

Plenaries

Andrew Chesterman, University of Helsinki

Process models and their assumptions

We will examine several models of the cognitive translation process, both classical and more recent ones, and analyse and assess some of their underlying assumptions. These include modularity, linearity, algorithmicity and recursiveness. To what extent are these assumptions empirically testable? Do they give rise to testable hypotheses? And how do assumptions about the cognitive process (the translation act) differ from assumptions about the sociological process (the translation event)? Do our assumptions mislead us? How actually do we construct our models?

Susanne Göpferich, University of Giessen/Germany

Translation Competence: Development and Stagnation

Only a decade ago, Schäffner & Adab (2000: viii) stated in the preface of their volume *Developing Translation Competence*: “There has not yet been a specific research focus within Translation Studies on how translation competence can be defined and developed, although the aspect of translation competence has been addressed more generally by scholars”. Since then the situation has changed completely. Numerous individual researchers and several research groups have launched projects investigating the development of translation competence. Most of them have followed a contrastive design analyzing, for example, the translation behavior of novices as compared with advanced translation students or professional translators (see the overview in Englund-Dimitrova 2005: 14 f. and Göpferich 2008: 168 ff.). Some of them have launched longitudinal studies in the strictest sense of the term, i.e., studies involving the analysis of translation products and processes of the *same* individuals *at regular intervals* during their training and later professional career. The latter provide us with *insights* into the development of translation competence *in its continuity*.

In my speech, I will present results of such a longitudinal study (TransComp; see <http://gams.uni-graz.at/tc>). Its hypotheses were derived from expertise research. The population of this study consisted of 12 students of translation enrolled in the BA program “Transcultural Communication” at the University of Graz and 10 professional translators with at least 10 years of professional experience in translation/interpreting. Translation competence was modeled as composed of several sub-competences, among them strategic competence, translation routine activation competence, and tools and research competence. These three sub-competences were considered to be translation-specific and to distinguish professional translators from mere bilinguals. They were selected as the dependent

variables in the TransComp study. The study found that the professional translators had not yet achieved expertise, the highest level of competence. For the student participants, it showed a stagnation of their competence development with regard to several indicators over the first four semesters of their program. For these findings, possible explanations and their didactic implications will be presented.

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Miriam Shlesinger, Bari-Ilan University

The double-bind process: Over-the-phone interpreting of metalinguistic tasks

Health professionals – speech pathologists, occupational therapists, psychotherapists etc. – often administer diagnostic tests designed to assist them in evaluating the patient's memory, comprehension, attention span and other cognitive functions, including a series of carefully formulated questions, along the lines of:

- Can you tell me the names of five animals beginning with the letter C?
- What does the following proverb mean?
- What words rhyme with? Etc.

The patient's answers then form the basis for the provider's clinical reasoning and clinical decision-making. When such questions are presented to a patient who does not speak the provider's language, the interpreter (whether officially employed or *ad hoc*) must formulate analogous questions in the patient's language. Clearly, the search for such "equivalents" places an added burden on the interpreter, and the shift from a more literal to a more functional interpretation of such instructions requires a series of subtle decisions along the way, all the more so when the provider subsequently solicits the interpreter's input in evaluating the patient's responses.

When such tasks are interpreted over the phone, the difficulties posed by the language barrier are compounded by the physical dislocation, and the interpreter is further encumbered by the absence of eye contact, visual cues etc. and by the patient's – and provider's – use of deictics. Surprisingly, many providers fail to take these constraints into account, and it is only through repeated training and practice that provider and interpreter – and patient – can form an effective triad, capable of eliciting responses that will allow for a reliable assessment. Of particular interest are the junctures at which the interpreter adopts as more proactive role (for better or for worse) involving interactional moves in which s/he appears to be intent on conserving the provider's time and/or bridging cultural differences.

Based on a set of twenty authentic recordings (Hebrew-Amharic and Hebrew-Russian) of such sessions, lasting between 10 and 50 minutes, and post-task interviews with the interpreters, I will attempt to provide an overview of the stages of this process and the interpreters' own reasoning, focusing on apparent decision points, and will analyze those cases in which providers, with the help of over-the-phone interpreters, do succeed in obtaining seemingly accurate and reliable information, despite the double bind of *language* and *dislocation*.

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Presentations

Lars Ahrenberg, Linköping University

Inferring vertical processing from a parallel corpus

Translation can be seen as a complex decision process affected by many different factors: the source text, the brief, translation norms, the translator's knowledge of source and target language, her cognitive state, time constraints, and so on. While parallel corpora, in addition to the target text, only give access to one of these factors, the source text, it has been shown that such resources allow general tendencies such as standardization, explicitation and disambiguation to be inferred [1]. This paper presents an approach to inferring differences in micro-level processing using morpho-syntactic annotations and word alignments.

Following [2] I make a distinction between vertical and horizontal processes in translation, where the first implies full comprehension of the source text before producing the output, and the second assumes a simpler process of transcoding or direct substitution of target phrases for given source phrases. Arguably, vertical processes involve more complex decisions and more cognitive effort than horizontal processes. The idea of the method is to use the word alignments and syntactic annotation to identify connected segments of the two texts that correspond under translation, i.e., where, under the assumption of a horizontal process, the target segment substitutes for the source segment. The two segments together may be called a substitution unit. The more complex the relation between source and target in a substitution unit, the less likely is the assumption of horizontal translation. Complexity may be due to the length of a substitution unit, to relative differences in length between source and target segment, to internal reorderings or other types of restructurings.

It must be recognized, of course, that short and simple substitution units, could still have been difficult for the translator for a reason, such as lack of adequate lexical knowledge. However, where complexity can be found in a substitution unit, that can not be explained in terms of language differences, we can infer that a vertical process has occurred.

The notion of substitution unit is inspired by work in machine translation research using n-gram correspondences, or tuples, for translation between closely related languages [3]. A tuple is a pair $\langle s, t \rangle$ where s is a non-empty connected subset $\{s_i, \dots, s_{i+k}\}$ of source positions, and t is a connected subset $\{t_j, \dots, t_{j+m}\}$ of target positions. Moreover, there are no crossings over tuples, so that, if s' is a source position to the left of s_i all its images are to the left of t_j , and similarly source positions to the right of s_{i+k} have their images to the right of t_{j+m} , if they have an image at all.

The method will be demonstrated on an English-Swedish parallel treebank where all alignments and syntactic annotations have been manually reviewed [4].

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Michaela Albl-Mikasa, (Zurich University of Applied Sciences (ZHAW) / University of Tübingen)

Impediments to the interpreter's inferential processing caused by the growing number of non-native English speaking conference participants

The global spread of English as a lingua franca (ELF) has far-reaching repercussions on the interpreting profession. While ELF and interpreting are not, as it may seem, mutually exclusive, this development is found to have adverse effects on the interpreter. From a wider perspective, working conditions are undergoing fundamental changes to the detriment of the interpreter's image and job satisfaction, and on the level of interpreting processes, the interpreters' limited resources are additionally taxed by the growing number of non-native English speaking participants at conferences. In my questionnaire survey of 32 professional conference interpreters (Albl-Mikasa 2010) I found that in the source text comprehension phase the interpreter has to make an additional effort to grasp foreign accents and recover unfamiliar expressions, resolve unorthodox syntactic structures and compensate the lack of pragmatic fluency on the part of the non-native speaker; in target text production, moreover, the interpreter invests additional capacity to adapt to (the proficiency level of) a non-native audience. Such "accommodation", a well-investigated feature in ELF research (e.g. Seidlhofer 2009, Cogo 2009), is clearly linked by the interpreters to capacity-related factors. As one interpreter put it: "Yes I do adjust, but only when I have sufficient capacity left, for it means having to give up long-established automatisms learned over the years".

On the basis of my questionnaire survey of 32 professional conference interpreters complemented by an interview corpus of by now 10 in-depth interviews (of those same interpreters) of on average 8000 words each, I shall sketch out in my presentation the way in which non-native English speaking conference participants are perceived to call for additional effort on the part of the interpreter. By linking the subjective statements to a cognitive model of interpreting based on cognitive-inferential theories of language and text processing (Rickheit / Strohner 1999, 2003; Albl-Mikasa 2007, 2011), I shall illustrate how this impedes the fundamental strategic interpreting processes of inferencing and anticipating.

Dr. Michaela Albl-Mikasa, University of Tübingen

On the combined use of keylogging and eyetracking to tap into instances of processing effort in translation

**Fabio Alves
Adriana Pagano
Igor Silva**

Keylogging has been used over the past two decades to carry out pause analysis in the unfolding of online translated text production (Jakobsen 1999, 2002, 2005). Yet, pauses in typing may yield stretches of silence during which nothing or very little is revealed about the underlying translation activity. To make up for the shortcomings deriving from the sole use of keylogging and supply additional data for translation process research, eyetracking has been spearheaded as a more advanced resource to tap into online translated text production (Jakobsen, Göpferich & Mees 2008), particularly at the interface between process and product-driven data (Alves et al 2010). The combined use of keylogging and eyetracking has proved productive in translation process research to track instances of processing effort during task execution and their location within the source and target text areas of interest (Pagano, Alves & Silva, 2010). This presentation focuses on the analysis of translation process data generated by the combined use of keylogging and eyetracking to examine a situation in which processing effort tends to increase, namely instances of (de/re)metaphorization in translation (Steiner 2001, 2005), i.e., instances in the course of the translation process where linguistically encoded information is unpacked for comprehension purposes and repacked for the sake of target text production. Hansen-Schirra (2003) has shown in a small exploratory study that instances of metaphorization, demetaphorization, and remetaphorization do occur in translated text production. However, more substantial data analysis is required to corroborate Hansen-Schirra's findings. Building on the notion of (de/re)metaphorization in translation, two sets of translation process data, generated through the combined use of keylogging and eyetracking and stemming from the same source-text in English, were analysed. In the first set of data, six professional translators and six physicists translated an English source-text about physics (on the resistance of crumpling paper) into German. In the second set of data six professional translators and six physicists, with comparable profiles, translated the same English source-text into Brazilian Portuguese. In both sets of data specific instances of the source-text were selected as candidates for (de/re)metaphorization on the basis of their inherent linguistic traits. The data analysis has shown that, departing from the same English source-text, German and Brazilian professional translators tend to show a somewhat congruent behavioral pattern in terms of (de/re)metaphorizing linguistically encoded information into their target text production whereas German and Brazilian physicists tend to show a somewhat divergent pattern when working under similar conditions. The results have relevant implications for the study of translation expertise and confirm the strength of the combined use of keylogging and eyetracking to tap into processing effort in translation.

Magdalena Bartłomiejczyk

Interpreting strategies from the perspective of introspection

In my presentation I am intending to focus on introspection (more specifically: retrospective verbal protocols) as a method of investigating strategy use in simultaneous interpreting on the basis of my own previous research, projects currently carried out by my MA students as well as a wider background of interpreting research. Among interpreting strategies, there are quite a few (such as visualization or personal involvement) that are inaccessible to researchers by any other means than process

research. The use of such strategies can only, at best, be speculated on the basis of the target text. Consequently, these strategies have been missing in many classifications, although they were discussed by “personal theorizing” literature already in the 1950s and 1960s. Even though the use of a given strategy can only be confirmed by process research, this can also serve as a promising departure point for product analysis, for example, once we know that some interpreters rely on visualization much more than others, we can check how this is reflected in the interpretations they produce.

Another group are strategies which can be successfully investigated both by product and process research, possibly by triangulating methods of both types. Examples include anticipation and omission. Here, introspection can shed a different light on the data, explaining the reasons behind certain translational solutions observable in the target text, or differentiating between non-automated and automated processing. In the case of anticipation, introspection reveals that the strategy is used much more often than established by simply studying the ear-voice span between various parts of the source and target texts.

There are also some strategies, such as repair, that can easily be investigated on the basis of the product alone. However, also here introspection can be useful, for example by revealing fragments where repair was not undertaken although the interpreter noticed having made a mistake.

Michael Carl and Barbara Dragsted, Copenhagen Business School Translation as a production-driven activity

The nature of source text understanding in translation is controversial in translation process research: Translation scholars disagree on the extent to which translation requires deep or shallow comprehension of the source text (ST), and whether translation is a stratificational process of ST comprehension, transfer, and TT production, or a process where text comprehension and target text (TT) production take place in parallel. It is also unclear when understanding and meaning emerge during the translation process. Some scholars argue that deeper understanding of the ST might emerge through problems in TT production (Gile, 2005), which seems to be in contrast with the stratificational perspective of comprehension-transfer-production.

In this paper, we qualitatively compare text production patterns in a copying task and in a translation task. Since we can assume that translating a text requires more mental effort than merely reproducing it, text copying constitutes a form of baseline for typing behaviour in general. Surprisingly, the observed patterns of keystroke behaviour in both tasks are similar: when text production is unproblematic, we observe smooth, uninterrupted typing. In problematic cases, translators as well as copyists refer back to the ST before a production problem occurs. While some ST reading activity takes place before TT production is commenced, our data gives us reason to believe that extended reading activities are triggered by TT production problems, rather than by difficulties in ST comprehension. In sequences of seemingly unproblematic production, only a few ST words ahead of the current position of TT production are attended to (i.e. there is a small eye-key distance), although translators look further ahead into the ST than copyists. In more problematic cases, translators as well as copyists re-read pieces of the ST (or TT), and have longer production pauses, apparently to achieve a better comprehension of the text. This type of behaviour can be observed immediately before a production problem is solved, rather than when the translator is reading a ST passage for the first time. Therefore, we tentatively conclude that the need for deep(er) ST understanding is triggered by TT production problems, rather than by problems of ST comprehension.

Many phenomena observed in translation process data can more easily be explained when the human translation process is seen as a TT-induced activity rather than from the

classical comprehension-transfer-production perspective. The main purpose of ST understanding in translation is to generate a viable translation. If the translator aims at producing translations with minimal effort and reduced cognitive workload, the required depth of text understanding emerges during TT production and depends on the ease or difficulty with which the TT fragment can be formulated.

Agnieszka Chmiel, Adam Mickiewicz University

The influence of conference interpreting experience on anticipation as measured by translation latencies under context constraints

Anticipation is claimed to be an important part of conference interpretation and a crucial skill to be developed in the training of interpreters (Seeber 2001, Chernov 2004). In Interpreting Studies literature, it has often been perceived as a directly observable product (Van Besien 1999). Other scholars view anticipation from a cognitive perspective and define it as a language production process that activates semantically based subsets in the lexicon (De Bot 2000). In a study comparing interpreting trainees and non-interpreting bilingual controls, Kujalowicz et al. (2008) confirmed the impact of training on processing in the mental lexicon as measured by faster word production. As a follow-up to this experiment, 24 professional conference interpreters and 24 non-interpreting bilinguals participated in the study that involved verbal production of translation equivalents (in their L1 and L2) under three sentence context constraints – no context, high context constraint and low context constraint. Naming latencies were measured and compared to test to what extent interpreting experience facilitates linguistic anticipation. The study revealed a significant context effect across both groups, thus confirming the influence of context on word production. Additionally, a group effect was found and corroborated the influence of interpreting experience on anticipation.

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Aline Ferreira

Direct and Inverse Translation: meta-reflection and durability in the professional translators making-decision process

This study is part of the thesis defended by Ferreira (2010), who investigated cognitive aspects observed in the translation process of ten professional translators while translating two correlated texts from a foreign language (English) into a native language (Brazilian Portuguese) – direct translation – and from the same mother tongue (Brazilian Portuguese) into a foreign language (English) – inverse translation. Data collection was based on the triangulation of translation process data, a methodology proposed by Jakobsen (1999) and Alves (2001, 2003), combining different tools of data elicitation to investigate the translation process. The analysis of translation process data drew on linear representations generated by means of keylogged files recorded with the software Translog and analysed in

conjunction with retrospective protocols. Directionality of the translation task (direct or inverse translation) was the independent variable in the study. The dependent variables are: (i) time spent on each phase of the translation process (orientation, drafting, and revision) and on the two tasks as a whole (JAKOBSEN, 2002; ALVES, 2005), (ii) pause patterns, (iii) recursiveness (BUCHWEITZ & ALVES, 2006), and (iv) segmentation (DRAGSTED, 2004; RODRIGUES, 2009). The quantitative analysis reveals that task order seems to have played an important role in the allocation of time and pause, the first task always taking longer to complete regardless of directionality. Pause analysis shows that task order also had an influence on the number of segments measured by pause intervals during each task. The results also show an increase in recursive movements in the inverse translation task. With respect to segmentation, no specific pattern could be identified among the group. These quantitative data can be analyzed in parallel with the qualitative data provided by the retrospective protocols, permitting the evaluation of meta-reflection instances during the making decision processes (Alves & Gonçalves, 2007) and pointing to idiosyncratic traits observable in the output of each subject. In this sense, durability can be mapped and assessed in order to describe characteristics related to making decision process during direct and inverse translation tasks.

Helle Dam-Jensen & Carmen Heine

Strategies in text production – Handling method application insights

In text-production research, strategies are traditionally studied by analysing text products. Since the publication of Vinay & Darbelnet's (1958) renowned article on translation strategies, the focus of linguistic studies of translation has been on the use of linguistic strategies. To this purpose, comparisons are made between source and target texts (Schjoldager 2008). Also, in writing research, focus has traditionally been on the text product. It was not until the end of the 70s that descriptive, systematic research on production processes started. A main reason for this was the advent of advanced technology of audio and video recording. The last couple of decades saw the introduction of new software tools such as eye tracking, logging and screen capture, which make it possible to carry out detailed and many-faceted studies of text production.

In our talk, we will briefly discuss three studies which apply triangulation of methods and data to analyse processes and production strategies in writing and translation processes of individuals and pairs:

Students' use of translation tools in the handling of specific linguistic problems (video- and audio recordings of collaborative work and product analysis (Dam-Jensen: in preparation))
Specialized discourse text adaptation of professionals and aspiring professionals (TAP, eye-tracking, screen capture and key stroke logging (Heine 2010)).

Academic writing in the classroom (IPDR)

Drawing on data from these research projects, we will show what kind of insight into process strategies can be gained from the application of a multitude of process measurement tools and how this knowledge complements what is traditionally known about cognitive strategies from traditional product analysis. Furthermore, this knowledge can encourage further discussion and the necessary definition of the multitude of strategies text producers apply when writing or translating. Additionally, we will show how our strategy approach can be adapted for university-classroom use (Dam-Jensen & Heine 2010) in order to help raise students' awareness of their process activities and strategies.

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Dam-Jensen, Helle (in preparation): "Students' use of translation tools – a pilot study"

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José Luiz V. R. Gonçalves, Federal University of Ouro Preto – Brazil

Mapping translator's expertise patterns through annotating translation micro-unit data

This paper reports on an ongoing research project aiming at the expansion and application of the translation unit categorization proposed by Alves & Vale (2011) – P1, P2 and P3 – for the study of a corpus oriented to the analysis of translation process data, available at a corpus oriented to the analysis of translation processes. One of the main goals of the project is to get a more detailed description and analysis of translator's expertise processing patterns based on the classification of linguistic problem-solving categories related to the translation units annotated through the software Litterae. One analyzes the production of translations in the English – Brazilian-Portuguese language pair, into both directions, through exploratory-experimental tasks. The two source texts used in the tasks – one in English and the other in Portuguese – are of similar rhetorical structure and terminological complexity and the six subjects are professional translators, native speakers of Brazilian-Portuguese, working with the language pair in focus. The methodological tools to collect and analyze the data are the softwares Translog (Jakobsen 1999) and Litterae (Alves & Vale 2011), besides retrospective protocols, the software Camtasia and eye-tracking. The theoretical background for the study draws on research focusing on cognitive processing in translation and translator's expertise/ competence patterns (e.g. Alves & Gonçalves 2003; Macizo & Bajo 2006; Alves & Gonçalves 2007; Göpferich, Jakobsen & Mees 2008; Göpferich, Jakobsen & Mees 2009; Alves & Vale 2009; Alves et al 2010). Applying the annotation expanded categories to the analysis of translation micro-units in the sample will make it possible to find out and quantify relevant aspects in the study and mapping of translator's expertise, especially the correlation between procedural and conceptual encodings and the implementation of more complex processing in translating. Through the analysis of typing-pause and eye-fixation patterns, one also intends to describe translator's cognitive effort behavior and its relation with expertise in translation.

Sandra Halverson, University of Bergen

Schematic networks in translation: bringing together process and corpus data

In two previous publications (Halverson 2008, 2009), it was suggested that a series of empirical investigations using corpus, elicitation and process data could be brought to bear on the so-called 'gravitational pull hypothesis' (Halverson 2003, 2010). This hypothesis, derived from the account of semantic structure posited by Cognitive Grammar (Langacker 1987, 2008), suggests that particular cognitive semantic structures, i.e. prototypes or schemas in schematic networks, will be related to overrepresentation of certain linguistic items in a translation corpus, to overproduction of these same items in an elicitation test, and to specific patterns of results in translation process data. This paper reports on a keystroke experiment, thus presenting new process data in a test for 'gravitational pull'.

In this investigation, student subjects translate a text in translog. The text includes a number of so-called 'basic verbs' (Viberg 2002a, b), taken as the operationalization of Langacker's 'high level schemas' in a schematic network (1987, 2008).

In the study, the Norwegian 'light verbs' *få, ha, la, være* are all used in the source text (ST). Moreover, each of these verbs has a light verb with schematic status as a possible English translation (*get, have, let, be*). The sites at which these verbs might appear in the translation will be investigated in terms of two process variables: relative pause length prior to translation, and revision frequency. According to the hypothesis, we would expect relatively shorter pauses prior to the selection of light verbs, due to their cognitive status. The susceptibility of these verbs to revision (perhaps due to their relative 'emptiness'?) is also of interest. Finally, the range of translation choices among the subjects, a text variable, will also be calculated.

In ongoing work (Halverson, in progress), corpus and elicitation data have also been collected for one of the light verbs studied here, *get*. The overall objective, as mentioned above, is to bring together corpus, elicitation, and process data in testing the same hypothesis. Thus, in discussing the findings of the keystroke investigation reported on here, a vital concern is with the status of the process data in the broader research project. The discussion will focus on the work done by the theoretical construct, in this case the concept of a schematic network, in grounding and in integrating both the selection of text/corpus/process variables and the interpretation of the findings.

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Adelina Hild, SUNY, USA

Exploring Crosslinguistic Influence in Interpreting

Crosslinguistic influence - or the influence of a person's knowledge of one language on that person's knowledge or use of another language - is a phenomenon that has enjoyed wide attention in bilingual and language acquisition research (Jarvis and Pavlenko 2008). Interpreting Studies has been only marginally interested in transfer, viewing it primarily as a negative phenomenon under the rubric of error analysis. Thus, CLI has been so far acknowledged as an explanans, i.e. a background factor in investigating other phenomena such as quality or multitasking.

Informed by recent advances in bilingualism research, the present paper takes a different approach and examines CLI as an explanandum, i.e. a phenomenon that merits special attention and explanation. It reports the results from a stratified cross-sectional study which elicited linguistic performance data from expert and novice interpreters by asking them to interpret into their L1 and to engage in retrospection concerning, among others, aspects of their language knowledge and use. Following the analysis of the interpreted TTs, CLI data was identified and classified in accordance with a taxonomy of linguistic structures and forms and conceptual domains. Instances of transfer were

identified in several different language subsystems: phonology/phonetics, lexis, syntax, discourse as well as conceptual representations of gender and time.

The main research questions addressed by the study are: 1) What are the scope and effects of crosslinguistic influence in interpreting relative to skill variation; 2) What variables, personal and environmental, affect reverse transfer (L2-L1) in highly L2 proficient individuals; 3) What can an inquiry into CLI tell us about the cognitive processes underlying interpreting, in particular those related to language control and use (e.g. control, switching).

This research was inspired by a proposal put forward by the late Sara Williams, who argued about the desirability for a rapprochement between interpreting studies and research on bilingualism. CLI could provide the grounds for such cross-fertilization between the two disciplines. Furthermore, by taking an unprejudiced look at CLI, the study purports to remove some of the stigma attached to transfer and in doing so to promote an impartial analysis of “interpreteese” (Shlesinger 1995), the interlanguage of interpreting.

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Åse Johnsen, Universitetet i Bergen

Revision in translation

The use of keystroke data from computational programs like *Translog* enables us to recreate the whole process of creating the target text. It is thereby possible to register not only the revisions that the translator makes, but also exactly when they occur in the translation process. Jakobsen (2002) describes three main phases in the translation process that can be identified in logged data from *Translog*: the initial orientation phase, the middle drafting phase, and the end revision and monitoring phase. In a study from 2001-2002 (Johnsen, 2005) I studied the translation process of seven translators (two professionals, three semi-professionals and two non experts), and I found that there were large individual differences between the subjects in the time they spent in the end revision phase, from about four and a half minutes to nearly two hours. I also found that only *one* of the translators had a clearly defined revision phase during the ‘middle drafting phase’. The others made only smaller revisions during that phase. One interesting case was one of the translators who changed the title of the text just after he had been confronted with a similar translation problem (a metaphor) in the body of the text. The revision of the title seemed to have been triggered by the problem in translating the metaphor in the body of the text. As *Translog* recreates the whole translation process, it enables us to see exactly when the changes are done, and therefore allows us to determine whether these changes might have been motivated by textual factors. In this paper I will address the smaller revisions made during the drafting phase, and try to find out whether textual elements in the source text trigger revisions of already translated text. The paper will present results from a study carried out among language students attending a course in Translation Theory and Practise (TRANSHF) at the University of Bergen during the spring semester 2011.

Petra Klimant, University of Hildesheim

Triangulating processes and products: getting closer to intersubjectivity

When translatoologists started drawing conclusions on the translation process by only analyzing the translation product, it soon became obvious that „reine Produktdaten

zweifellos die unzuverlässigste und am wenigsten aussagekräftige Quelle für die Analyse von Übersetzungsprozessdaten darstellen“ (Krings 2005:348). Think aloud, retrospective verbalization and keylogging represent biased perspectives when isolated, so they have a modest validity on their own. In order to ensure higher data objectivity (i.e. intersubjectivity) and reduce distortions inherent to each method, several triangulation strategies have been proposed (e.g. Hansen 2003, Krings 1992, 2005, Lorenzo 2001). Yet another possible combination of quantitative and qualitative methods and data collection tools will be presented here, namely the ones applied in my current research project on the effects of mental fatigue on translation quality. Non-professional and professional translators completed a questionnaire before and after translating three randomized texts on three different days from Spanish into German with Translog. Translation quality was double-blindly, randomly and holistically assessed by a panel of three evaluators. A second, unrelated panel of evaluators then independently analyzed and marked problematic text segments. Data from different sources were cross-referenced in the following fashions: (a) holistic assessment and problematic text segments marks; (b) log files and translation assessments; (c) *prespective* and retrospective protocols; (d) log files and pre/retrospective protocols; and (e) translation assessments and pre/retrospective protocols. Preliminary results and also relationships between different data sources will be discussed.

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Haidee Kruger, North-West University (Vaal Triangle Campus)

Child and adult readers' processing of foreign elements in translated South African picturebooks

The tension between domesticating and foreignising translation strategies is particularly strongly felt in the translation of children's literature (Klingberg 1986, Nikolajeva 1996, Oittinen 2000, O'Sullivan 2005), and has been a key issue in many studies of translated children's literature. However, despite the pervasiveness of the concepts, there is little existing empirical research investigating how child (and adult) readers of translated children's books process and respond to foreign elements in translation (Lathey 2010). This means that scholars' arguments in favour of either domestication or foreignisation in the translation of children's literature are often based on intuition and personal experience, with no substantial empirical basis.

This paper presents the findings of a pilot experiment undertaken to investigate Afrikaans child and adult readers' processing of and responses to potentially linguistically and culturally foreign textual elements in translated children's picturebooks, against the background of postcolonial/neocolonial cultural and linguistic hybridity in South Africa. The project, which is exploratory in nature, aims to answer the following four research questions:

Does the use of foreign elements in translated children's picturebooks have any significant effect on the reading process of child and adult readers?

Is the comprehension of child and adult readers affected by the use of foreign elements in translated children's picturebooks?

Does the use of foreign elements in translated children's picturebooks have any effect on the attitude of the child and adult reader towards the text?

Are there significant correlations between reading behaviour, comprehension and attitude?

A group of Afrikaans-speaking children, of roughly the same age (10 years) and educational background, together with their parents, were asked to participate in a reading experiment involving eye-tracking. Two page-length extracts from two existing South African translated children's books utilising foreignising strategies were selected, and a domesticated version of each created, so that the following four texts were used in the study:

Text A original foreignised version (Text AF)

Text A manipulated domesticated version (Text AD)

Text B original foreignised version (Text BF)

Text B manipulated domesticated version (Text BD).

Child and adult readers were randomly assigned readings of Text AF+ Text BD, or Text AD + Text BF. Respondents were asked to read the texts on the computer screen, while eye-movement data were collected.

In order to answer research question (a), data obtained by means of eye-tracking were analysed for pupil dilation, fixation duration, fixation count, regressions and refixations involving textual and illustration elements reflecting domesticating or foreignising translation strategies. In order to answer questions (b) and (c), brief structured interviews with respondents were used, focusing on the degree of comprehension of the two texts, as well as readers' attitudes towards the two texts they had read. Question (d) was answered by investigating statistical correlations between reading behaviour, comprehension and attitude.

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Minna Kumpulainen, University of Eastern Finland

Redefining "novices" in translation

First-year translation students are certainly novices with regard to their translation competence – but what are novices exactly? As a teacher of translation, I find the notion of a novice insufficient when planning my teaching. Hence the goal of my PhD research is to shed light on the competences the students have at the beginning of their studies and the way translation competences are learned during studies.

This presentation introduces the preliminary results of the first stage of my project, in which the material collected from first-year students during the academic year 2010—11 is analysed with the aim of forming different translation learner groups. The material consists of background information sheets, questionnaires about the students' concepts of

translation, three translations two of which are recorded by using Camtasia recording software, as well as translation commentaries.

Although it is certainly true that every learner is unique, it can be hypothesized that on the basis of similar features in translation processes and products the students can be divided into different types of novices who possess different types of competences to begin with. The division is made on the basis of the students' concept of translation, ability to identify and solve problems, monitor the translation process and revise and evaluate their own work.

Profiling the novices in this way and following the progress of the groups will help the teachers of translation to plan their teaching according to the actual needs of the students. Results of the study will also contribute to those of ongoing research projects on the development of models of translation competence acquisition, such as Susanne Göpferich's TransComp project at the University of Graz.

Anna Kuznik, Universitat Autònoma de Barcelona

Text-Process in Context-Text.

Observing Real Work Situations in Translation Companies

This paper focuses on the situational and organisational context of translation activities in the case of in-house translators working in translation companies. We will demonstrate that translation activity proper, viewed as text production, represents only a very small part of a translator's overall work activity - not only for those in management posts but also for top-class in-house translators. This situation seems rather paradoxical but it is real. To prove our point, we will present three empirical studies carried out by three different researchers in three different countries: Stelmach's study (2000) carried out in Poland in the area of management studies (Stelmach 2000; translation reinterpretation of Stelmach's data in: Kuznik and Verd 2010), Hébert-Malloch's study (2004) carried out in Federal Government's Translation Bureau in Canada, and our own PhD research in Barcelona, Spain (Kuznik 2010).

Each of these studies uses different kinds of observation for the purposes of data collection: self-observation chart (Stelmach 2000), video-taping (Hébert-Malloch 2004) and direct observation chart (Kuznik 2010). The results obtained are complementary and permit mutual validation (Denzin 1970). All three studies stress the importance of ecological validity over experimental design. In each case, data were collected using the most continuous indicator known, i.e. time. This particular data-collecting method (time indicator) enabled all activities performed by in-house translation staff to be recorded. We can conclude that translation work comprises many different activities related to translation proper without necessarily being translation proper, when viewed as recording a new text on the computer (text production). All the job positions under observation here, could be called "hybrid" positions, a typical feature of translation-related jobs studied by Bowker in the translation labour market in Canada through job advertisements (Bowker 2004). Thus, if the cognitive activity of in-house translators is to be studied when they are translating, we should take into account the influence of all the other activities that conform the greater part of their work day.

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Tanja Leirvåg, Stockholm University

Translating idioms and other fixed expressions: a process study of professional translators and novices

The process in translating idioms and other fixed expressions has not yet been given much attention in process oriented translation studies. In this study involving three professional translators and three bilingual participants without any training or experience in translation, I investigate types and frequency of chosen translation strategies, the ways in which the participants arrived at their final choices, as well as possible differences between the two groups of participants, when translating idioms and other fixed phrases in two short Swedish texts into German. For data elicitation a combination of product and process oriented methods, keystroke logging with *Translog* and retrospection, were used. Results indicate that paraphrasing and translation with an expression with similar meaning and similar or different form are the strategies most frequently used in both groups, and that there are only few occurrences of preliminary versions in the writing process, but quite many examples of negotiation of meaning and style as expressed in the verbalizations. Compared with the novices the professional translators tended to be more cautious in their use of idiomatic equivalents and to consider aspects like target group or style and function of the target text more carefully.

Ritva Leppihalme, University of Helsinki

THREE PUBLISHED LITERARY TRANSLATORS ANALYSING THEIR OWN TRANSLATION PROCESSES IN THEIR M.A. THESES

Studies of the translation process range from the macroscopic, where the focus is on the organizational or interorganizational aspects of the process (e.g. Nordman 2009), to the microscopic, where the investigator tries to get as close as possible to what "goes on in the translator's head", for example by tracking the translator's keyboard activities or eye movements, or studying for example recorded think-aloud protocols (TAPs) or video-taped discussions of groups or pairs of (often student) translators.

High-technology methods are best employed in funded research projects, whereas small-scale studies like M.A. theses mostly need low-cost, low-technology alternatives. One such alternative is for the translator to perform a retrospective analysis of his/her own translation process by examining drafts as well as the completed translation product to shed light on his/her decision-making process. This type of research, often known as 'translation with commentary', is a recognized type of translation studies, where the translation may be done mainly for the purpose of demonstrating a familiarity with theoretical concepts and completing requirements for a degree while its publication may not even be attempted. When the study is of a translation process leading to a published translation, the completion of an academic degree can still be a motivating factor, but so is the translator's desire to enter in dialogue with both general readers and the translator

community so as to communicate what the practitioner learned or discovered during the translation process.

This paper focuses on three M.A. theses at the Department of English of Helsinki University written by translators analysing their own published literary translations. One thesis (2008) is that of a novice, who follows his revision and learning process from a first draft to the published translation; the other two (2002, 2008) are by experienced and highly acclaimed translators with scores of published translations to their credit. The issues taken up and the reasoning behind the decisions are of interest as this kind of tacit knowledge is rarely made explicit to a wide readership. Two of the three theses are currently available on the Internet.

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Gary Massey, Maureen Ehrensberger-Dow and Andrea Hunziker Heeb Zurich University of Applied Sciences (ZHAW)

Combining products and processes: implications for translator training

Translation pedagogy has long recognised the importance of students reflecting on the decisions made and actions taken during translation as a means of acquiring translation competence. It therefore follows that the evaluation of translation can be aided by knowledge not only of the product, but also of the process by which it came about. Until relatively recently, the most common ways of accessing, analysing, evaluating and critiquing translational performance have been through student annotations and other forms of written commentary. Since the 1980s, however, translation process researchers have developed and exploited various other techniques to try to access the “black box” of the translator’s mind, some of which have been applied directly in translator training experiments and methodology (cf. Alves 2005, Dam-Jensen & Heine 2009, Gile 2004, Hansen 2006, House 1986, 2000, Kujamäki 2010, Kussmaul 1995, Massey & Ehrensberger-Dow, forthcoming, Pym 2009). Aiming to bridge “the gap between declarative and procedural knowledge” (Alves 2005), this research has raised important questions about the added value of deploying process research techniques in educational settings and about the nature of the relationship between translation processes and translation products, including the quality of target texts. In this paper, we discuss the implications of a study carried out in the Institute of Translation and Interpreting at the Zurich University of Applied Sciences in which screenshot videos, eye-tracking records, retrospective verbalisations and follow-up interviews were used to explore what students on our MA programme in specialised translation seemed to learn from viewing their own and others’ translation processes, and what insights their teachers seemed to gain from observing these recordings. At the same time as providing researchers and trainers with useful information on students’ problem awareness and identification, search behaviour, resource use, revision practices and work efficiency, this research sheds light on how students and teachers integrate new knowledge gleaned from observed processes into their existing conceptions of translation competence. The ultimate goal of our investigations is to discover how process-oriented components of translator training can be profitably incorporated into course development, curriculum design and translation quality assessment. We anticipate that, by building on the indications from the study discussed here, further research will enable us to validate the use of process research methods in translation teaching and training.

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Ulf Norberg, Stockholm University

On the development of students' translation processes – What role may retrospective comments about the translation process play for the translator under training?

At the Institute for Interpretation and Translation Studies, Stockholm University, translator students' are asked to write retrospective comments to the translations they hand in for evaluation, which do not only focus on text analysis and descriptions of solutions of different translation problems, but also on their own translation process. These comments – written in essay form – aim at raising the students' awareness of their own translation process.

The objective of this paper is to shed light on if, and, in that case how, retrospective comments fulfil the aim of increasing the students' awareness of their own translation process. To achieve this aim I will analyse the retrospective comments handed in by 20 students as part of their ordinary course work. For each of these students I will examine and compare their comments to the 15 translations they hand in during two terms.

Comments on segmentation, phases, various forms of translation aids, as well as expressions for their attitude, are discussed, and correlations with certain solutions in their translations are made. The results indicate that the writing of comments to the process may have a greater impact on learning during the first term, when students most intensively seek their own preferred way of directing the translation process.

Nataša Pavlović and Goranka Antunović, University of Zagreb

The effect of interpreting experience on self-monitoring in translation processes

Some evidence from process research (see Tirkkonen-Condit 2005) suggests that Ivir (1981) might have been right in asserting that translators begin their search for the best translation with “formal correspondence” (FC), and look for alternative solutions only when this default version is found lacking (Shlesinger & Malkiel 2005, Jakobsen, Jensen & Mees 2007; cf. Englund Dimitrova 2005). On the other hand, the very influential concept of deverbalization (Seleskovitch, Lederer, Dejean le Féal, Gile) seems to suggest that interpreters and translators can be trained to behave differently, in a way which considerably limits the role of formal correspondence in the decision-making process. In this study we have decided to approach the “formal correspondence default” from a slightly different angle, and to test whether it is affected by the translator’s extensive deverbalization experience. We want to see what will happen with literal (cognate, FC) solutions if translators who are also interpreters, and who have been exposed to the deverbalization method in the course of their training, are asked to translate the same text as professional translators with no such experience.

We might expect that the training/experience in interpreting will have an effect on the translation process, resulting in fewer literal solutions being captured by the keystroke logging program Translog as the default (initial) solution in the logs of interpreters/translators than in those of the other group. Should that be the case, further stages of the self-revision process might also exhibit some interesting differences, most obviously in what we call “distance dynamics”. The latter concept refers to possible patterns in the order of translation solutions with respect to their closeness to the source-text form.

The two groups of subjects – interpreters/translators, and translators with no interpreting experience – will be asked to translate the same general-language text from their L2 or B-language (English) into their L1 or A-language (Croatian). Both groups will be asked to work under time pressure, as this is expected to reduce the degree of inevitable (and unrecordable) self-revision before the default solutions have had a chance to be recorded in the logs.

The data will be analyzed in terms of total number of cognate solutions appearing in the logs of each group, and also in terms of “distance dynamics”. Our earlier research suggests the latter might be related to individual translation style, which may or may not prove to correlate with training in the deverbalization method.

Hilkka Pekkanen, University of Helsinki

Literary translation – learning the process

This paper is an attempt to throw light on the translation process through literary translation. By giving examples, it will show how students learning to translate fiction work. This learning process is suggested as one way of illustrating how a professional translator might process certain issues in problem-solving situations and develop routines for problem-solving.

The examples are from translation projects organized by myself at the University of Turku. Each year, a seminar of ten students has prepared a popular novel originally written in English for publication in Finnish by a Finnish publisher. The learning and working process of the students is traced in this paper through examples illustrating various structural and semantic problems and choices. The students participating in the projects are advanced-stage students of translation and therefore have some experience of

translation and the problems the process involves, but most of them have no previous experience of literary translation and its special characteristics.

In learning literary translation, students will need to develop an awareness of certain specific factors that come into play in the sector of literary translation, such as distinguishing speech from narrative, the importance of register in both speech and narrative, the need to eliminate excessive linguistic interference without compromising authorial choices, various problems posed by intercultural differences, the publisher's potential expectations with regard to the text and so on. Such awareness is not enough, however: it is of crucial importance to learn to link this awareness with actual text-level choices in the process of moving from source text to target text.

The various aspects of literary narrative to be taken into account are discussed in detail by e.g. Crystal & Davy (1969), Leech & Short (1985) and Bal (1997) and in relation to translation, by House (1997), Bosseaux (2004) and Boase-Beier (2006). Related text-linked research has been carried out by e.g. Munday (1998), Baker (2000, 2004 and 2007) and Doherty (2003). These discussions make it clear that producing a literary translation calls for a close analysis of textual features and answering a number of questions such as: What kind of textual features will result in the desired stylistic effects? I discuss the link between individual textual features and macrolevel stylistic effects in my own dissertation through the concept of style factors (Pekkanen 2010). How to deal with problem issues such as intercultural differences at text level (discussed e.g. in Leppihalme 1997)? How to differentiate between undesirable source-text interference and desirable local colour representing the source-text culture (e.g. Venuti 1995) ?

Various types of text-level processes emerging during the instruction-translation work carried out by the student groups are recorded and analysed. These processes consist of the practical work steps leading from the first, potentially clumsy efforts to final translation solutions during the instruction period. Here, the translational processes are approached through the evolution of the text from source text to target text, i.e. the linguistic steps taken rather than the mental processes of the student-translators (e.g. think-aloud protocols) or other external observation of their work. This analysis is carried out in order to make a contribution towards establishing a typological framework for textual manipulation. It has been shown by e.g. Jääskeläinen (2004) that by making students aware of certain translational features, such as the existence of repetition in a text, helps them to take such aspects of the text into account in their work. E.g. Leech & Short's (1985) model for textual analysis and House's (1997) model for translation evaluation are applicable to teaching students to be aware of the existence of such features. The main contribution of this particular paper will be the process-related findings arrived at on the basis of empirical data gathered in the actual work process with the students.

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Isabelle Robert, University of Antwerp & Artesis University College

Investigating the problem-solving strategies of revisers through *triangulating tracks*: first results

In 2006, the European Committee for Standardisation published a European norm for translation services (EN 15038) in which translation revision has henceforth become compulsory. This is why some researchers, who have published on translation revision, believe that this process will probably become more and more frequent (e.g. Künzli 2007b, Mossop 2007). However, the European standard is not clear as to how this revision process should be carried out.

Little empirical research has been specifically dedicated to translation revision procedures (with the exception of Künzli 2005a, 2005b, 2006a, 2006b, 2006c, 2007a, 2007b, 2008), and on the whole, both the revision process generally and specific revision procedures remain an open issue

This paper deals with one of the research questions of an ongoing project concerned with the impact of translation revision procedures on the revision product and process: how do successful revisers differ from less successful revisers as to problem-solving strategies?

As far as the methodology is concerned, sixteen professional revisers were asked to review four *comparable* French texts translated from Dutch and to use a different translation revision procedure for each of them. Data collection used three main *tracks*. The analysis of the revision as a product is based on the number and type¹ of amendments made in the final version. The analysis of the revision as a process is based on data collected through a key-logging tool (*Inputlog* developed by Luuk Van Waes and Marielle Leijten at the University of Antwerp) on the one hand, and through *Think Aloud Protocols* on the other hand. These data in particular were used to examine the problem-solving strategies of revisers.

First results indicate that successful revisers do not only use more strategies but also combine different strategies and that when they use the search for additional information strategy, they also use more information sources and combine them more often than less successful revisers.

Keywords: translation revision, revision procedures, product and process studies, key logging, think aloud protocols, translation quality

² The types of amendments are partly based on Künzli (2006, 2007, 2008), i.e. justified revision, hyperrevision, overrevision and underrevision, plus "improvement".

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The metaphonymization mechanisms in translation

This paper addresses the metaphonymization mechanisms involved in text interpretation and reformulation. Whereas conventional linguistics fail to explain how it is possible for the same meaning to be expressed by two different linguistic formulations in two different languages, the Cognitive Theory of Metaphor and Metonymy (CTMM) seems promising to translation studies, as it provides us with conceptual models of meaning representation which can be applied both to the original and its translation. On the basis of translation data provided by 12 professional translators who were assigned a translation task, I will show how a contextually enriched Cognitive Theory of Metaphor and Metonymy (CTMM) can shed light on various translation strategies. Particular attention will be given to the degrees of conceptual overlap between the original utterances and their translations.

The participant pool was derived from the Norwegian Association of Literary Translators. All were Norwegian native speakers and selected to participate in the explorative study on the basis of a minimum of ten years of active translation experience (Shreve 2002). In addition, all participants have been screened according to their level of English, established by the electronic Dialang diagnostic language test. Only those with a score superior to 800 (of a maximum 1000) were invited to translate into Norwegian (their A-language) a short English text (their B-language) of 208 words.

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Translating metaphoric expressions from Chinese into Portuguese: the process through an exploratory and experimental study

Metaphor has been often discussed in the discipline of Translation Studies (TS), essentially in relation to translatability, and translation procedures many times based on the traditional understanding of the metaphor as a figure of speech, a linguistic expression which is substituted for another expression. Only at the end of the 1990s this traditional view gradually has changed in TS into a cognitive approach (Schäffner 2004), where metaphors are a means of understanding one domain of experience in terms of another (Lakoff and Johnson 1980/2003). This cognitive approach has contributed to new insights into areas of TS, such as process-oriented approaches (Trikkonen-Condit 2002, Jakobsen, Jensen & Mees 2007, Sjørup 2008). This study follows the recommendations on possible directions for future research, suggested by Sjørup (2008). I will report on the results on the initial stages of my PhD research involving twelve professional translators working with the language pair Chinese-Portuguese, where I test an experimental design for measuring parameters to identify how professional translators process linguistic metaphor in a translation situation, i.e., which the strategies adopted by them? Some hypotheses were formulated, according Dobrzynska (1995, 599): translators will use of an accurate equivalent of the original metaphor (M-M), choice of another metaphorical expression with similar meaning (M1-M2) or paraphrase (M-P). For this purpose, methodological procedures and instruments used to collect data are used. These include representations obtained through the *Translog*® program and Eye-tracking, retrospective protocols transcribed, and the detailed analysis of the source text, applying the methodology proposed by *Metaphor Identification Procedure* (Pragglejaz 2007) to one Chinese magazine cover article, which was identified four conventional metaphors and two novel metaphors, this analysis was supported by the corpora of the Center for Chinese Linguistics of Peking University (CLL). The discussion of these preliminary results would contribute to the research design for the Process-oriented studies in translation of metaphors.

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Inferring Processes from Texts: Making Sense of Strategic Decisions

This paper will report on a preliminary observational study of subjects translating between Chinese and English which was carried out with students in a graduate translation program at Beijing Foreign Studies University.

The purpose of the study was to compare what has been said about translation strategies in languages that are relatively close to each other to languages and scripts that are very different. When it comes to research in different areas of applied linguistics, it is sometimes assumed that findings based on English can be generalized to other languages and other cultures. In the case of reading, for example, it has been shown that children whose first language is Chinese do not exhibit the same transference of skills as had been assumed based on research involving the same written systems (Luk & Bialystok: 2008).

I also wanted to look at methodological issues in the analysis of observational data. Over the last thirty years or so process studies have looked at results based on certain assumptions, for example that translation proceeds in terms of units, or that translation flows until a decision point is reached. These approaches assume that subjects are homogeneous. Another possibility is to use a more bottom-up and holistic approach such as the one used in one area of communication studies called Sense-Making. A second issue is the validity of more naturalistic versus more controlled experimentation, a question which has been raised in disciplines similar to ours (Vicente: 2011).

In this very preliminary study, fifteen students translated a text used by an airline from Chinese into English. They translated by hand, writing their answers, and were asked to leave all their corrections visible. Then two native speakers of Chinese who were both experienced teachers of Chinese doing graduate work in linguistics and translation and who had some experience living in North America evaluated the quality of the translations.

The paper will compare the findings of this study to previous work using French and English translators and will also speak to the ideological, functional, and cultural elements present in the translations.

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“Interpreter’s Mistake!” – what may a case study tell about trouble triggers?

A basic assumption of Gile’s Effort Models (2009) is that the output’s relative quality in interpreting (simultaneous and consecutive) reflects the balance between the required vs. available resources/efforts of the interpreter. At the same time, interpreting studies share a basic methodological problem with mainstream linguistics in that the observer only has access to *products* of the *processes* that the former result from. Culioli (1995: 16) therefore stresses the need to identify the nature of the observables. Following this line of thought, the aim here is to contribute towards a systematic description of the observables: how is trouble in processing signaled at the textual level, and how may the observables be characterized? Subsequently, what may these observables reveal about their triggers?

Despite its inherent limitations, a case study approach allows for a deeper look into the particular event selected for examination. With its wide-angle snap-shot of the object, it therefore has potential to indicate the lines to be followed in a systematic description of the observables.

Reporting on work in progress the vantage point here is a case study from the courtroom setting where the interpreters work in the consecutive mode with short speaker intervals. The material includes both on-site and remote interpreting, and is based on a war crime trial in Oslo in 2008, following actions during the war in Bosnia and Herzegovina. Hence, the interpreters’ working languages are Norwegian and Bosnian, Croatian or Serbian. Their backgrounds vary in terms of bilingual profiles and prior training. The approximately 135 hours of recorded court proceedings are supplemented by on-site observations, post-interaction interviews, and case information such as indictment, verdict etc.

In the discourse analysis of the soundtracks, the interpreting events selected for examination signal friction on the textual level, that indicate trouble triggers in processing, i.e., observable changes in illocutionary force, misunderstandings, repairs, restructurings, or requests for clarification. The qualitative analysis shows that characteristics of these observables point to factors of cognition (e.g. bilingual profiles) in interplay with factors of convention (e.g. homonymy, false friends) or situational context (e.g. speech mode, interpreting mode).

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Data in Linguistics and Translation Studies - types, evaluations, validity, theoretical implications

We would like to offer a short discussion of the nature of "data" in empirically oriented investigations of language and translation, particularly of data on "product" vs. "process".² Methodological orientations in language studies generally extend from

- traditionally hermeneutic, through
- applied-descriptive, through
- hypothetico-deductive, to
- empirical,

to mention just some of the more general possibilities.

The notion of "data" is marginal in hermeneutic approaches, where data serve as illustrations, or more ambitiously as generalizable examples. Data are also of some limited importance in applied-descriptive studies, although here they at least constitute the range of phenomena which should be covered by a comprehensive description. The notion of data is also marginal, though in a different way, in hypothetico-deductive studies (e.g. in the earlier Chomskyan tradition), where they represent interesting test-cases for significant sub-parts of the theory, but are usually constructed rather than obtained from realistic occurrences. Additional problems in this "hypothetico-deductive" tradition can be seen in that

- acceptability/ grammaticality/ quality judgements vary substantially;
- if data contradict a given model/ hypothesis, the given model is often mended and "saved" by introducing fairly ad-hoc and in their effects uncontrollable assumptions;
- the relationship between highly complex processing data and neurophysiologic data and theories about language and/or translation is usually far from clear (which includes process-oriented research on translation, even outside the hypothetico-deductive tradition).

Where "data" become crucially important is in approaches belonging to the "empirical" family, notably including product and process-oriented studies of translation. One type of data, that represented in corpora of natural language, may sound particularly attractive at first sight, yet faces its own open questions, to do with representativeness, quality, linguistic variation, and opportunistic language use, among others.

We would like to make a modest contribution to ongoing debates by illustrating the problematic notion of "data", increase awareness for the different types and their relationship to theorizing, and by focusing on the combination of corpus-data (product) and

² Cf. Fabio Alves, Adriana Pagano, Stella Neumann, Erich Steiner and Silvia Hansen-Schirra. 2010. "Translation Units and Grammatical Shifts: Towards an Integration of Product- and Process-based Translation Research." In: Shreve, G. & Angelone, E. (eds). *Translation and Cognition*. Amsterdam: John Benjamins. pp. 109 - 142

experimental data (process) as a way forward for studies of language and translation in particular.

Ljuba Tarvi

Translation Process as a Conceptual Metaphor

This paper considers some aspects of translation phenomena in terms of conceptual structural metaphors based on the hypothesis that “human thought processes are largely metaphorical” (Lakoff et al.). Translation and metaphor are indeed partly sharing their definition (‘carrying across’), structure (target and source domains), and procedure (mapping of one domain onto another). Translation processes and products are viewed here as closely interrelated gestalt entities jointly governed by the aims and means of text interpretation.

The comparative framework is based on Lakoff’s structural schema of a metaphor, “ST is TT”. A cline of various ST-TT relationships is considered, with the opposite poles of the dichotomy designated by the two radical positions, ST=TT and ST ≠ TT. The cline, therefore, harbors all possible ST-TT relationships, from SL-oriented or metonymic, in Lakoff’s terms, versions to TL-oriented or metaphoric ones. This framework is used as a tool of conceptualizing and comparing the twenty-two full English translations of the Russian novel in verse “Eugene Onegin” by Alexander Pushkin (1831). As a result, there have emerged *three ‘Holmsian’ ST-TT clines, each with its own arrangement of the same translations.*

The process (translator’s) cline analyzes and compares the twenty-two prefaces in terms of the declared intentions on the background of the achieved results (the other two clines). The conclusion can be roughly summed up with the old adage “The road to hell is paved with good intentions.”

The function (user’s) cline reflects the “popularity” of this or that translation as based on the availability of various versions and the preferences of university instructors in Russian literature. It is suggested that commercially successful translations are normally those closest to the current range of the target culture socio-cultural-linguistic norms, which implies that their position of the ST-TT cline cannot be radical or pole-gravitating. Within the chosen framework, it means belonging to a certain layer of conventional rather than innovative metaphors.

The product (text) cline arranges the texts in terms of the ST-TT distance. The Token Equivalence Method (TEM) is used (Tarvi 2004), which allows one to gauge the percentage of the lexical completeness of translations as regards the original (100%). As is shown, an ST=TT version is a linguistic impossibility even when the translator declares the intention to produce a completely loyal translation (Nabokov’s score is 98%). The remaining versions rates are from 92% to 45%.

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The Translation Error: From the Product Analysis to the Process Analysis

The research on Translation Errors has traditionally been carried out from the product point of view, i.e., the translation as a result. Through this paper we aim at proving the interest of going beyond the product oriented perspective and dealing with the error from the process oriented point of view. To do so we put forward and carry out an experiment: 15 participants (3 High School Students who wished to study Translation and Interpreting Studies after their Secondary Education, 9 Translation Students from the University of Alicante, and 3 professional Translators) had to translate 3 texts (250 words more or less). We recorded all their movements/actions while translating (without they knew it) through

a software which captured what they saw on screen, what they said and what they wrote simultaneously, and saved them as compressed video file in real-time. This experiment provided us with a double nature corpus: a) a textual corpus (45 translated texts) and b) a multimedia corpus (45 compressed video file). In order to analyse this corpus in the most objective way, we turned to 3 other professional translators. They had to find the translation errors detected in the translated texts (product). We studied the errors they detected from three perspectives: product perspective, process perspective and product-process combined perspective. After this combined analysis we established a difference between two process-based errors families: presymptomatic errors and postsymptomatic ones. By comparing the trainees and the professional translators action sequences we discovered a large set of behavioural differences which led us to consider the hypothesis of the existence of a double resolution profile: the static resolution profile and the chaotic resolution profile. The analysis of this two profiles and the appearance of errors as a consequence of an automatic or controlled performance by our participants invited us to study a translation phenomenon that we called “the automatism paradox”.

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Trilingual lexical processing in online translation tasks.

KEYWORDS: conference interpreting, online translation, trilingual lexical processing
Online investigations of lexical processing in case of trilingual speakers with conference interpreting (CI) experience constitute a relatively unexplored territory (e.g. Cieślicka and Kowynia 2008). This paper presents the results of a study devoted to investigating the speed and accuracy of lexical processing in the case of conference interpreters working for the EU institutions and of CI trainees from the Adam Mickiewicz University of Poznań, Poland, all with the following language combination: Polish (A/L1), English (B/L2), and German (C/L3), in a translation recognition task (from German into English and from German into Polish) and a translation production task (from Polish into German) using E-Prime.

With regard to the Paris School postulate of ‘deverbalisation’ (cf. Seleskovitch 1978; Lederer 2003; Pöchhacker 2005) and the difference in CI experience among the two subject groups (cf. Krings 1986; Lörcher 1986, 1991), it has been proposed that:

- (1) professional interpreters are likely to have overall shorter reaction times than interpreting trainees in both tasks;
- (2) in translation recognition, professional interpreters are more susceptible to semantic distractors while interpreting trainees to formal distractors;
- (3) in translation production, professional interpreters are more likely to provide an approximate translation when an appropriate equivalent is temporarily unavailable while interpreting trainees often fail to produce a desired translation response.

Response times and error rates for both tasks have been determined. The results suggest that prolonged interpreting practice influences strongly the organisation of lexicosemantic information in the brain in such a way as to support the accuracy but not necessarily the speed of lexical retrieval in online translation tasks. We conclude that the different language subsystems (cf. Paradis 2004) of a trilingual speaker are separate but interconnected by virtue of associative links whose strength depends on factors related to individual linguistic experience.

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Pulling the Strings: User Searches as Manifestations of Translation Problems

Current web-based translation aids allow easy logging of user activity providing researchers with enormous quantities of raw data. Logged search strings from a multilingual concordancing tool are one possible type of complex user activity data. When used in combination with existing methods for eliciting data in translation process research, they can reveal new facets of the way translators operate.

In the past decades, elicitation methods have significantly improved and increasingly larger volumes of data are available thanks to keystroke logging, eyetracking and screen recording that supplement traditional data elicitation techniques. For technical and practical reasons, the attention of researchers has however been mostly, if not exclusively, directed to the editing environment where the texts are processed. The current experimental designs allow hardly any exploration on what translators are doing when no significant keyboard activity is logged (e.g. 'long' pauses). One way of studying translators' behaviour during pauses is to look at how they use available forms of external support but systematic logging or recording of such an activity has yet to be made.

Assuming that a conscious decision to resort to external support is aimed at finding the answer to a question or the solution to a problem, each searched string can be seen as a manifestation of a translation problem – a Problem Unit. Using translation support possibly involves some additional cognitive activity in the form of problem-solving strategies and an optimization of search strategies, thus making each search a complex event in itself. From a log of source-text fragments entered as search strings, informed guesses could be made about what translation problems (consciously or subconsciously) motivated the search strings. The problems inferred in such a way can subsequently be compared with inferences drawn from translation process data. This operation involves a different type of triangulation comparing macro- and microscopic data and could help validate hypotheses from process data analysis.

The paper presents an ongoing study of a corpus of authentic search strings entered by EU staff translators, in which search strings are interpreted as manifestations of translation Problem Units. An attempt is made to develop a multi-level string categorization across different language pairs with the aim of building a possible taxonomy of language-pair

related translation problems that could be used to compare data from future translation process experiments and make a better-informed selection of texts for experimental purposes.

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Metonymic Language Use as a Student Translation Problem: Towards a controlled psycholinguistic investigation

The concept of translation problem plays an essential role in translation process and product studies and encompasses a wide variety of kinds of problems, including those of a linguistic nature. While Translation Studies seems to agree that a linguistic competence module is part of a translator's required competences, it is not clear to what extent cross-linguistic differences actually pose problems to most translation students and therefore need a place in the training curriculum. Our study looks into the extent to which the translation of a linguistic metonymic construction whose acceptability differs cross-linguistically raises translation process problems. Translators who are not aware of the restrictions (or translation tools that have not integrated the cross-linguistic differences) may, indeed, produce a translation that does not conform to the target language idiom. And translators who are aware of the restrictions will need to look for alternative formulations that are suited to the translation situation, and decide on the best translation from a range of possibilities. This chapter will discuss the methods applied in an experimental investigation of a novel kind, which combines approaches from linguistics, psycholinguistics and Translation Studies.

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Inferring translation indirectness from existing translations

Although often generally regarded as an inferior translation practice, indirect (or mediated) translation has always been widely used. It is not restricted either to minor, (semi-)peripheral languages or lowbrow fiction as one might assume, or to one or more historical eras. It is not a dominant approach to translation nowadays in the West, but it is not marginal either. Moreover, from a historical and/or global point of view, it might prove to be if not dominant, than widely accepted as a normal practice. Translators (and publishers of translations) resort to it for various reasons, be it lack of competent translators, economic grounds and many more, such as simply not paying attention to the issue, thus confirming it as a normal practice.

In translation studies, indirect translation is often dealt with as a matter of fact, as translated texts that are known or believed or marked as indirect translations. Accordingly, what attracts attention is the reasons and contexts of indirect translation. But little research has been done on indirect translation as process, as an ongoing choice made by the translator and written in the target text. The proposed paper will focus on the possibilities and limits of inferring translation (in)directness from existing texts, regardless any (available or not) paratextual and metatextual information.

Despite the popular notion that indirect translations can easily be detected through textual analysis (and some scholars suggest it is possible to detect them on the basis of the target text only), the paper – analysing several literary texts that may or may not be indirect translations – will draw a more complex picture. Moreover, as directness (or indirectness)

is one of the basic and most obvious features of any translation (included in Toury's preliminary norms), the analysis of this particular feature can be a pilot study for those eager to discover the possibilities and limits of inferring features more complex and more intricate.