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Describing Cognitive Processes in Translation

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Acts and events

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Describing Cognitive Processes in Translation. Acts and events
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Introduction

In the translation process, translators and interpreters have a central position as thinking and acting human beings. This volume[1] addresses the topic of translation as an act and event, having as its main focus the cognitive, mental processes of the translating or interpreting individual in the act of translating. But it also opens up wider perspectives by including the social situation in the cognitive explorations of the translation process, i.e., by also looking at the event of translating.

The mental processes of the translator/interpreter have been the subject of a growing field of study in Translation Studies, beginning in the 1980's and experiencing a very strong development in the last 15 years (for an overview, see Englund Dimitrova 2010 or Jääskeläinen 2011). This field, often called process-oriented translation studies or translation process research, has been characterized from the start by a strong empirical orientation, thus inscribing itself in the paradigm of Descriptive Translation Studies. Another characteristic feature has been interdisciplinarity, as seen in the application of theories and methods from disciplines such as cognitive psychology, cognitive linguistics, and psycholinguistics. The latest, but certainly not last, evidence of this interest in interdisciplinarity is another recent volume in the BCT series (Ehrensberger-Dow, Göpferich, and O'Brien 2015).

The empirical focus of process-oriented studies has entailed the application and further development of a number of research and data collection methods, ranging from introspection (i.e., concurrent during think-aloud or retrospective commentary) to observation of behavior such as writing (e.g., with keystroke logging; see Jakobsen and Schou 1999) or eye movements and pupillometry through eyetracking (e.g., O'Brien 2006). The introduction of such tools and methods has brought with it increasing attention to and awareness of fundamental aspects of research design and experimental rigor, but also, somewhat paradoxically perhaps, the importance of ecological validity. For a discussion of developments over the

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1. The chapters were originally published in a special issue of the journal *Translation and Interpreting Studies* (8:2, 2013), bringing together papers presented at two international conferences in 2011, *Text-Process-Text*, at Stockholm University, Sweden, and *Translation Process Research: Breaking New Ground*, at Aston University, Birmingham, U.K.

past decade of process-oriented translation studies and its most prominent topics and tendencies, see Muñoz (2014).

In parallel with the field of process-oriented studies, another important field has evolved in Translation Studies, also having as one of its focal points the translator/interpreter, but seen from the perspective of being embedded in his/her social environment: translation sociology or the sociology of translation (e.g., Wolf and Fukari 2007; Kinnunen and Koskinen 2010; Angelelli 2012). This field could be said to have originated in the core of Descriptive Translation Studies and in the conceptualization of translation norms (see Toury 1995) but has since been further developed by inclusion of theories and concepts from sociologists such as Bourdieu and Latour.

Chesterman (2009) proposed a new subfield within Translation Studies, which he called *Translator Studies*. He further suggested a tripartite division of this subfield, with cultural, cognitive, and sociological branches, the last two of which are the focus of the present volume. The sociological branch would deal with "translators'/interpreters' observable behaviour as individuals or groups or institutions, their social networks, status and working processes, their relations with other groups and with relevant technology", and the cognitive branch would deal with "mental processes, decision-making, the impact of emotions, attitudes to norms, personality" (Chesterman 2009: 19). It is clear that there is overlap in some of the objects of study in the cognitive and the sociological branches and hence a potential for a rapprochement and perhaps cooperation. Examples of studies which may be seen as located at the interface between the two branches are Buzelin (2007) and Risku and Windhager (2013/2015). The relevance of such potential convergence seems especially clear in view of the rapid changes in the working conditions of translators and interpreters. Increased use of technology, specialization of translation work processes in large enterprises as well as the outsourcing of translation tasks are just some factors which characterize the development of modern translation professions. How those changes in the sociological translation event impact the cognitive translation act is a fruitful avenue for future study.

The six chapters in this volume address various aspects of translators' and interpreters' observable and non-observable processes, thus enabling readers to reflect further on the concept of translator studies and a possible merging of cognitive and sociological approaches to understanding the phenomenon of interest.

In the first chapter, **Andrew Chesterman** provides a theoretical framework for the volume with Toury's (1995) proposed distinction between different translation processes: on the one hand, cognitive translation acts, i.e., the mental processes, and on the other, sociological translation events, into which translation acts are embedded. Chesterman here proposes a third term, translation practices, to designate the translation process at the historical and cultural level. The author further

claims that translation acts can be studied from three different perspectives: as virtual (potential) processes, as reverse-engineered (reconstructed) processes, or as actual (observed) processes.

In terms of those distinctions, the other chapters of the volume can be characterized as studies of the actual cognitive translation acts, of other processes related to the translation acts, or of processes that are related to the sociological translation event. They share an interest in actual, observed processes but differ with respect to the phenomena under investigation as well as the methods used to gain an increased appreciation and understanding of those phenomena.

Focusing on bilingual processing, clearly part of the act of translation, **Moritz Schaeffer and Michael Carl** re-evaluate the psycholinguistics of the bilingual lexicon and evidence from bilingual priming studies in order to gain insights into automated translation processes. They argue that translation involves the activation of shared cognitive representations and report experimental evidence for a facilitative effect of translation over simple reading on the recall of a source text. In the light of their findings, they propose a recursive model of translation which re-defines the literal translation hypothesis and the monitor model in terms of horizontal and vertical bilingual processing during the production of a target text.

In her chapter, **Michaela Albl-Mikasa** considers the special challenges that ELF (English as Lingua Franca) input presents in the act of mediated bilingual processing in conference interpreting. She draws on a small case study of a student interpreter's rendering into German of short speeches given by ELF speakers. Her analysis of the data suggests that interpreting ELF speech may be compromised on two levels: non-standard input may affect the interpreter's comprehension processes; and unconventional expressions and structures prevent the interpreter from being able to rely on previously established links in rendering the target text. Especially interesting with respect to the act-event distinction is that the study also includes the ELF speakers' perspectives on their own discourse, as deliverers of the source speech. In her conclusion, Albl-Mikasa discusses the didactic implications of trying to prepare students for unpredictable ELF input.

Probing how non-conscious processes might influence the act, **Séverine Hubscher-Davidson** examines the psychological construct of intuition and explores the role that it might play in translation. She reviews the literature that has considered the importance of intuition in translation and explains the construct in light of recent psychological research. Self-report data from a case study of a student translating a literary text is analyzed in order to highlight the possible influence of intuition in decision-making behavior during translation. On the basis of her analyses, she claims that the potential to enhance intuitive decision-making should be exploited, since it might be an important part of the translation process.

Similar to Schaeffer and Carl, **Nataša Pavlović and Goranka Antunović** focus on the literal translation hypothesis. Using Translog recordings of interpreters' and translators' processes, they test whether more literal renderings during the initial act of translation become freer during self-revision. Hypothesizing that interpreting experience will have an effect on the types of self-revisions made at various stages of the process, they compare revisions in terms of distance to the source text structure. Their hypothesis is only partly confirmed by their results. An important finding is that many self-revisions are 'neutral' in terms of distance to the source text, and the authors conclude that this has to be taken into account in future studies on self-revision.

By encouraging students to reflect on their own processes afterwards, **Erik Angelone** moves them a step away from the immediate cognitive act. In his exploratory study of self-revision processes, he compares the efficacy of three types of translation process protocols as prompts for post-drafting translation problem recognition and revision. Students created a process protocol while translating and then self-reflected about their problem-solving performance on the basis of that protocol. They were given the opportunity to revise their translations following their analyses, and then their final versions were marked for various types of errors. Of the three protocol types, screen recordings were consistently associated with the fewest errors in the final translations, suggesting that this type of prompting would be a useful revision technique in process-oriented translator training.

In the last chapter of this volume, **Sarah Eardley-Weaver** considers a very different type of translation process, one which is more closely linked to the concept of a sociological translation event. She discusses the growing field of audiovisual translation and examines audio description and touch tours for partially-sighted and blind patrons of opera performances. Proceeding from the framework of actor network theory also used in studies within sociology and translation (Abdallah 2010), she explores the roles of various actors involved in such translation processes and argues that the complex networks would be best described as iterative, with the audience's reception of the translation product feeding back into subsequent processes. Audience reception studies, she points out, should be an integral part of the investigation of any translation process and not just audiovisual translation.

With the chapters of this volume, we hope to have provided impetus for further work, combining the act and event perspectives.

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Models of what processes?

Andrew Chesterman

Toury (1995; 2012) distinguishes between cognitive translation acts on the one hand, and sociological translation events on the other; a translation act is embedded in a translation event, and both acts and events are seen as processes. He also explains three senses of 'translation problem,' which relate to different notions of the processes involved in the translation act. The present chapter analyzes and develops these ideas. It distinguishes between what are here labeled virtual, reverse-engineered, and actual processes of translation acts or events, which correlate with Toury's three senses of 'translation problem.' A few examples are given of models of each kind of process, both classical and more recent ones. Also discussed is the extent to which the various models are predictive and hence testable. To designate the translation process at the historical and cultural level, alongside the mental act and the situational event, the term 'translation practice' is suggested.[1]

Keywords: translation process, translation model, translation act, translation event, translation practice

1. Act and event

Most process research on translation has so far focused on the cognitive dimension; the investigation of sociological processes has not attracted as much attention, although the recent "sociological turn" in translation studies may influence future tendencies (e.g., Wolf and Fukari 2007). The distinction between these two basic dimensions was already implied by Gideon Toury (1995), in his discussion of natural translation and sources of feedback. Feedback, he wrote, may come from the translation recipients, and also from:

> those who have commissioned the act of translating, and sometimes from the orig-
> inator of the utterance to be translated as well. When realized by actual persons,
> these roles (in the sociological sense) — all parts of the interactional makeup of a
> translating *event* — may, of course, partially overlap. (1995: 249, emphasis original)

Reading somewhat between the lines here, many scholars (including myself) have taken "act of translating" — or translation *act* — to refer to the cognitive process, whereas the translation *event* is the observable sociological framework in which the cognitive translation act takes place. In the revised version of the book (Toury 2012: 67–68), this distinction is drawn more clearly and developed at some length. The locus of the translation act is said to be "the human brain." Yet Toury insists there that the cognitive cannot be completely separated from the environmental. The relation between the mental act and the situational event is one of "comple-mentarity and containment." This is a position that has also been taken by other scholars such as Risku (2010), who have explored the relevance of the notion of situated cognition to Translation Studies. Toury calls for research on the interaction between these two levels, the mental and the situational. A recent example of how this interaction might be studied is Jones (2011), on poetry translation; this study combines think-aloud protocols (TAPs), interviews, and agent networks.

An act is thus embedded in an event: the event is the sociological or situational context of the act. The event is directly observable: one can follow a translator's overt behavior, observe phone calls, emails, use of the internet, physical movements, and so on. But the act is not directly observable, one can only make inferences from the behavior one can see. Even the insertion of electrodes in the brain does not provide direct access to cognition itself, only to the electric pulses and neuron activities etc. which manifest it. A translation event normally involves other actors too, of course, who also perform relevant cognitive acts.

In principle, the distinction between the cognitive translation act and the sociological translation event seems clear, although both terms refer to processes taking place in time; moreover, some models appear to incorporate aspects of both dimensions. In translation, these time scales are very different: one is measured in seconds or microseconds, the other in hours or days, or even months. There does not yet seem to be agreement about how to define precise starting and ending points of a translation act or event, however, or how to conceptualize the overlap between them. Aspects of the event, for instance, such as the details of the brief and the definition of the intended addressees, presumably influence the mindset of the translator and hence the cognitive translation act, perhaps even before he/she even receives the source text. Let us nevertheless suggest that a translation act begins when the translator begins to read the source text, and ends when the translator decides to take no further action in revising the translation (although

there might still be further thought on the subject). The act may of course be interrupted. A translation event, on the other hand, could be said to begin when the translator accepts the job (or perhaps when the client begins to look for a translator?), and ends with, say, payment of the bill (or perhaps when the first recipient reads the translation?). Translation events have been investigated in different ways, via workplace studies, revision procedures, the analysis of translator teams and networks, translator agency, and so on (e.g., Kinnunen and Koskinen 2010). Here too, interruptions are common.

This chapter mainly concerns translation, but it is worth noting that, in interpreting, the distinction between act and event often seems less clear-cut. But the interpreting act and event can still be studied separately, as indeed they are, using different kinds of methods and models.

2. Models and problems

The term "model" is significantly polysemous in the philosophy of science, where debates range about what a model is ontologically, what kinds of models there are, and how models relate to theories. For instance, some models aim to be representations of a phenomenon, in some way or other, while others have the form of an explanation (like a law). Some models are more explicit than others; some are formulated in mathematical terms, others are based on analogy (such as the computer model of the mind). Within Translation Studies, too, there are many different views. I take a model here to be a preliminary kind of theory, one which claims some relation of similarity with the object that is modeled; a model, in this definition, purports to be isomorphic with its object, in some way. In some kinds of models this isomorphism is obvious. Think of those models of the solar system, before and after Copernicus, that you saw at school. In others, such as mathematical or computational models, the isomorphism is more abstract. Models in this sense show what are thought to be the main components or elements of a phenomenon, what are thought to be the main relations between them and their main functions. I shall assume here that models are basically systematic descriptions, descriptive hypotheses, which claim to *represent* something. True, such a model may also imply an explanation, for instance if the relations included are causal. Consider for instance a simple model of a primitive steam engine, showing how increasing the temperature of water in a container eventually causes an increase of pressure when the water boils, and this pressure then causes something to move somewhere else in the modeled system; the resulting movement is thus explained by the model.

Explanations of various kinds are also implied by the predictiveness of models, insofar as they are indeed predictive. In a weak sense, a general descriptive model

implicitly predicts that it will also apply to yet-to-be-studied instances of the phenomenon in question, indeed to all possible instances belonging to the same set. In this weak sense, a descriptive model could be said to be explanatory in that it generalizes, by predicting applicability to unknown instances (on explaining via generalization, see Chesterman 2008). However, explanations and predictions do not inevitably go hand in hand, as is well known.

In a stronger sense, a model can be predictive of consequences that can themselves be tested empirically. A classic example from chemistry is Mendeleev's nineteenth century model of the elements, the periodic table, which arranged the elements by group and by atomic weight. The first versions of this model had gaps at certain points; the model predicted that these gaps would eventually be filled, as new elements were discovered. And they were.

As we shall see, not many models of the translation process appear to be particularly predictive.

In what follows I will distinguish between different kinds of models of the cognitive translation process according to the ontological status of what is being modeled. These different kinds of models actually represent different senses of 'translation process,' although all are concerned with the cognitive translation act, not the sociological event. My presentation of model types is based on Toury's discussion (2002; 2012: Chapter 2) of three different senses of the term 'translation problem.' Toury does not give labels to these different senses, but refers to them as PROBLEM$_1$, PROBLEM$_2$, and PROBLEM$_3$. In brief, Toury's distinction is as follows. The first sense is the potential problem of the translatability of a given source-text item into a given target language, under given conditions: how might this ST item be translated here? A problem in the second sense is identified by starting with a given target-text item that functions as a factual translation solution, and then attempting in retrospect to reconstruct the translation problem for which it has been selected as a solution, and also to reconstruct the thinking that led the translator to this solution. And the third sense is the notion of a problem as it is observed to be experienced by the translator, during the process of a given act of translation, via traces left e.g., by interim solutions, by verbal reflection, or by pauses in the process. In Toury's revised version of his book (2012), these three senses of 'translation problem' are argued to correspond to different senses of the translation act.

With these senses in mind, consider what they imply for an understanding of different models of the process of the translation act. I propose to distinguish three kinds of models: models of *virtual processes*, corresponding to Toury's first sense of 'problem'; those of *reverse-engineered processes*, corresponding to Toury's second sense; and those of *actual processes*, corresponding to his third sense. I now look at these types in more detail, and give some examples.

3. Models of virtual processes

First, consider a model of what I will call a *virtual process*: this would be the potential path from one sense of 'translation problem' to a potential solution, showing for instance the possible strategies for the translation of an allusion or a pun (taken as translation problems, in Toury's sense 1). Such a model is pedagogical or advisory/prescriptive in nature, and starts with something in the source text that is treated as a translation problem, or as we saw Toury put it, a problem of translatability. It thus takes a prospective approach. Based on intuition, or experience, or on the analysis of many translations, the model then outlines possible courses of action leading to possible solutions, in theory. It is a simplified, idealized model, of possible decision processes leading to acceptable solutions (although, clearly, real translators might not behave optimally). Such a model might also purport to represent the translation process in general, not just the solution of a given problem. Models of the virtual process are predictive in the weak sense that if translators follow the advice illustrated by the model, it is presumably assumed that the results will tend to be more acceptable than if the advice is not followed. In other words, the model implies a prediction that its use will lead to beneficial effects: hence its usefulness in the classroom. In principle, therefore, these models are testable: we can test whether their use really does lead to better translations than cases where they are not used. (But do we have any such tests?)

An early example of such a virtual model is Nida's (e.g., 1969) well-known three-stage model, comprising analysis, transfer, and restructuring, with obvious pedagogical aims. Nord's "looping model" (1991) takes Nida's pedagogical approach a step further. She starts with the analysis of the skopos, then the analysis of the source text, followed by the production of the translation. The model loops back and forth between these three. Feedback comes from the emerging target text itself, too, as later decisions affect earlier ones. Hönig (1995) proposes an "ideal" flow-chart model, including the translator's macro- and micro-strategies, monitoring, etc. Interestingly, he explicitly compares his virtual model with Krings' actual one (see below).

Levý's game-theoretical model (1967) takes a teleological point of view of the virtual translation process, in which the translation act is represented as a series of decisions, which are like moves in a game. Alternative solutions to a given ST segment are generated, assessed according to specified criteria (such as stylistic naturalness vs. semantic closeness, or type of implied audience). Most of the examples he analyzes are modeled in terms of binary decisions. Levý takes the process of translating to be "a game with complete information"; this means a game where every decision and move is influenced by the knowledge of previous decisions and their consequences.