

## **Eye-Tracking the Effects of Directionality on Cognitive Effort Distribution and Segmentation in the Translation Process**

Eye-tracking studies of translation processing has brought a new dimension to our understanding of what takes place in the translator's mind during the translation process. In contemporary Translation Studies, when we talk about translation, we usually take for granted that we are dealing with translation from L2 into L1. Consequently, we assume that the process of translation is only that of L2-L1. But in the world, there are many settings in which translation from L1 into L2 is frequently performed. It is very common in places where people use 'languages of limited diffusion' such as Turkey. Translators are required to translate in two directions simply because not enough people master Turkish as a second language. The function of English as lingua franca is another factor which is increasing the demand for translation into English as L2 in Turkey. Research into the comparison of translation processes in different language directions shows that L2-L1 and L1-L2 translation processes differ in various ways.

The aim of this paper is to investigate, empirically, how professional translators: 1) distribute their cognitive effort between ST and TT in general and in different language directions in particular, 2) perform cognitive segmentation in both L2-L1 and L1-L2 translation processes. We have, therefore, developed a research design using eye-gaze and keyboard logging data to explore the above questions.

We will conduct a pilot study with two professional translators whose L1 is Turkish, and strongest L2 is English, from and into which they have had translation experience for, at least, five years. We will ask the subjects to translate two authentic short texts (approximately 250 words), one from English into Turkish and one in the other direction. We will use texts on a topical issue, the comparability of which is relatively higher. In advance, we will give the subjects brief information about the experiment setting. Using the Tobii 1750 eye tracker, we will monitor their eye-gaze and use Translog to record the keyboard activities. To answer our research questions, we will analyse both the eye-gaze analysis software, Clearview, as well as the keyboard logging Translog data. From this experiment, we hope to gain insights into how professional translators distribute their cognitive effort across ST and TT in translation tasks in different language directions and see whether there are any signs of specific segmentation patterns attributable to the direction of translation.

This pilot study is planned to extend into a PhD project. It also expects to formulate new hypotheses and retest the previously tested ones of recent research. We hope our research will afford us a better understanding of how professional translators behave. We believe that regarding translator behavior, this project has strong relevance to translator training and places emphasis on translation from L1 into L2. Further, knowledge of segmentation in the translation processes can be useful for improving TM systems which operate by storing and retrieving segmented source and corresponding target text items.