# Eye-tracking in Translation Studies

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In this workshop we are going to discuss how the use of eye-tracking has enhanced our understanding of the cognitive complexity involved in translation. Although the eye-tracking technology has been used for quite a while in reading research (Rayner 1978), it has only fairly recently started to be used in Translation Process Research. To date several studies have included eye-tracking to complement other data collection tools such as keystroke-logging and screen-capture software, and arrived in this way at a more comprehensive picture of how translators solve problems and make decisions. Jakobsen and Jensen (2008) found that while reading for translation the translator's eyes fixate more often on the source language text and the duration of fixations is much longer than when the text is being read for comprehension. Pavlović and Jensen (2009) investigated whether directionality in translation (translating into a native or non-native language) has a significant impact on cognitive effort as demonstrated by fixation duration and pupil dilation. More recently, Schaeffer et al. (2016: 191) reported that the translators' first fixation durations were longer when they looked at words which have multiple meanings, and thus many translation equivalents in the target language, as compared to words which have only one possible translation. In all of the above studies, the main assumption was that the eye-behaviour reflects the cognitive effort expended by the mind involved in language/information processing as explained by the eye-mind hypothesis (Just and Carpenter 1980). Although very promising, eye-tracking technology is not problem free when used to study the process of translation and a compromise needs to be achieved between experimental conditions and ecological validity of the translator's working environment (Saldanha and O'Brien 2014). During this workshop I will share the experimental set-up, our research experience and the results of the Para-Trans research project (founded by the Polish National Science Centre) which included eye-tracking and keystroke-logging in the multi-method study of decision-making in interlingual translation and intralingual paraphrasing (Whyatt et al. 2016).

References:

Jakobsen, Arnt L. and Kristian T. H. Jensen. 2008. "Eye movement behaviour across four different types of reading task". In: Göpferich, Susanne, Arnt L. Jakobsen and Inge M. Mees. (eds.), *Looking at eyes: Eye-tracking studies of reading and translation processing*. Copenhagen: Samfundslitteratur.103-124.

Just, Marcel A. and Patricia Carpenter. 1980. "A Theory of Reading: From Eye Fixations to Comprehension". *Psychological Review* 87(4). 329-354.

Para-Trans Research Project - decision process in paraphrase and translation (2013-2016) financed by the National Science Centre (UMO – 2012/07/E/HS2/00661); project webpage: https://paratrans.wordpress.com/

Pavlović, Natasha and Kristian Jensen. 2009. "Eye tracking translation directionality". In: Pym Anthony and Alexander Perekrestenko (eds.), *Translation Research Projects 2,* Tarragona, Spain: Intercultural Studies Group. 93-109.

Rayner, K. 1978. "Eye Movements in Reading and Information Processing*". Psychological Bulletin* 85(3). 618-660.

Saldanha, Gabriela and Sharon O'Brien. 2014. *Research methodologies in translation studies*. London: Routledge.

Schaeffer, Moritz, Barabara Dragsted, Kristian T. Hvelplund, Laura W. Balling and Michael Carl. 2016. "Word translation entropy: Evidence of early target language activation during reading for translation". In: Carl, Michael, Srinivas Bangalore and Morit. Schaeffer (eds.), *New directions in empirical translation process research*. New York: Springer. 183-210.

Whyatt, Boguslawa, Kajzer-Wietrzny, Marta and Katarzyna Stachowiak. 2016. "Similar and different: Cognitive rhythm and effort in translation and paraphrasing". *PSiCL: Special issue 'Language processing in translation'*. (forthcoming)