

# Variability of multiple translations as evidence for cognitive and linguistic factors underlying translator decisions

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While research in Translation Studies naturally relies on constructs and methods from various subfields of linguistics, there have been repeated calls for developing a unified theoretical framework and especially for improved interaction with cognitive linguistics and psycholinguistics (De Sutter & Lefer, 2020; Halverson & Kotze, 2021). In this context, Halverson's (2017) revised "gravitational pull" (RGP) model aims to explain translators' behavior in terms of usage-based factors such as the saliency of source and target items and the entrenchment of translation pairs. However, the term "saliency" remains notoriously ill-defined in linguistics, tending to conflate distinct phenomena such as attentional prominence, surprisal, and frequency (Boswijk & Coler, 2020; Schmid & Günther, 2016; see also Gilquin, 2008). Furthermore, saliency may result not only from lifelong exposure but also from recent priming effects (Hartsuiker et al., 2016; De Sutter et al., 2021). In this talk, I discuss how the components of Halverson's RGP model may be operationalized.

As a test case, I present a study of French translations of English noun sequences (e.g., *disaster relief program coordinator*). Psycholinguists have long investigated how compound processing may elucidate the structure of the mental lexicon (Libben, 2005; Baayen et al., 2010; Gagné, 2011), and cross-linguistic research can extend this to bilingual cognition. Furthermore, the bare juxtaposition of nouns provides efficient information packing in English but poses specific challenges for translation into French (cf. Lefer & De Clerck, 2021). At the formal level, French tends to use prepositional post-modification, but the accumulation of prepositions can impose a significant cognitive load for longer sequences (e.g., *disaster relief program coordinator* → *coordinateur du programme d'aide en cas de catastrophe*). At the semantic level, potentially ambiguous relationships between constituents, left implicit in English, often need to be explicitated in French.

I use data from the Multilingual Student Translation corpus (MUST; Granger & Lefer, 2020), consisting of French student translations for English texts specialized in sustainable finance. The resulting access to multiple translators' interpretations and realizations makes it possible to explore translation *variability*, i.e., the number of different solutions for a given source instance. This approach, already championed by Malmkjær (1998), remains underexplored to date (but see Castagnoli, 2020). More specifically, I present results from two analyses: (1) a qualitative description of how translation solutions vary at three structural levels (main constituents, linking prepositions, and surface grammar), which can reveal different aspects of how translators interpret source ambiguity; and (2) quantitative multifactorial models of translation variability as a function of sequence length, lexicalization, frequency of use, and structural ambiguity.

Thus, while previous RGP studies have explored the under- or overuse of particular lexical or grammatical forms in translation, I propose that studying the variability of multiple translations provides a complementary approach to elucidate the cognitive and linguistic factors underlying translator decisions.

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