JoSTrans
The Journal of Specialised Translation

Walker, Callum and Federici, Federico M. (eds) (2018). *Eye Tracking and Multidisciplinary Studies on Translation*. **Amsterdam/Philadelphia: John Benjamins, pp. 295, €95/$143. ISBN 978 9027201690.**

The cognitive approach to translation has been dominant in recent decades. Psycholinguistic research methods, such as Think Aloud Protocols (e.g. Lörscher 1986), key logging (e.g. Jakobsen 2011) and EEG (e.g. Grabner *et al*. 2007) have all been applied to investigate the processes embedded in translation. Among these methods, eye tracking has been proven to be an effective tool in examining attentional distribution and cognitive effort in written translation and in various modes of interpreting. Often, several research methods have been triangulated (Alves 2003) in order to obtain more reliable data. Walker and Federici's edited volume adds to this canon of literature by presenting research in which eye tracking has often been combined with other methods. As such, the multi-method approach is adopted as a methodological frame of reference for both translation process research (TPR) and reception studies.

The book is clearly structured and comprises three main parts (Method, Process, and Product), preceded by two introductory chapters by Walker (Chapter 1) and Federici and Walker (Chapter 2), contextualising multidisciplinary eye tracking research in Translation Studies (TS). Part 1 of the book opens with a chapter on the methodological challenges of using eye tracking in the translation workplace, by Teixeira and O'Brien (Chapter 3). Based on a case study, in which eye tracking was used to test how translators interact with the graphical interfaces of translation tools, Teixeira and O'Brien discuss, *inter alia*, selecting the right eye tracker, configuring eye-tracking experiments, collecting and analysing the data, etc. This is an important discussion since eye tracking has only rarely been used to date in translators' natural environment, i.e. outside the lab. Chapter 4, by Moorkens, discusses temporal, technical and cognitive effort in post-editing of machine translation. Moorkens observes a correlation between average fixation count per segment and temporal effort, as well as between average fixation duration and technical effort. Finally, in Chapter 5, Doherty offers a discussion of the advantages of regression designs over factorial designs in eye tracking studies. The author discusses methodological issues that are often problematic in eye tracking research, such as data loss, dichotomisation of factors, experiments vs. quasi-experiments, and treatment of individual differences.

Part 2 of the book provides examples of eye tracking studies conducted in TPR. In Chapter 6, by Martínez-Gómez et al., key logging and eye tracking data are analysed in order to create a computational model of the translation process recognising personal attributes. In a similar vein, key logging data is triangulated with eye tracking data in Chapter 7 by Schmaltz. The author investigates translation strategies used and cognitive effort invested in translating metaphorical expressions in a journalistic text. The

results show that there is no effect of expression type (literal vs. metaphorical) on total production time (TPT), but translation strategies might influence TPT. In Chapter 8, Huang reports on a study in which eye tracking, key logging and cue-based retrospection were used to investigate cognitive processes involved in self-revision, other-revision, and post-editing performed by student translators. The results of the study may offer a valuable contribution to translation pedagogy, especially in terms of recommended revision and post-editing procedures. Chapter 9, by Szarkowska et al., is a report on a multi-method study on visual attention distribution in an intralingual respeaking task, which is the first study of its kind. For instance, it was observed that translators who had experience in subtitling were more efficient in visual attention distribution, which might point to the importance of expertise in multi-modal processing.

Part 3 comprises three chapters. It appears that most eye tracking research conducted in TS has focused on studying the translation process itself, and in doing so, has somewhat neglected the applicability of eye tracking to research on how translated content is perceived by users. Filizzola contributes to filling this empirical void in Chapter 10, investigating how subtitled British stand-up comedies are perceived by Italians. Fixation count and total fixation duration were measured to investigate attention distribution on subtitles and images. In another reception-oriented study, reported in Chapter 11, Walker tests how marked language in literature is processed both in the source and target language, as opposed to a stylistically neutral version of the translation. By means of eye tracking, the author measured the cognitive effort invested in processing three versions of the same text, formulating valid conclusions about the cognitive equivalence in literary translation of stylistically marked content. In Chapter 12, Łabendowicz explores the differences in reception of three audiovisual translation modes (subtitles, dubbing, and voice over). Similar to previous chapters, the author uses eye tracking to test how participants process culturally marked materials.

This book is undoubtedly a valuable collection of research, discussing the applicability of eye tracking in TS and emphasising the importance of a multi-method approach. That said, more topics of research could have been included. For example, although eye tracking is in general regarded as non-invasive, some ethical issues related to the use of infrared light could be discussed more thoroughly. Moreover, since the importance of triangulation is emphasised on several occasions in the book, it is perhaps surprising that some research methods used in the respective studies were only briefly mentioned, with no thorough data analysis (e.g. retrospective verbal protocols in Chapter 7 and EEG in Chapter 9).

These issues notwithstanding, the book makes a very significant contribution to TS as it provides readers with a carefully planned selection of interdisciplinary eye tracking studies. The authors discuss not only the applicability of eye tracking, but also some methodological issues related to

its use. The results of the studies presented in the book may contribute not only to TPR, but also to reception studies, as well as to state-of-the-art statistical approaches adopted to study translators' behaviour and translation user experience.

References

- **Alves, Fabio** (2003). *Triangulating Translation: Perspectives in Process Oriented Research*. Amsterdam/Philadelphia: John Benjamins.

- **Grabner, Ronald H. *et al*.** (2007). "Event-related EEG Theta and Alpha Band Oscillatory Responses during Language Translation." *Brain Research Bulletin* 72(1), 57-65.

- **Jakobsen, Arnt Lykke** (2011). "Tracking Translators' Keystrokes and Eye Movements with Translog." Cecilia Alvstad, Adelina Hild and Elisabet Tiselius (eds) (2011). *Methods and Strategies of Process Research: Integrative Approaches in Translation Studies*. Amsterdam/Philadelphia: John Benjamins, 37-55.

- **Lörscher, Wolfgang** (1986). "Linguistic Aspects of Translation Processes: Towards an Analysis of Translation Performance." Juliane House and Shoshana Blum-Kulka (eds) (1986). *Interlingual and Intercultural Communication*. Tübingen: Narr, 277-292.

Acknowledgement

Paweł Korpal
Adam Mickiewicz University, Poznań
E-mail: pkorpal@wa.amu.edu.pl