Theoretical modelling of the translation process

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Abstract: Translation Studies has undergone a significant transformation from a practice which relied on intuitive knowledge to a discipline with systematic approaches that have contributed in illuminating the intricate nature of translation. In the study of the translation process, for example, scholars and practitioners have introduced various models that explain the diverse dimensions of translation, covering cognitive, cultural, linguistic, sociological, and alternative perspectives. Although there has been an extensive exploration of the translation process through the cognitive lens, there is very little understanding of how it unfolds within other theoretical frameworks. This paper addresses this gap by introducing the concept of process modelling, illustrating how scholars from different theoretical backgrounds have dissected the translation process into distinct components. The objective is to emphasize that translation, as the process of "text production" in a different language, is a multifaceted operation involving several stages or phases. Through the lens of process modelling, the paper contributes to a deeper comprehension of the complexities inherent in translation.

Keywords: translation phases; process modelling; translation process research; translation act; translation event.

1. Introduction

Translation Studies (TS) has undertaken a significant journey towards independence from the late 1970s to the early 1990s, a transformation emphasized by scholars such as Bassnett (2005, 2012) and Bassnett and Lefevere (1992). The advancements in Translation Process Research (TPR) discussed by Alves (2021) underscore the evolution of TS into a more disciplined and respected academic field. In the early days of TS, people relied on intuition and reflections on how translators worked. This period, marked by an instinctive understanding of the translation process, eventually shifted with a **reflexive turn** (Dizdar, 2012). The shift led to various ways of studying the translation process. Researchers now recognize that translating involves different subprocesses or stages,

leading to the conclusion that translation is a dynamic and multifaceted activity. Presently, several existing models in the field have elevated the status of TS and deepened our understanding of the complexities of translation. Whether scrutinizing translation through a cognitive lens (e.g., Alves, 2021), exploring the dynamics between source and target cultures, delving into the nuances of language and symbols, approaching it from a sociological viewpoint, or investigating alternative methods, the common thread is that translation involves a confluence of multiple sub-processes. This shared characteristic can be effectively examined through the lens of process modelling. This paper therefore explains the concept of process modelling and illustrates how scholars with different theoretical perspectives have broken down the translation process into distinct components. The goal is to emphasize that (different forms of) translation, as the process of creating a text in another **language**, involves several stages of operation.

2. Concept of process model(ling)

According to Curtis *et al.* (1992), a process model is an abstract description of a process, which captures crucial elements for its purpose. In simpler terms, it outlines the sequence of activities that contribute to the attainment of a specific goal (Kentjmcdonald, 2018). Process models are widely used to represent and analyze recurring activities across various sectors, facilitating the understanding of operations within a specific domain. In business, process modelling is the analytical representation or illustration of an organization's processes. It helps visualize current workflows (**as-is**) and optimize them for better efficiency (**to-be**), aiding in productivity and operational improvement (Team Kissflow, 2024). Similarly, in manufacturing, process models are employed to illustrate all the stages and steps involved in the production process. This can include everything from the initial design phase to the assembly line and quality control (Mendling *et al.*, 2007).

In (Software) Engineering and Design, process models are employed to articulate and understand the activities and information necessary for developing a software system. This involves a structured representation that outlines the steps, tasks, and information flow throughout the software development lifecycle. Scholars such as Curtis *et al.* (1992), Sommerville (1996), and Wynn and Clarkson (2018) have contributed to the understanding and application of these process models. Regardless of where they are used, all process models have some common features. One key characteristic is that they are a visual or graphical representation of a process lifecycle, which is the different stages through which the process is followed. Most process models follow a step-by-step order, where each phase is completed before moving on to the next one. In translation studies, Chesterman (2013) posits that process models function both as an act and an event. This implies that these models operate both as cognitive processes (**acts**) and as observable sociological occurrences (**events**).

2.1 Cognitive process modelling

Translation as an act, popularly known as **act of translating** — or **translation act**, refers to the cognitive process involved in translating. This is the description of what happens in the mind of translators when they are working, presently studied under the now broader subfield of Cognitive Translation & Interpreting Studies (CTIS) (Rojo López & Martín, 2022). Referring to Toury (2012),

Chesterman (as cited in Rojo López & Martín, 2022) asserts that the translation act is centred in the human brain. Given the challenge of visualizing the mental processes of translators and interpreters during work, scholars have endeavoured to model the series of activities within the translator's brain. This process model (see Tymoczko, 2010) speculates that the mental architecture during a translation or interpretation session is divided into various stages or cognitive operations. To shed light on these cognitive operations, several methodological approaches have been adopted. In his comprehensive overview of Translation Process Research (TPR), Jakobsen (2017) identifies three distinct phases that mark its evolution. The initial phase was characterised by the Think Aloud Protocol (TAP). TAP involved asking translators to verbalize their thoughts during translation, with the hope of gaining access into their thought processes (e.g., Dechert & Sandrock, 1984; Gerloff, 1986; Krings, 1986; Lörscher, 1986; Königs, 1987; Kiraly, 1995; Tirkkonen-Condit, 2005). Building upon this, the second phase introduces technological advancements, integrating keylogging and eye-tracking methodologies. It was believed that these techniques would provide a more objective and detailed analysis by capturing translators' keystrokes and eye movements to illuminate their cognitive activities (Jakobsen, 2014; Alves, 2015; Orrego-Carmona *et al.*, 2018). The most recent phase represents a paradigm shift, which incorporates methods rooted in data analytics and data sciences. This approach harnesses computational techniques to analyse extensive datasets, which claims to offer detailed insights into translation processes that extend beyond the scope of traditional methodologies (Carl *et al.*, 2019; Vanroy *et al.*, 2021; Wen, 2021; Carl, 2023).

2.2 Sociological process modelling

The second model views the translation process as an observable sociological event, rather than solely a cognitive activity. It considers the translation process as an interaction between cognitive functions and various external elements, such as clients, quality controllers, tools, and workflows. This model, supported by scholars like Gideon Toury and Hanna Risku, underscores the dual nature of translation, which involves both cognitive and environmental factors. Toury's (2012) concept of the translation event emphasizes that translation is influenced by external variables, including socio-cultural contexts and audience expectations. His broader theory of translation norms suggests that these external factors shape and guide translators' practices through socially accepted conventions (as cited in Risku & Rogl, 2021). Similarly, Risku and Rogl (2021) argue that cognitive processes in Translation Studies extend beyond the internal mental workings. They introduce the concepts of situated cognition and embodied cognition, which highlight the importance of environmental influences and physical experiences in the translation process. According to Risku and Rogl (2021), understanding translation cognition involves considering how external contexts and embodied experiences interact with cognitive functions, thus providing a more holistic view of the translation process.

3. Process models in translation

In the preceding paragraphs, we have established that the idea of process model is widely used in different fields to outline step-by-step workflows for specific goals. It has equally been elaborated in translation studies that it covers both the mental process of the translator and the

observable social aspects (see Chesterman, 2012, for example). Various scholars have modelled the translation process differently, either focusing on the translator's cognitive activities or treating translation as a social event. Some scholars argue for a two-phase translation process, while others suggest three stages, and some believe in numerous operations. Table 1 summarizes some of these different models, wherein the terms **stage**, **phase**, **operation**, and **activity**" are used interchangeably in this paper to represent the same fundamental concept. This equivalence is substantiated by the fact that **operation** or **activity** encompasses the actions taking place within the broader context of **stages** or **phases** or **steps**.

Table 1: Models of the translation process

Two-phase models		Three-phase models		Multi-phase models	
Wilss (1982)	SLT identification	Nida (1964)	Analysis	Kußmaul (1995)	preparation
	TLT reconstruction)		transfer		incubation
Bell (1991)	analysis		restructuring		illumination
	synthesis	Seleskovitch (1975)	comprehension		evaluation
Dragsted (2010) Jakobsen (2011)	meaning construction		Deverbalisation	Sager (1994)	specification
	meaning representation		re-expression		preparation
Carl & Kay (2011) Hansen Schirra & Gutermuth (2015:59)	ST processing TT production	Delisle (1982)	comprehension, Reformulation		translation
			verification (justification		evaluation/revision
		Gile (1995)	ST Comprehension		
			ST Meaning Transfer		
Ogawa (2021)	comprehension				anticipation
	translation/ rendering		TT proposition revision		
Hvelplund (2019) Fontanet (2005)	comprehension	Levý (1967)	*Erfassen der Vorlage*	Randaccio (2012)	resource exploitation
	reformulation		*Interpretation der Vorlage*		
			Umsetzung der Vorlage		
		Mossop (2000)	*Pre-drafting*		co-operation
			Drafting		revision;
			Post-drafting		
		Lomheim (1999)	comprehension		translating.
			relay	Vinay and Darbelnet (1995)	Identification
			formulation		Examination
					Reconstitution
		Massey *et al.* (2013)	orientation		evaluation
			drafting		function analysis
			revision		

Wilss (1996,)			Nord (2005)	ST analysis
Multi-phase model (contd.)				
Wilss (1996,)	identification of problems			
	clarification (description) of problems			ST compatibility test
	search and retrieval of relevant informatio			analysis of TT elements
	problem-solving strategies			
	choice of solution			ST Restructuring
	evaluation of solution			

Source: Author (2024).

Table 1 provides an overview of various translation models, organized into three primary categories: two-phase models, three-phase models, and multi-phase models. This table systematically lists prominent scholars and their respective contributions to the field of translation studies, delineating the specific phases or processes articulated in their models. The subsequent subsections will detail each of these stages as represented in the table, offering a comprehensive examination of the methodologies and theoretical frameworks proposed by these scholars.

3.1 Two-phase model

From the early stages when the field of translation studies sought recognition, the debate on identifying the components of the translation process was a prominent aspect that played a central role in the theoretical endeavors of translation scholars. Wilss (1982) posited the existence of **universal regularities** within the translation process. He outlined a chronological sequencing of textual operations, where the translator assumes the roles of both a source text (ST) receiver and a target text (TT) sender. This process involves a two-step approach, encompassing source-language text identification and target-language text reconstruction. From the perspective of translation pedagogy, Wilss (1982) described translation competence as comprising three partial competences: first-language competence (L1), second-language competence (L2), and a supercompetence enabling mediation (through decision-making) between L1 and L2. These competences function within the framework of the cognitive translation process.

Similarly, Bell (1991) specifies that the translation process, though complex, involves two major phases: the analysis (decoding or comprehension) of the contents of the ST and the synthesis of the ST information into the TT (pp. 45–60). From a cognitive perspective, Bell (1991) acknowledges the intricacy of this process, asserting that, for each unit of sense, the translator performs these two actions at various levels of memory—from sound and word recognition to sentence parsing, up to the comprehension of the entire text structure. In other words, the analysis of the ST begins at the lower-level word recognition and extends to the comprehension of the entire textual structure.

More recently, for the purpose of analyzing the translation process with the aid of the latest technology, such as eye-tracking and keylogging, it is common among scholars to identify the two phases as 'meaning construction' and **meaning representation** (Dragsted, 2010; Jakobsen, 2011).

Although meaning construction is often used as a synonym for comprehension of the text, it can also be accomplished in the meaning representation or Bell's (1991) text reconstruction phase. It is also possible to construct meaning during the representation phase of operation. What we understand from the standpoint of process data studies is that meaning construction is not a phase per se but a kind of operation that characterizes the complex process of translation. For this reason, other process studies (Carl & Kay, 2011; Hansen-Schirra & Gutermuth, 2015; Ogawa, 2021) may refer to the two as **source-text processing**, which involves comprehension, or understanding of the ST, and TT production. Giraldo Ospina *et al.* (2024) have emphasized that text comprehension, including working memory and attention, is essential for accurate translation.

3.2 Three-phase models

On the other hand, some models stipulate that the translation process is composed of three distinct phases. One such model is found in the Interpretive Theory of Translation (the Theory of Sense) developed by Seleskovitch (1975). Although this theory was originally developed for interpreting, Gile (2009) argues that interpreting involves the same process as written translation. Seleskovitch's (1975) theory posits that translation and interpretation encompass three main phases: comprehension, *déverbalisation*, and re-expression. Comprehension, the initial phase, involves generating the sense of the source text (ST) by integrating cognitive inputs, linguistic knowledge, real-world knowledge, and contextual knowledge, all processed through human memory. The translator analyzes these components to apprehend the ST's sense, leading to *déverbalisation* (stripping the message of its linguistic form) and re-expression (transferring the meaning into another language).

Similarly, Nida (1964), influenced by Chomsky's generative grammar, views translation as a special form of communication divided into three phases: analysis of the ST into its basic semantic components, transfer into the target language (TT), and restructuring of the TT draft. Gile (1995) shares this view, distinguishing between comprehension of the ST, transfer of its meaning, and revision of the TT proposition. Delisle (1982) also identifies three stages in translation from a linguistic perspective: comprehension, reformulation, and verification (justification). Levý, in collaboration with Popovič and Miko (cf. van den Broeck, 1998), describes the translation process within structuralist literary theory as involving three sequential stages: (a) *Erfassen der Vorlage* (mental capture of the ST meaning), (b) *Interpretation der Vorlage* (ST interpretation), and (c) *Umsetzung der Vorlage* (implementation of ST interpretation).

Additionally, Lomheim's subtitling studies reveal three phases: comprehension, relay, and formulation (Qvale, 2003). The comprehension phase involves analyzing the ST to form a mental picture of its message. The relay phase replaces source-language units with target-language units, and the formulation phase involves putting the translation into written form. Mossop (2000) also outlines a three-phase process: predrafting, drafting, and post-drafting, with self-revision and other-revision distinguishing between internal and external review processes (Borg, 2018). In Translation Studies, the transition from self-revision to other-revision signifies the end of the translation process as an act and marks the initiation of the process model as an event. This shift emphasizes the collaborative and iterative nature of translation.

3.3 Multi-phase models

Some scholars argue that the stages of the translation process should perhaps contain more than just two or three stages. They contend that, as a problem-solving and creative process, translation involves several stages, similar to the four-phase model of the human mind during creative processes suggested by psychologists (Poincaré, 1913, as cited in Kußmaul, 1995). Kußmaul (1995) aligns this model with translation, asserting that the preparation phase corresponds to the comprehension stage of translation, where active decisions are made to establish the meaning of the source text (ST) in relation to the anticipated function of the target text (TT). Many other translation scholars view translation as a creative process (e.g., Reiß & Vermeer, 2013; Fontanet, 2017; Kadiu, 2019; Apfelthaler, 2021). In a volume edited by Carl (2021), several contributors report their observations from experiments involving machine and human translations and acknowledge the uniquely creative nature of human translation. They recognize translation as a complex activity.

Jean-Paul Vinay and Jean Darbelnet (1995) proposed a four-step process for translating from the ST to the TT, based on linguistic theory and cognitive decision-making processes:

1. **Identify Units of Translation**: Translators mentally recognize and select meaningful linguistic units in the ST based on context, meaning, and the intended message.
2. **Examine the ST**: Translators engage in cognitive activities to thoroughly examine the ST, evaluating its descriptive, affective, and intellectual content, and making decisions on how to convey this content in the TT, including choices related to language nuances, tone, and faithful representation.
3. **Reconstitute the Situation**: Translators mentally reconstruct the context that gave rise to the ST message, understanding broader contexts, cultural nuances, and communicative intent, and making decisions to convey these elements in the TT.
4. **Weigh Up and Evaluate Stylistic Effects**: Cognitive processes assess the stylistic features of the ST, understanding literary or rhetorical devices and their impact, and deciding how to replicate or adapt these effects in the TT.

Fontanet (2017) argues that Poincaré's four stages should be seen as operations rather than phases, occurring multiple times during translation. Mackenzie (1998) similarly compares the translation process to the creative problem-solving process, stressing that translation requires no predetermined solution but entails creative strategies. Mackenzie (1998) also draws parallels between Sager's (1994) stages—specification, preparation, translation, and evaluation/revision—and the creative process stages. The parallels include specification and preparation with the creative process's initial phases, incubation and illumination with translation stages, and verification with evaluation/revision.

Randaccio (2012) presents a five-phase model that aligns with the sociological perspective on translation:

1. **Anticipation**: Translators establish the context for the ST and TT, including authorship, purpose, and audience, and gather resources such as dictionaries and similar texts.
2. **Resource Exploitation**: Analyzing the texts and resources collected during Anticipation.
3. **Co-operation**: Collaborating with other translators and experts to address translation challenges.
4. **Translating**: Engaging in the actual translation process.
5. **Revision**: Finalizing the text based on preceding phases.

The sociological perspective emphasizes collaboration and recognizes translation as a social event influenced by various actors and factors. During the Anticipation phase, translators understand the social context of both the ST and TT. The Co-operation phase explicitly embodies the sociological perspective as translators collaborate to resolve challenges, involving multiple experts. The Revision phase reflects the culmination of collective efforts and decision-making within the social context of translation. Nord (2005, pp. 37-38) suggests that the translation process is not restricted to a linear approach but involves a "[circular path that contains a number of smaller circular movements (or loops) that keep recurring between ST situation and ST, between TT situation and TT". This view is supported by Gile (2009), who notes that recent models incorporate actions, tests, and feedback as integral to comprehension and production processes. Nord (2005) emphasizes that the initial step involves analyzing the translation brief, which informs subsequent ST analysis and TT production. The translator must continuously verify that decisions align with the TT's purpose, reflecting an iterative and dynamic translation process.

4. Conclusion

This paper has explored the diverse theoretical perspectives of scholars on the stages of the translation process, illuminating these stages within the overarching framework of process models, categorized into either the translation act or the translation event. It is important to note that the proponents of each of these models provide plausible justifications for their proposals, particularly those inspired by practice. This is not uncommon in a practice-oriented profession like translation. As Kadiu (2019, p. 8) notes, "theorizing takes place during the translating process itself, in the act of undertaking a translation and attempting to articulate our experience of it, of facing a translation dilemma and reflecting on possible solutions". Holmes (2000) specifies that the relationship between theory and practice is dialectical. Translation theory utilizes insights from research, which, as observed, is derived from the practical exercise of the translation profession. Several theoretical positions in the literature are products of descriptive studies resulting from rigorous experimental research within the descriptive branch of Translation Studies (Ji, 2019).

Finally, regardless of the theoretical or pedagogical justifications (Gile, 1995, 2009) for partitioning the translation process, it is essential to recognize that translating is an extremely complex activity that cannot be confined to specific phases. User activity data has revealed that seven types of activities can characterize a single translation session, according to Schaeffer *et al.* (2016). Translation Process Research specialists have found that translation processes are much less

sequential (sentence-by-sentence, chunk-by-chunk) and much less stratificational than predicted by earlier translation models. Hurtado Albir and Alves (2009) assert that difficulties in investigating the translation process are magnified by the various phases through which the process unfolds and by the complexity of the interwoven abilities and forms of specialized knowledge involved.

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