Exploring Automation in The Analysis of Creative Shifts Found in News Translations: Machine vs Human Translation

For a long time, although machine translation (MT) has made significant progress in some fields, it is still has not considered to be equivalent to human translators (HT) in terms of creativity, especially in literary texts (Guerberof and Toral 2020). And in the quality evaluation of MT, creativity is hardly included as a criterion:

- On the one hand, creativity requires searching for new ideas and solutions for open problems, which is a complex thought process supported by cultural understanding and experience (Allen & Thomas, 2011). Whilst, the current achievements of MT are mostly based on clear rules rather than actual creativity (Fjelland, 2020).
- On the other hand, there are limitations in current machine learning process. The training set for MT is bilingual (Koehn & Knowles, 2017), so the machine can be restricted to the existing translation and rigid to provide novel and appropriate solutions.

However, the rapid development of massive data and AI translation technologies brings new possibilities for creativity in MT, such as new unsupervised neural machine translation model only relying on monolingual corpora (Artetxe et al., 2017). In this background, to what extent can MT show creativity compared to HT? And how to quantify creativity?

The project presents the results of a research including the translation of a collection of news from English to Chinese in two modalities: MT and HT. An empirical approach is presented to quantify the creativity in each translation with the analysis and evaluation of creative shifts (all translations that deviate from the source text) and reproduction (all translations that reproduce the source text) in news translation. Guidelines are provided to automatically determine the creativity shifts in parallel corpora and the evaluation of these shifts in comparison to human annotated corpora.

References:

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