INCREC: Uncovering the creative process of translated content using machine translation

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Abstract

The INCREC project aims to uncover professional translators' creative stages to understand how technology can be best applied to the translation of literary and audio-visual texts, and to analyse the impact of these processes on readers and viewers. To better understand this process, INCREC triangulates data from eye-tracking, retrospective think-aloud interviews, translated material, and questionnaires from professional translators and users.

1 Introduction

A remarkably high percentage of what we read and view is translated, especially in our multilingual and global society. For this translated content to reach world-wide audiences faster and at low cost, publishers and platforms are using MT. In view of the increasing amount of interlingual communication mediated by technology that we, as a society, are exposed to, understanding its effects on translators and the resulting user experience has become a matter of urgency.

My recent research on creativity in the translated product, as part of the EU-funded project CREAMT, shows that literary texts translated with MT have a lower creativity index than those processed in a traditional way and, therefore, the user experience might be negatively impacted by MT (Guerberof-Arenas and Toral, 2020). Yet, little is known of how technology affects the creative process of professional translators, rather than the final product, or how MT could be administered to favour the translating process and, hence, the user experience.

2 Previous work

In psychology, there is some agreement about the definition of creativity itself, as something that drives novel and useful ideas (Runco and Jaeger, 2012), but when it comes to the creative processes there is less agreement (Jankowska et al., 2018). Further, there is not a single model that can describe the creative process in all disciplines (Botella and Lubart, 2016; Lubart, 2018). And although more empirical research has been devoted to translation processes and translation cognition in recent years (Alves and Jakobsen, 2020; Vanroy, Schaeffer, and Macken, 2021), creativity in translation is mainly analysed from a product perspective (Bayer-Hohenwarter, 2011; Guerberof-Arenas and Toral, 2022), or as a trait that might result in better translations (Rojo and Meseguer, 2018). A welcome change of focus, from product to process, was carried out by Kussmaul (1995). Based on the four-stage model defined by Wallas (1926), and on empirical research using think aloud protocols with translation students, he suggests a four-phase model: preparation, incubation, illumination, and evaluation. However, the process of professional translators, especially those that work within the creative industries, when technology is applied, continues to be under-researched.

3 Methodology

INCREC looks at the macro processes (stages of creativity) and micro processes (translation problems, i.e. units of creative potential, UCP) in the MT-aided translation of creative content. A research team of six (PI, three PhD students, one post-doctoral researcher and one research assistant) will implement INCREC's four work packages (WPs). The language combination is English into Dutch, Catalan and Spanish because of easy access to customized engines and professionals.

3.1 WP1 - Macro-process: stages of the creative process (3 PhDs)

WP1 involves the collection of data from forty professional literary and audiovisual (AV) translators. They will carry out a two-week long preparatory task while taking notes on their creative process. They will be interviewed afterwards to gain insight on a) how they define creativity, b) how their creative process takes place, c) how they name the creative stages, and d) what conditions foster creativity.

3.2 WP2 - Micro-process: units of creative potential (2 PhDs)

The WP is divided into two subprojects: WP2.1 will collect data from twenty professionals translating a short story while WP2.2 will collect data from twenty professionals subtitling three related videos using an eye-tracker. The professionals will translate on their own or they will receive MT assistance either by default or on demand. A video of their gaze will be presented to obtain retrospective data. The target texts will be annotated for creative shifts (CSs) and errors. The analysis of the stages from WP1 will be contrasted with these results, and the eye-tracking data at word level will provide information on how translators deal with UCPs in a source sentence.

3.3 WP3 - Readers' preferences and attention in literary translation (PhD 3)

Fifty participants will read three extracts of literary texts using an eye-tracker. These three extracts will be randomly presented to the participants in pairs, so they can compare several modalities once (e.g. MT vs PE). The participant will thereby see two different modalities each time for the same source text (without knowing how these were translated) and select the one they prefer. They will be prompted to explain the reasons behind their choice. Upon completion, a video of their gaze will be presented so they can describe what they were thinking or feeling when they fixated in a certain words.

3.4 Viewers' engagement and attention in AVT translation (Post-Doc 1)

Ninety participants will watch selected movies from WP2.2, translated in different modalities using an eye-tracker. After watching the clips, the participants will then fill in a 12-item scale on narrative engagement, enjoyment and translation reception (Guerberof-Arenas and Toral, 2020). For AVT, we will consider mean fixation, dwell time, number of fixations, percentage of skipped subtitles and deflections to image in the different modalities.

4 Expected outcomes

The project has seven objectives: 1) Create a framework of creative stages (macro-processes) in literary and AV translation, 2) Describe and systematically classify micro-process in literary and AV translation, mapping translation problems that require a higher level of creativity or cognitive effort, 3) Understand the benefits or constraints of MT when provided at different stages to translators, 4) Understand how productivity and creativity are related in AV translation, 5) Analyse and classify user preferences in literary translation, 6) Analyse and classify how users relate to CSs in translation, 7) Analyse the role of raw MT in the reception of literary text/subtitles produced without professional intervention.

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