

Review of *Translation Tools and Technologies*, by Andrew Rothwell, Joss Moorkens, María Fernández-Parra, Joanna Drugan, Frank Austermuehl, ISBN: 9780367750329, Routledge. 2023.

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Book Review

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Translation Tools and Technologies (Routledge, 2023), by Andrew Rothwell, Joss Moorkens, María Fernández-Parra, Joanna Drugan, and Frank Austermeuhl, aims to provide translators with guidance to the digital tools and technologies that increasingly mediate every aspect of their professional activity. The wide range of topics covered in the book, including the depth of details covered in the discussion, makes this clear implicitly. Thematically, the content is divided into two broad subjects: chapters 1 to 7 explore technologies relating to the actual translation of language, while chapters 8 to 12 focus on the technologies in which such translation occurs with particular emphasis on contexts, platforms, and processes. Following the explicit practical purposes of the work, topics are discussed in an approachable, highly structured way, using many illustrations to clarify details of the tools and technologies the book considers. The wide spectrum of topics covered in this book can be highly beneficial for a wide range of audiences, including but not limited to novice translators who are new to the profession, experienced translators adapting to novel technological requirements in their work, and translators moving into managerial positions. As the authors note (p. 2), the increasing rapidity of developments in the requirements associated with these technologies makes this guidebook an essential and valuable resource.

The speed of these developments is especially notable in the first of the two broad subjects identified above (chapters 1 to 7), about technologies pertaining directly to the translation process. Machine translation (MT) and computer-assisted translation (CAT) are the areas in which the broad effort to replicate intelligent human activity with computerized processes has shown some of the most striking results since the early to mid-twentieth century (Aguilar, 2023). MT and CAT have made significant progress, and now, much of the work that human translators need to do is pre- and post-editing and proofreading the translations generated by such technologies (Rothwell et al., 2023). A detailed understanding of how various approaches to MT and CAT work is, therefore, beneficial for translators engaged in such work, as it enables them to predict likely challenges, understand problems that do arise, and apply efficient, reliable remedies (Rothwell et al., 2023). The book's approach, in this respect, is informed by the intended audience, framing the discussion in terms that are likely to maximize the benefits for professional translators.

Chapter 1, “Introducing Translation Tools and Technologies,” discusses the impact of Tan and Nagao’s (1995) innovation of the combination of statistical and lexical approaches to the use of parallel corpora in CAT on the rule-based machine translation (RBMT) approach that was prevalent before this. As this chapter showcases, the use of this approach with parallel corpora and translation memory (TM) had a massive impact on the accuracy, fluency, and naturalness of MT. The perpetual salience of this approach makes familiarity with it invaluable for the contemporary translator.

Chapter 2, “Principles of Computer-Assisted Translation,” explores the common CAT tools for translation tasks, provides guidance to their use, and evaluates the strengths and weaknesses of the various offerings. This chapter will be valuable for translators seeking to determine which applications are appropriate for which types of tasks and how to make such evaluations. The main strengths of CAT are productivity, consistency, and efficiency, such as allowing multiple translators to contribute to a single translation at the same time. The main weaknesses relate to creative and idiomatic uses of language and the time they often require learning to use. Given these weaknesses, Rothwell et al. (2023) propose that the use of CAT for projects be determined by considering the risks of incorrect

translation. For example, for texts where mistranslation can be very costly, CAT should only be used early in the process and only with supervision by human translators.

Chapter 3, “Translation Memory, Matching, Alignment, and Data Exchange,” makes reference to the topics introduced in Chapter 1 and explores them in more detail. The primary focus is the impact of Gale and Church’s (1994) “statistical alignment” approach to building parallel corpora in natural language processing. The chapter illustrates how statistical alignment achieves consistency across numerous languages through the advanced algorithms to search and excerpt legacy translations from corpora. The detailed discussion of the practical implementation of such approaches in contemporary technologies will give translators a deeper appreciation for the computational logic on which these algorithms are based, thereby enhancing the value translators can get out of them.

Chapter 4, “Managing Terminology in CAT Tools,” develops this line of inquiry by considering the use of termbases for the management of terminological consistency in CAT tools. The chapter explores the practical specifics of term extraction, the importing and exporting of termbase data, and associated technical challenges translators are likely to encounter. As the discussion demonstrates, these resources are of great value in multi-translator contexts, enabling overseers of projects to ensure lexical coherence across the entire translation and avoiding the risks associated with divergences.

Chapter 5 explores electronic corpora and concordance tools in further detail. Concordance tools allow translators to search the translation memory (TM) to see how specific terms or phrases have been translated before. This helps promote consistency and makes the translation process more efficient. A specific area of focus is placed on the use of these technologies for the purposes of alignment with the target audiences’ cultural values and idiomatic expectations. The authors discuss the various approaches to the generation of relevant databases, with a focus on the benefits of online affordances such as websites dedicated to this purpose or bespoke internet searches, as well as tools such as AntConc or Sketch Engine, a corpus-study tool, that adopt a strategy more closely in alignment with the traditional approach.

Chapter 6 turns its attention to current machine translation technologies, tracing their development out of earlier iterations. This focus on the processes whereby the technologies have developed is of value to a clear explication of the computational rationales on which the contemporary state-of-the-art technology is based. The theoretical discussion focuses on the impact of neural-network-based approaches on MT, and the current challenges that still require solutions. The more practical considerations of the chapter are given to the role of translators in the pre- and post-editing with MT technologies, using the foregoing theoretical grounding as a way to clarify areas of focus and concern in various scenarios. This chapter provides perhaps the best example of one of the book’s most notable strengths: the depth of its engagement with the precursors to contemporary tools and technologies. The insights afforded by such material illuminate the trajectory of the developments out of which the contemporary tools and technologies have emerged, and the rationales underpinning them, as well as the ways in which they are currently adopted. The insights these discussions offer to translators who will need to work with such technologies are of great value to an in-depth understanding of the principles on which they are based and how they do what they do. They will equip professional translators with the skills to evaluate the comparative strengths and drawbacks of various systems, and to judge their appropriateness for specific contexts.

Chapter 7, “Advanced Leveraging in CAT Tools,” explores recent developments intended to address the two primary drawbacks of CAT: the waste of valuable translation information, and its relative helplessness when TMs or termbases can provide no suitable input. The chapter discusses how contemporary approaches overcome these challenges through approaches such as predictive typing, fuzzy match repair, and automatic tag placement. While many of these technologies are protected by commercial confidentiality, the authors speculate on the role of machine learning in their function, and on likely directions of development in the future.

Chapter 8 provides guidance to the translation project management tools that translators are likely to need to get to grips with the performance of their professional duties. The authors focus mainly on Wordfast Anywhere (WFA) and Phrase. However, the discussion shows the general functional principles of such technologies to help translators when they need to use them in workflow platforms. As with all the chapters in the volume, the more abstract discussion (in this case, of the protocols for the management of translation projects) provides a valuable addition to the practical question of how translators can make the most of the tools.

Chapter 9 explores the translation of subtitles and the editing of CA-translation of subtitles. As in Chapter 8, the discussion focuses on specific actual examples of interfaces for the performance of this kind of work. In addition, there is also consideration of broader contextual developments having a bearing on the work and its requirements, primarily that of a push toward accessibility on the part of large media providers such as the BBC. The chapter demonstrates the opportunities the situation presents, as well as the risks to translators. With the emergence of digital media and platforms for the dissemination of such content as YouTube and Netflix – and the near-global reach of the communications infrastructures required to access them – the demand for such subtitling and the translation associated with it has increased significantly. This has been accompanied by increasing emphasis on accessibility to such media for the hearing impaired. For example, Rothwell et al. (2023) cite the example of the BBC requiring that all content available on its platforms be accessible in this way. This has generated both opportunities for CAT and MT, as well as novel challenges that are likely to shape the ways it develops in the future.

Chapter 10 turns to a closely related set of considerations by considering software, web, and game localization. As with subtitling, contextual, and technological developments of recent decades have contributed to a surge in the demand for this type of input from translators, usually in conjunction with CAT. The chapter provides an overview of the relevant considerations for the localization of websites, digital games, and software, informed by authoritative research on the topic (Singh & Pereira, 2005), and the ways in which translators can expect to be involved in the process. With the increasing globalization of markets and audiences for audio-visual products such as TV series, movies, and digital games, the economic and cultural ramifications of catering to such diverse segments have become increasingly complex. In this respect, again, the opportunities such developments present for CAT and MT are matched by equivalent challenges. Such localization has long been identified as one of the salient challenges to any MT or CAT approach, given the deeply idiomatic nature of the forms of expression required to achieve it successfully (Avramidis, 2019). It also requires an executive determination of how the trade-offs between fidelity to the original context and accommodation to the context of the audience in question are to be managed. For example, in some cases, the cultural

strangeness of the product is likely to be valuable (such as the TV show *Squid Game*), whereas in other cases, varying degrees of accommodation to the idiolect and idioculture of the presumed consumer will be necessary for the product to be intelligible, enjoyable, and commercially viable (Pyae, 2018). Rothwell et al. (2023) do not engage with such questions in any great depth, but their awareness of their implications for the primary topic of translation tools and technologies gives the book a robust engagement with contemporary developments that is a valuable addition.

Chapter 11 focuses on translation quality assurance. While the tools discussed earlier in the book (TM, termbases, etc.) have promoted quality in some respects, they have also created new challenges in this regard. This has given rise to the use of dedicated quality assurance technologies such as QA Distiller and ApSIC Xbench. A significant consequence of this development is that quality assurance now frequently occurs primarily at the project management level rather than among translators themselves. This change can require adaptation from translators, and the chapter provides insights into how this can be managed smoothly.

The final chapter of the volume, Chapter 12, considers human factors connected to translation tools and technologies, including aspects such as translators' working conditions, their workspaces, the accessibility of the tools and technologies they are required to utilize, and related topics. The authors touch on the phenomenon of 'flow', and workspace platforms designed to enhance it. The prime objective of this chapter is to assist translators in structuring their work environment in such a way that they can reach the highest possible levels of productivity and job satisfaction. This final chapter also provides the clearest example of the most significant omissions caused by the authors' approach to the material. The extensive casualization and precarity of translators' employment conditions is mentioned as something of an aside, with Rothwell et al. (2023) primarily concerned about the challenges this poses to researchers seeking reliable data on translation tools and technologies. The lack of discussion of the ways this casualization and employment precarity has largely matched the emergence and spread of technologies is striking, given the topic of the book. The technologies discussed in this chapter are also considered without much critical reflection on the broader socio-political context in which they function. The authors appear to take the explanation provided for the purpose of these technologies entirely at face value: that they are intended to assist translators to work more efficiently and effectively, and that, in this sense, they are of benefit to translators. There is no discussion of the ways in which such technologies serve a disciplinary function, enabling employers to exercise continuous and detailed oversight over the translators' work in ways that could very easily be used for punitive purposes (Coates, 2002).

This dimension of these technologies engenders a marked asymmetry in the relationship between the freelance translator and their employer. The translator's work is systematically casualized, often paid on a piece rate system such as the one advocated by the principles of scientific management and structured in such a way as to limit the employer's liabilities to the translator to the greatest extent possible (insurance, health care, holiday pay, etc.) (Courtney & Phelan, 2019). Despite such an arm's length approach, dedicated platforms for the control of workflows enable the employer to exercise very close scrutiny of and control over the translator's work. While the translator has no control, the employer has complete control. In this regard, these tools are already being used for purposes of surveillance and discipline in the field of translation (Coates, 2002) in ways that appear likely to have

a significant impact on translators' employment security and job satisfaction (Martin et al., 2022; Ravid et al., 2020). Rothwell et al.'s (2023) very limited consideration of the ways in which these technologies are likely to impact the actual employment conditions of translators, thus seems a notable omission.

However, this limitation is more than outweighed by the general strengths of the book. Some strengths of specific chapters are discussed above, with reference to the chapter in question. One more general strength of the work is its rich awareness of and reference to the wider social context in which such tools and technologies are applied. Research on CAT is liable to a lack of consideration of the social and cultural context and an exclusive focus on factors such as language, computing logic, and similar abstract questions. This is perhaps unsurprising, given that such questions, in many respects, represent the conceptual and substantive core of the challenges CAT researchers confront. Technological developments facilitating CAT (the 'upstream' context) receive extensive attention, as do social, political, and cultural contexts having a bearing on the reception of the language itself. As Rothwell et al.'s (2023) consideration shows, however, there are significant downstream contextual factors, unrelated to specifically linguistic matters, that have an impact on the design and application of CAT.

Translation Tools and Technologies is likely to prove to be an invaluable addition to any professional translator's shelf. As the authors note, the pace of technological development in the field means that almost anyone stands to benefit from this kind of resource. The importance of the topic is matched by the authors' expertise, the clarity of the exposition, and the exhaustiveness with which the topics have been covered. The book achieves its own aims admirably, and the authors are to be commended for the work.

Disclosure statement

No potential conflict of interest was reported by the author.

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