and develops a metalanguage of effect in a bottom-up manner.

The metalanguages corresponding to individual parts of the translation process can be cascaded as follows:

- **SD analysis:** *Specify* [SD properties] and *identify* [SD elements].
- **Translation:** *Transfer* the identified [SD elements] into [TD elements] based on various information such as the [translation purpose], [SD properties] and [TD properties].
- **Revision:** *Identify* [translation issues] and *correct* them.

The italicised verbs and bracketed noun phrases in the above formulations correspond in principle to core actions and items to be elucidated as metalanguages. The metalanguage for effects is deployed for diagnosing the choice of strategies and revisions.

Part III consists of seven chapters, i.e. Chapters 10–16. They provide case studies of metalanguage usage in practical or pedagogical scenarios as well as relevant issues related to technologies. These chapters help readers understand how metalanguages can be used in their own context. Chapters 10, 11, 12, and 13 deal with the metalanguages presented in Part II, while Chapters 15 and 16 cover different, but related, metalanguages and technological supports in some practical use scenarios.

Chapter 10 by Yamada et al. presents metalanguages for the workflow of translation projects. It also gives typical use scenarios of the metalanguages in the translation workflow as well.

Chapter 11 by Fujita et al. describes the application of the metalanguage of translation issues to an English-to-Japanese translation training course. It shows effective ways of using the metalanguage to diagnose problems in students' performance.

Chapter 12 by Piao and Kageura designs a translation training session that incorporates the SD property metalanguages and empirically analyses the role of metalanguages in session operation and in translation performance.

Chapter 13 by Kageura et al. introduces the translator training platform MNH-TT, which incorporates the core parts of the metalanguages defined in Part II

to promote collective and reflective learning. It argues that this platform opens the way to the systematic use of metalanguages in a unified environment for pedagogical purposes.

Chapter 14 by Sakamoto and Yamada reports the use of translation evaluation metrics in machine translation post-editing (MTPE) scenarios. It shows the effectiveness of using the metrics at the pre-production negotiation stage.

Chapter 15 by Nitta presents a case of technical implementation of style guidelines for translation quality assurance. The tool, which has been commercially available, supports not only language guidelines generally acknowledged in the translation industry in Japan but also domain-specific preferred usage of words and symbols. The explanation of the tools gives insights into how metalanguages can be embedded into practically useful tools.

Finally, Chapter 16 by Fujita discusses the advances in NLP related to translation. It provides an overview of NMT and discusses its possible extensions with human-computer collaboration. It also introduces NLP tools in the context of computer-assisted translation. These technologies can be compared with and incorporated into the human translation process in combination with metalanguages. This chapter enables us to reconsider the proper roles and usage of metalanguages at the crossroads of technologies for translation and technologies of translation.

Notes

- 1 For instance, the following press release refers to TOEIC (an English proficiency test) score: <https://miraitranslate.com/news/362/>.
- 2 We use “translation processes” in the same way as in ISO (2015). By this term we do not mean cognitive process of translators as in Jakobsen (2017).

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