

# Correlating Metaphors to Behavioural Data: A CRITT TPR-DB-based Study

**Faustino Dardi**

Durham University

Dept. of Modern Languages and Cultures

England, United Kingdom

faustino.dardi@durham.ac.uk

## Abstract

There exist a strong correlation between the number of translation options available for a certain word and the translator's eye movements. Indeed, higher translation entropy (*HTra*) has been shown to increase uncertainty in translation choices, thus making the translation process costlier, whereas lower entropy facilitates the translation of a particular word into its target rendition.

This exploratory study has been carried out at Kent State University during the second MEMENTO boot camp, and seeks to explore how translation entropy values relate to metaphors and how these correlate to behavioural data. This is achieved by retrieving and analysing existing datasets contained in the CRITT TPR-DB. Datasets with the English-Spanish language pair (BML12, six texts) are analysed in order to explore the correlation between metaphors and behavioural data. Metaphors are annotated in the source text files and then correlated to their renditions in the target texts. The identification of different types of metaphors in the source texts is performed through the application of the updated version of the *Metaphor Identification Procedure* (MIP) developed at Vrije Universiteit Amsterdam (MIPVU).

The behavioural data in the TRP-DB are analysed on the basis of two parameters: (a) first fixation duration (*FFDur*) on the source-text item(s) used metaphorically; (b) total reading time (*Trts*) on the source-text items used metaphorically. Both measures are assessed and correlated to *HTra*,

which has been demonstrated to have a significant effect on both *FFDur* and *Trts*: first fixation durations are shorter for source-text items with low translation entropy than for items with a larger number of translation alternatives. Considering that these latter findings confirm the *Literal Translation Hypothesis* – according to which words are first translated literally –, the same procedure can be tentatively applied to metaphor translation, delving into studies not originally performed to investigate metaphorical language translation. A further insight can be given for cross-lingual distortion (*Cross*) between source- and target-text items, in order to explore how the latter correlates to *FFDur* and *Trts* and, in particular, if any significant difference can be detected when compared to *HTra*.

It is possible to establish additional correlations between *FFDur*, *Trts* and the strategies used for translating the metaphors, and in particular if shorter or longer *FFDur* and *Trts* correspond to certain translation strategies. The framework for classifying the target-text translation of source-text metaphors will include five strategies: (1) the translation of a source-text metaphor into an exact equivalent in the target text (M–M); (2) the translation of a source-text metaphor into another metaphorical phrase with the same meaning in the target text (M1–M2); (3) the paraphrase of a source-text metaphor in the target text (M–P); (4) the translation of a source-text non-metaphor into a metaphor in the target text (NM–M); (5) deletion or omission.

---

© 2019 Faustino Dardi. This article is licensed under a Creative Commons 4.0 licence, no derivative works, attribution, CCBY-ND.

## References

- Jakobsen, Arnt L., and Kristian T. Hvelplund. 2008. "Eye Movement Behaviour across Four Different Types of Reading Task." *Copenhagen Studies in Language*, 36 (1):103–124.
- Krennmayr, Tina. 2008. "Using Dictionaries in Linguistic Metaphor Identification." *Selected Papers from the 2006 and 2007 Stockholm Metaphor Festivals*, edited by Nils-Lennart Johannesson and David C. Minugh, 97–115. Acta Universitatis Stockholmiensis, Stockholm.
- Schaeffer, Moritz J., Barbara Dragsted, Kristian T. Hvelplund, Laura W. Balling, and Michael Carl. 2015. "Word Translation Entropy: Evidence of Early Target Language Activation during Reading for Translation." In *New Directions in Empirical Translation Process Research: Exploring the CRITT TPRDB*, edited by Michael Carl, Srinivas Bangalore and Moritz J. Schaeffer, 183–210. Springer, Cham.
- Schäffner, Christina. 2004. "Metaphor and Translation: Some Implications of a Cognitive Approach." *Journal of Pragmatics*, 36 (7):1253–1269.
- Sjørup, Annette C. 2013. *Cognitive Effort in Metaphor Translation*. Copenhagen Business School, Copenhagen.