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Translation under pressure and the web: A parallel corpus-study of Obama's inaugural speech in the online media

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Abstract: During the last decade, the effects of time pressure in translation have been studied from an empirical-experimental approach (Jensen, 1999, 2000; De Rooze, 2003, 2008; Sharmin, Spakov, Räihä, and Jakobsen, 2008). At the same time, the immediacy of the WWW has contributed increasing time pressures for some translation processes, especially those associated with web digital genres. This paper researches this issue following a product-based corpus methodology: in the twelve hours after President Obama's inaugural speech, a parallel corpus of ten different translations into Spanish was collected from online media outlets around the world. The analysis concentrates on the effects on quality through a combination of error-based metrics and a corpus-based analysis of creativity. The results were later contrasted with the empirical process-oriented data from professional translators obtained by De Rooze (2003). Despite the difficulties in inferring cognitive processing from translation products, the objective of this analysis is to attempt to map certain features of translations under pressure that might appear in actual published translations, thus shedding some light into strategies and procedures in the professional world to deal with time pressure.

Keywords: translation under pressure; journalistic translation; corpus-based translation studies

Time pressure has been recognised as one of the most prevalent situational factors in professional translation (Bayer-Hohenwarter, 2009; Charron 2005; Bowker 2004). During recent years, time pressure has been gradually increasing with the introduction of translation technology tools and the ever-increasing immediacy of Internet mediated communications. The impact of this digital revolution has not been overlooked by translation researchers, with several publications discussing this issue mostly from the perspective of translation memory use (Barlow & Bowker, 2008). Nevertheless, despite a relatively small number of process-oriented studies on the time pressure (Jensen, 1999; De Rooze, 2003; Sharmin, et al. 2008), there are no studies that focus on the features of actual published translated texts that are produced under pressure, as opposed to translations produced under controlled experimental conditions. Therefore, one of the goals of this paper is to attempt to shed some light onto the effects of time pressure on the published language of translation (Frawley, 1984; Olohan, 2004). This dynamic object of research has been widely studied since the emergence of corpus-based translation studies, and it will inevitably undergo changes as an increasing number of texts are translated with quick-turnaround deadlines for Internet distribution.

Methodologically, this study is based on a parallel corpus of translations of Obama's inaugural speech in the Spanish language media collected in the twelve hours following its delivery. Given the rhetorical and creative nature of this 2401-word speech, it is assumed that the translations collected constitute a unique representation of the effect of the Internet not

only on the quality of the translated texts, but also on strategies and mechanisms used in the professional world to deliver translations under strict time deadlines. In this sense, this study is at the crossroads between previous research on how time-induced stress impacts the cognitive process and how the translation profession is being impacted by both the immediacy that the Internet affords and the expectations of the target audience. The potential uncontrolled variables in this setting are many – professional status of translators, use of machine translation post editing, use of spell checkers, types of intermediary versions, etc. Nevertheless, this corpus-based methodology can add to this body of knowledge on time pressure through the additional layer of translation understood as a professional activity subject to time and money constraints. In order to create a continuum between previous experimental studies and the approach taken, the results will be contrasted with those in the doctoral dissertation by De Rooze (2003), more specifically, with the data obtained in experiments with professional translators[1]. This comparison will also allow the investigation of whether the effects of time pressure as a specific constraints in professional practices appears in published texts.

Time pressure in Translation Research

The interest in research into the effects of time pressure in translation can be traced back to the introduction of the cognitive paradigm in Translation Studies (Shreve & Diamond, 1997; Alvstad et al. 2011). This type of research intended to shed some light on the cognitive processes during translation tasks that were not visible through direct observation, thus the introduction of the concept black box (Shreve & Diamond, 1997). Most studies following this paradigm have as a goal to introduce in Translation Studies the rigorousness and objectivity brought by empirical methodologies, mostly borrowed and adapted from the fields of psychology, psycholinguistics and cognitive psychology (Halverson, 2009). As a result, the very few studies on time pressure rely on controlled experimental methods (Hansen & Hönig, 2000; Jensen, 2000; De Rooze, 2003; Sharmin, et al. 2008). Normally, these studies have used the fixed-deadline approach; this is, using the time available for similar translations in all subjects as an independent variable. Given the mostly didactic focus on these results, normally the subjects have been translation students in researchers' institutions (Hansen & Hönig, 2000; De Rooze, 2003; Jensen, 1999, 2000; Sharmin et al., 2008; Pym, 2009), with some comparing the performance of professionals to that of students (Jensen, 2000; De Rooze, 2003). The overall goal of these studies has been to study the effects of time pressure either on translation quality (Hansen, 1999; Hansen and Hönig, 2000; De Rooze, 2003), on translation strategies (Jensen, 1999) or on eye fixations on the source and target texts (Sharmin et al., 2008). The hypotheses set forward are closely linked to cognitive processing principles in previous studies, such as the tendency to produce a more lineal or linguistic translation when subjects have less time for problem solving activities (Tirkkonen Condit, 1996; Kussmaul & Tirkkonen Condit, 1995), as well as the application of different tactics or strategies, such as the coping tactics described by Gile (1995).

[1] In this study the performance of professional translators was contrasted with translation students. Only the dataset from professional translators will be used.

These studies have shown that the effect of time pressure on translation might be surprising. For example, Jensen´s (2000) PhD dissertation showed no correlation between time pressure and the strategies used by professional and novice translators, with only a decrease in problem-solving activities during the revision stage. De Rooze (2003) found the quality of students' translation decreased by 15% when the time available for a 250-word text was reduced from fifteen to ten minutes. Surprisingly, some students produced better quality translations under stricter time deadlines. This study also found that professionals did not show any effects on quality under both experimental conditions. In comparing the effect of time pressure between translation and interpreting, it was found that translators take ten to eleven times longer to produce translations with similar quality to those produced by simultaneous interpreters (Hönig, 1998; Dragstead & Hansen, 2007). From the perspective of this study, one of the most interesting findings is that professionals possess or develop the ability to produce the same quality regardless of the length of the deadlines (Jensen, 1999; De Rooze, 2003), that is, a component of professional translation competence that needs to be developed by novices is the ability to adapt their cognitive mechanisms under time pressure to maintain the quality of their output. Nevertheless, these previous results have also been criticized on methodological grounds, given the difficulty in controlling the variable 'stress' associated to time pressure in all subjects through fixed-deadlines (Bayer-Hohenwarter, 2009).

Although these studies help understand how the cognitive translation process is impacted when time-induced stress is added as a variable, most do not interrelate the outcome of the study and their potential practical applications in the professional practice. In fact, the most discussed outcome of this research trend is mainly the adequacy of methods used and their impact on the results obtained (De Rooze, 2008; Bayer-Hohenwarter, 2009). This shows again that despite steady progress during the last couple of decades, the development of specific research methods in Translation Studies can still be considered in its infancy (Halverson, 2009).

This study intends to shed some light on time pressure in professional translation using top-down and bottom-up approaches: instead of using carefully controlled experimental methods, the parallel corpus of translations of Obama´s inaugural speech can provide a glimpse of how professional translators cope with strict time constraints in a real professional context. This approach can also bring to the surface several other situational factors such as the absence or not of professional post-editing, the role of translation expertise in journalistic settings (Bielsa and Bassnett, 2009), and the compromise between content or style-oriented translations in this translation type.

As far as the common points between this corpus-based study and the aforementioned experimental approaches, most previous studies have used journalistic texts in their instruments. Additionally, one of the main variables that will be used is the widely used translation quality (Hansen, 1999; De Rooze, 2003), mostly through the identification of specific error types.[2] In the second stage in the study, the results obtained with professional translators by De Rooze will be contrasted with those collected from the corpus.[3] This will

[2] De Rooze (2003) used both an error-based metric plus a holistic translation quality approach (Waddington, 2001).

[3] Professional was defined in this study as a translator with at least two years of experience translating 5000 words a day for more than 200 days a year (De Rooze, 2003, p.47).

allow for the identification of whether and how the features found in these published translations are actually impacted by time pressure, and how the professional world might set up mechanisms to control these previously reported effects. The relationship between process-based empirical research and product based research, such as corpus studies, is still in its infancy (Alves et al. 2010), but this paper defends Olohan's (2002, p.6) claim that the product-oriented approach based on a corpus will also be useful in inferring traces of conscious or subconscious cognitive processes during the translation task. This combined approach will not only add to the body of knowledge of these research areas, but also help establish links between experimental studies and the professional practice.

Methodologies in previous time pressure studies

As mentioned in the previous section, all studies on the effects of time pressure have been performed under experimental conditions with subjects. Normally, these have been selected among representative populations for cross validation, such as bilinguals, translation novices or experts. These subjects are requested to translate sets of carefully selected texts in specific time frameworks, normally with some performed without deadlines and some under strict time constraints or fixed deadlines. The empirical observation of the process normally has entailed:

(a) Analysing the translation product produced under different conditions, modifying the variable available time to complete the process. The analysis normally concentrates on different aspects such as translation errors, translation strategies, time fixations and their correlations to errors, etc.
(b) Transcription of the translation protocol using programs such as Translog (De Rooze, 2003)
(c) Retrospective interviews (Hansen, 2005; De Rooze, 2003)
(d) Eye tracking (Sharmin et al., 2008)
(e) Quality metrics based on errors.

New methodologies to control the pressure variable have also been suggested by Bayer-Hohenwarter (2009). The researcher suggested applying methods used in other psychological studies such as using blood samples in order to identify the presence of adrenaline in the bloodstream while translating as an indicator of stress levels. Nevertheless, the researcher also indicates the potential difficulty in order to apply such an invasive method that would definitely impact the performance of translators under study.

Time pressure in journalistic translation

Among the many translation types and modalities practiced around the world, journalistic translation has undoubtedly changed the most with the advent of the Internet (Bielsa & Bassnett, 2009). The extremely competitive world of online newspapers, news sites or RSS feeds, depends on the fast delivery of news. As a result, it is logical to think this translation type is best suited for any corpus-based research into real professional translation under time pressure. In general, most publications on journalistic translation complain about the little attention paid to time pressure type despite the enormous amount of translated news distributed globally on a daily basis (Bielsa &

Bassnett, 2009; Hernández, 2006). Nevertheless, it should be indicated that journalistic texts have been the object of a great deal of research from a corpus-based perspective, as many of the existing parallel and comparable corpora are made out of this text type. In fact, most research into the specific features of the language of translation since the 90s has been carried out on both literary and journalistic texts (Englund-Dimitrova, 2005). It can therefore be assumed that what most publications on journalistic translation criticize is the lack of studies on the profession or translation type as a whole, mostly from a sociological approach (Bielsa & Bassnett, 2009; Hajmohammadi, 2005; Li, 2006), and not on product-based studies to the features of translated news.

Among the most important qualities in journalistic translators, speed in translation and the ability to produce adequate translations under time pressure are the most commonly documented. According to Bielsa and Bassnett (2009, p.11), "speed in transmitting information is vitally important in a highly competitive new market". Similarly, Hajmohammadi (2005, p.222) indicates "at an agency, news and time connect directly. News material has a short life", to which it could be added that news translators, therefore, are subject to extremely strict time and space constraints (Hernández, 2005, p.157). It should also be mentioned that normally, news agencies do not hire translators, as this is supposed to be the within the normal competence of a multilingual journalist or editor. Again, according to Bielsa and Bassnett (2009, p.57): "News agencies do not tend to employ translators as such. This is because translation is not conceived as separate from other journalistic tasks of writing up and editing, and is mainly assumed by the news editor."

This is generally the reason why translated news do not generally include the name of the translator (Hernández, 2005, pp.166-171), as multilingual news editing and translation are usually combined. In the corpus under study, only two of the translations included the person or agency responsible for translation: (1) the translation from the Spanish paper *La Vanguardia* that was signed by Mr. José Mª Puig de la Bellacasa, and (2) the EFE translations included a statement indicating that the agency was responsible for the translation *Traducción de la agencia EFE*, 'Translation by EFE agency'.

As far as the editing process is concerned, an editing and a revision stage are expected in journalistic translation. Nevertheless, given the nature of the translations collected, this revision stage could be considered an uncontrolled variable that will be brought to the surface once the analysis is carried out.

Empirical Study: Methodology

As previously mentioned, this study departs from previous findings in previous cognitive-experimental approaches to the study of the effects of time pressure, as it observes through a corpus based method current professional practices and standards of quality. The parallel corpus was compiled on January 20th, 2009, during the twelve hours following President's Obama's inaugural speech at 12pm EST in Washington D.C. Due to the six hour time difference, the speech appeared in some Spanish papers online in the early hours of the morning the following day. Most Spanish-language media outlets posted either a translation or a bilingual version, with a few others simply posting the English version of the speech, such as the online version of the Spanish paper *Expansión*. The News search engine of Google was

used, searching with keywords such as Obama, inaugural, speech, etc., and all links were inspected. In that period of time, twenty-eight postings of the Spanish translation of Obama's speech were found, but only fourteen were finally included in the corpus as most news outlets published the translation provided by the largest Spanish-language news agency, EFE.

	News outlet	Total
Translations in parallel corpus	EFE News Agency, ABC (Spain), El País (Spain), El Universal (México), US Embassy (El Salvador, Nicaragua), La Cuarta (Chile), La Jornada (Mexico), La Vanguardia (Spain), Periodista Digital (Spain), Sendero y Peaje (USA)	10
Incomplete translations	El Pais (Costa Rica)	1
Revised versions of the EFE Agency translation	Diario Burgos (Spain), Univisión TV website (United States), Clarín (Argentina)	3
Online news outlets using the EFE translation	Ideal group (Spain), El Mundo (Spain), Miami Herald (USA), La nacional (Chile), Diario de las Americas (USA), El Correo (Spain), El Periódico (Spain), etc.	

Table 1. Final composition of the corpus and summary of compilation process

After a closer analysis, one translation posted by the online Costa Rican paper *El País* was rejected as it only included excerpts totalling 40% of the speech. In the analytical stage, three other translations were rejected as they were revisions of the EFE agency translation, but they were originally collected because they presented small changes in the first lines of the text, such as the translation of the first sentence, "My fellow citizens", or the use of a numeral in the line "Forty-four Americans have now taken the presidential oath". Additionally, two other texts seem to belong to the same translation, the one found in the Mexican newspaper *El Universal*, and that found in the Chilean paper *La Cuarta*. Nevertheless, contrary to the case of the EFE News Agency, it was impossible to determine whether one of them was the original translation and the other was an edition, as both presented different distributions in the number of errors.

Table 2 shows the complete compilation process and the final number of texts included in the corpus. All the translations were randomly assigned a sequential number, from TRA1 to TRA10, and all analyses were carried out using Wordsmith Tools. The following table includes the translations organized by the number of words. The original text is also included in order to contrast the total number of words, tokens, and the number of different words in each translation, the types. The total number of words in the corpus is 24,624, with an average of 2,462 words per translation, while the original speech contained 2,401 words.

Translation	Tokens	Types
TRA1	2617	981
TRA7	2572	1017
TRA10	2527	943
TRA2	2524	968
TRA4	2481	933
TRA8	2466	934
TRA9	2448	931
TRA6	2438	928
Original Speech	2401	887
TRA5	2289	851
TRA3	2262	837

Table 2. Comparative table of tokens and types in the corpus.

As Table 2 shows, the number of words varies widely, from 2,617 words to 2,262 words, a 355-word difference, ranging from 5.79% fewer words than the original to 8.99% more. It should be noted that the type-count cannot be directly contrasted to the source text as the corpus was not lemmatized and Spanish has higher levels of inflection in nouns, adjectives and verbs than English. This results in higher types counts for similar texts in English and Spanish in non-lemmatized corpora. Once the corpus compilation and corpus composition has been described, the following sections present the empirical study and results.

The empirical study will be divided in two different stages. In the first part, a contrastive study of all collected translations will be carried out using the following variables:

(1) Total number of tokens or running words, number of types or different words used, and the standardized type/token ratio. This will allow for the observation and comparison of the range of lexical variety in the different translations. Despite the fact that several scholars have argued that type/token ratios might not be extremely useful in corpus-based research (Kenny, 2001),[4] all translations in the corpus have a single source text, and it is logical to assume that higher or lower type token ratios might be related to a more varied vocabulary or lexical density (Baker, 1995).

(2) Average number of errors per translation and the potential relationship with type/token ratios. In this analysis, the relationship between quality and lexical variety will be explored. Following previous time-pressure studies, the types of errors that would be most impacted by time pressure and that have been included are:

a) Spelling and typographic errors (<ORT>). These are defined following Spilka´s (1984) notion of *mistake*, and in the translations under study they are related either to erroneous use of typographic conventions (such as commas, capitalisations, numbering conventions),

[4] Kenny (2001, p.34), among others, argues that type/token ratios are extremely sensitive to text and corpus length.

directly transferring certain uses of the hyphen or dash into Spanish, typing errors, etc. As an example, in the following segment a comma is missing:

La gente ha perdido hogares, empleos [,] negocios. (Homes have been lost; jobs shed; businesses shuttered.)

In the next example is a typing error in which the Spanish preposition *por* (for) and the determinant *esta* (this) are misspelled as *pos* and *estar* respectively:

...así como <ORT>pos la generosidad y cooperación que ha demostrado en <ORT>estar transición… (as well as the generosity and cooperation he has shown throughout this transition.)

b) Accent-marks. A specific case of typographic errors in Spanish are those related to accent-marks, and they were separated in a specific category due to their language-specific nature and the fact the study of De Rooze (2003) also separated them from other typographic ones. As shown in Figure 1, they were marked with the tag <ACC> in the corpus. In the following example, the adverb *más* [more] is missing the required accent-mark.

…que estamos dispuestos a ejercer nuestro liderazgo una vez <ACC>mas. (…that we are ready to lead once more).

Figure 1 shows an extract of the parallel tagged text with a search for accent-mark errors.

N	Concordance	Set	Tag	Word No.	File	%
29	promise of citizenship. <ACC>este es el precio			4,080	univ~1.txt	87
30	And all this we will do. <ACC>ésto es lo que va			1,683	uar~1.txt	36
31	or la confianza que me <ACC>habeis otorgado, c			47	riod~1.txt	1
32	ostoso y cada día trae <ACC>mas evidencia en			449	univ~1.txt	10
33	randes capitales a los <ACC>mas pequeños pu			2,466	uar~1.txt	53
34	oder es mayor cuanto <ACC>mas prudente <O			2,721	jorn~1.txt	57
35	o porque es el camino <ACC>mas seguro para			2,348	jorn~1.txt	49
36	a regañadientes sino <ACC>mas bien con aleg			4,209	riod~1.txt	87
37	sabiendo que nada es <ACC>mas satisfactorio			4,061	uar~1.txt	87
38	stro liderazgo una vez <ACC>mas. Recall that e			2,598	jorn~1.txt	54
39	r, basada en intereses <ACC>mútuos y respeto			3,144	uar~1.txt	67
40	C>mútuos y respetos <ACC>mútuos. To those			3,147	uar~1.txt	67
41	Concord y Gettysburg, <ACC>Normandia y Khe			1,208	der~1.txt	25
42	siendo la nación más <ACC>prospera y podero			1,297	uar~1.txt	28
43	e día con recuerdo, de <ACC>quienes somos y			4,445	riod~1.txt	92
44	e menos de 60 años y <ACC>quién <OT>trabaja			4,233	univ~1.txt	90
45	e nuestro porderío por <ACC>si solo no podría			2,577	uar~1.txt	55
46	o muy pequeño, sino <ACC>sí acaso <CAL>tr			1,916	uar~1.txt	41

Figure 1. Sample of the final tagged parallel corpus showing the tag for accent-marks errors <ACC>.

c) Calques. The identification of lexical and syntactic calques was carried out with the support of authoritative dictionaries and style guides, online Spanish corpora such as the CREA from the Spanish Royal Academy, as well as online searches. The tags <CAS> and <CAL> were used:

Lexical calque*: Cuarenta y cuatro estadounidenses han prestado <CAL>ahora juramento presidencial* (Forty-four Americans have now taken the presidential oath).
Syntactic calque: <CAS>*En reafirmar la grandeza de nuestro país* (In reaffirming the greatness of our nation).

d) Omissions and additions. Inadequate omission and additions in this study were defined as those that either subtracted or added considerable propositional content from the source text, and not legitimate translation strategies (Vinay & Darbelnet, 1958). Omissions were much more prevalent than additions in both corpora, especially in the corpus under pressure. Normally, most omissions were related to difficulties in translating some segments, such as the following in which the entire subordinate clause was omitted:

Omission*: …seguimos siendo una nación joven, pero como dice la <ORT>escritura, <OM>* [the time has come to set aside childish things.] (We remain a young nation, but in the words of Scripture, the time has come to set aside childish things).
Addition: *…mujeres de trabajo oscuro y <AD>carente de reconocimiento* (women obscure in their labor).

e) Other errors. An additional category was created for all other translation errors other than the ones above, such as distortions. The tag <OT> was used for this type of inadequacy.

(3) Creativity in translation has been the object of a number of studies (Kussmaul, 1991; Kenny, 2001). Creativity plays a role whenever there is no ready-made translation solution available during translation tasks and, consequently, it is part of the cognitive problem-solving of all kinds of translation tasks (Jääskeläinen 2012). Kenny (2001), in her corpus study on lexis and creativity in translation found that literary translations tend to be less creative than original texts, a process that the researcher calls normalization. It is expected that these types of translations under pressure will show different degrees of creativity that will be analysed through type/token ratios, that is, higher or lower lexical variety, and the translations of specific creative segments in the speech. For this last measurement, thirteen highly creative segments using literary or metaphorical language were selected following the previous study by Pöchhacker (2009), such "…as rising tides of prosperity and still waters of peace", "…ground has shifted beneath their feet" or "…choose our better history". For each of these selected difficulties, a score of solved or unsolved was assigned in each text.

In a second stage, the study will contrast the results obtained with De Rooze's (2003) doctoral dissertation, more specifically the dataset obtained from professional translators. Both De Rooze's and this study use journalistic texts, and therefore, this contrastive analysis could provide a glimpse into whether the results from this controlled experimental study are similar to those in published translations. In order to provide a reliable measure across studies, the number of errors will be normalized to errors per100 translated words in both textual populations. Additionally, the spelling and typographic errors will also be specifically contrasted given that, despite differences across

studies, this specific variable provides a reliable and objective regardless of interater variation.

Results

The first analysis performed of the corpus entails contrasting the number of tokens or running words, the number of types and the standardised type/token ratio. Table 3 shows the results of the analysis. As previously mentioned, the number of types and tokens varies from 2,617 to 2,262 words, while the type/token ratio, indicative of lexical variety, ranges from 49.35 to 44.85. The analysis reveals that there is not necessarily a correlation between the highest number of words and higher lexical variety: TRA1 has the largest number of words but, nevertheless, occupies the third place in the type/token ratio. TRA7 is the translation with highest level of standardised type/token ratio, 49.35, and it clearly correlates to the highest number of different words or types, 1,017. The results also confirm the overall translational tendency towards explicitation, as 80% of the translations are rendered with a higher number of words than the original text. As the next analysis will show, the only two texts with a lower number of words, TRA5 and TRA3, have a high number of errors of omission in key difficult and creative segments to translate. This is a recurrent feature in translations under pressure (Jensen, 1999). Nevertheless, these two translations show lower standardised type/token ratios than the original speech, an indication that the target text was rendered even with less lexical variety than the source one.

Translation	Tokens	Types	Standardised Type/Token ratio
TRA1	2617	981	46.65[#3]
TRA7	2572	1017	49.35 [#1]
TRA10	2527	943	45.45[#8]
TRA2	2524	968	47.15[#2]
TRA4	2481	933	46.35[#4]
TRA8	2466	934	46.35[#4]
TRA9	2448	931	46.3[#7]
TRA6	2438	928	46.35[#4]
Original Speech	2401	887	46
TRA5	2289	851	44.85[#10]
TRA3	2262	837	45[#9]

Table 3. Contrastive table of standardised type/token ratios.

Error-based contrastive analysis

For the next analysis, all texts were tagged for the error types described in the methodology section. Following previous studies, it was established that the categories that would be most impacted by time pressure would be typographic and spelling mistakes, lexical and syntactic calques, inadequate omissions and additions. All other possible errors, such as distortions, wrong sense, no sense, etc., were included in a category called 'other' (OT).

All errors were compiled in the analysis shown in Table 4. This contrastive analysis illustrates that the range of errors vary widely among the compiled texts. One of the most interesting aspects is that the difference between the texts with the lowest (TRA2: twenty-five errors) and the greatest

number of errors (TRA3: 142 errors) in the variable 'total errors', is 5.8 times higher. However, in the totals for typographic and accent-marks mistakes, the difference between the translations with the highest and lowest scores is 12.5 times higher (TRA5: sixty-six ORT+ACC errors, TRA2: five ORT+ACC errors). As predicted by De Rooze (2003), this is a clear indication that the effects of time pressure are more prevalent in errors related to typography, spelling and accent-marks.

	Error type								
Translation	ORT	ACC	OT	OM	AD	CAL	CAS	Total	Total Mistakes ORT+ACC
TRA3	57*	7	39*	21*	4	12	2	142*	64
TRA5	45	21*	31	17	1	7	0	122	66*
TRA8	15	14	36	0	0	17	7*	89	29
TRA9	15	6	38	0	0	18*	7*	84	21
TRA10	26	6	28	1	0	13	2	76	32
TRA4	8	13	23	1	0	17	6	68	21
TRA7	11	2	29	1	7*	10	2	62	13
TRA6	8	5	23	1	0	6	3	46	13
TRA1	11	0	12	0	0	5	4	32	11
TRA2	5	0	14	1	0	5	0	25	5

Table 4. Comparative analysis of error types in corpus.

It is of interest that despite the fact that TRA3 and TRA5 show the highest counts of total errors, other translations show the highest levels in some error types. This is indicated in the table by an asterisk. For example, TRA7 has the highest number of addition errors (AD = seven). This translation has the higher number of tokens or running words, as well as the higher lexical variety. This translation is generally highly creative and this can be witnessed by the increased number of running words due to additions. Similarly, in the case of lexical calques, TRA9 shows the highest count (CAL = eighteen), while TRA8 and TRA4 show very similar values (CAL = seventeen). TRA8 and TRA9 also show a similar amount of errors in the case of syntactic calques (CAS = seven). The variation in the different types of errors present offers a clear glimpse into translators' styles under pressure, as shown by the fact that TRA3 has the highest number of overall errors but, nevertheless, TRA5 has three times more accent-mark errors than the former (TRA3 = seven ACC errors, TRA5 = twenty-one ACC errors). It is possible that both translations were transcriptions of the simultaneous interpreting TV broadcast, one of the possible strategies to cope with strict time constraints. Nevertheless, the different distribution of typographic, accent-mark and other types of errors does not suggest that they are revised versions of the same transcription.

Errors and lexical variety

It has been shown that time pressure cannot only impact the number of errors that are made, but that it can also hinder the ability to provide creative solutions in figurative and form-oriented translations. For the next analysis, an intragroup comparison of the ten translations was performed. Texts were ranked from one to ten according to the number of acceptable solutions to

problems posed by creative segments. Texts were also ranked from one to ten according to the values in standardised type/token ratios, token and types. In this case, the ranking was assigned from highest to lower counts of type/token rations, token and types as this can be directly related to more varied language use and, consequently, more creative style. Finally, for the variable total errors, the translation with the lowest number of errors was assigned the first position corresponding to the highest possible quality, while the tenth position was assigned to the translation with the highest number of errors and lowest quality in the group. Figure 2 shows this intragroup analysis of errors and higher lexical variety.

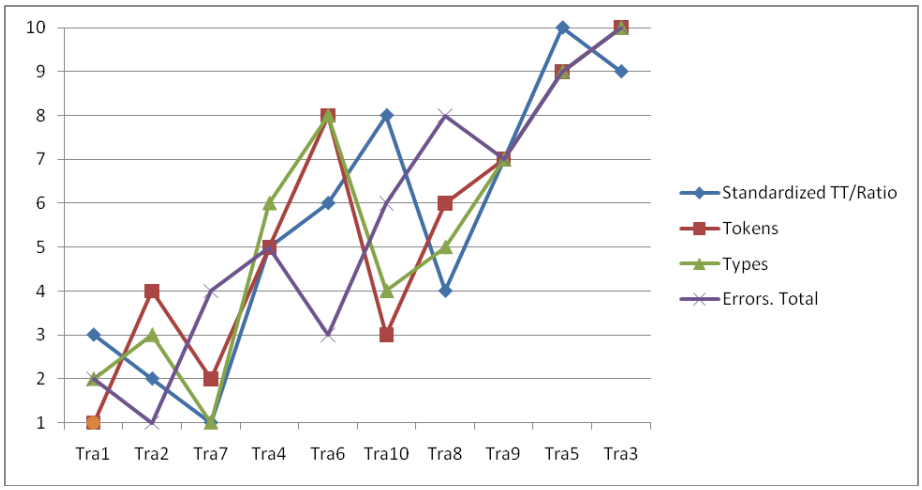

Figure 2. Contrastive analysis of lexical variety (types, tokens, type/token ratios) and error counts.

The contrastive analysis demonstrates a clear relationship between errors and lexical variety in these translations. There is an obvious cluster comprising the highest ranked four translations, with TRA1 scoring the best combined results, and TRA3 and TRA5 scoring the lowest scores in all variables. Interestingly, the last three translations show the greater concentrations in all variables (TRA3, TRA5 and TRA9), with a group of translations in the middle of the continuum that shows the highest variation in all analysed variables (TRA6, TRA10 and TRA8). This finding is of interest as it shows that the effects of time pressure might vary among translations when measures other than error counts and/or strategies are factored in.

Creativity and the web

The next analysis focuses on the potential relationship between errors, lexical variety and translator's creativity, as shown by the ability to solve language problems under time pressure. It is clear that for this form-oriented source text, the notion of quality can be logically associated not only to error counts, but also, to several other parameters, such as appropriate solutions of problems related to highly creative metaphors, figures of speech, etc. As previously mentioned, thirteen creative segments were selected following a previous study (Pöchhacker, 2009), and all translations were ranked from one to ten according to the number of adequately solved creative problems.

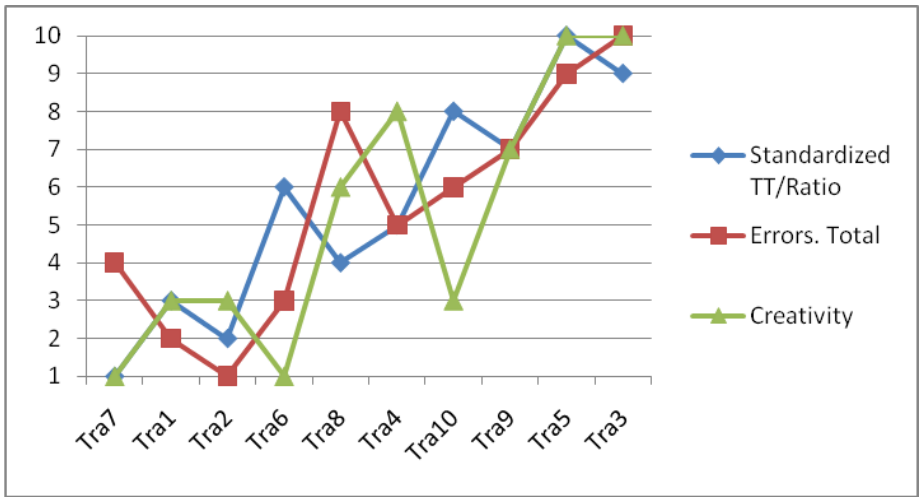

Figure 3. Contrastive analysis of error counts, standardised type/token ratios and solutions to problems related to creativity.

The data in Figure 3 combines the following variables: standardised type-token ratios, total number of errors and creativity. This last variable is understood as the successful solution of the selected creative translation problems. The results show a clear correlation with the previous analysis. TRA3, TRA5 and TRA9 also show similar positions and concentrations, while in the first position appears TRA7, clearly the most creative translation, even when it is in fourth position as far as errors are concerned. Again, the three translations that showed greater variability are TRA10, TRA6 and TRA8, although TRA6 receives a higher overall score in this analysis in which creativity has a more prominent role.

This contrastive analysis shows that quality is context-dependent and could be differently established depending on the purposes of the translation (Colina, 2008; Jiménez-Crespo forthcoming). It also shows that different translators cope with errors and creativity in different ways. The translation with the highest score when creativity is factored in, TRA7, is not among those with the lowest error counts, due mostly to additions and typographic mistakes, while it excels at using a highly creative lexical-textual composition with the highest number of adequately rendered creativity problems. Similarly, TRA6 also shows a similar number of correct solutions, but a higher score on the total number of errors. Nevertheless, TRA6 shows much lower lexical variety, despite the fact that this measurement cannot be directly related to a higher or lower quality. For the overall purpose or *skopos* of the translation, providing a quality translation in which not only the content but the form and style are respected, this analysis has shown that four translations provide the best quality among those published, TRA1, TRA2, TRA6 and TRA7. Another group of three translations is in the middle of the quality continuum, TRA8, TRA4 and TRA10, and a final group of three translations, TRA3, TRA5 and TRA9, consistently show the lowest scores in all analysed variables.

Comparison with De Rooze's (2003) data

The previous analyses have provided a glimpse into the possible effects of time pressure on published texts. It has been shown that the range in terms of quality produced under pressure is quite broad, and that translations could be grouped into three clear categories, three consistently showed the lower

quality; the three best translations showed a limited range of variation; while the middle group showed the highest possible range of variation among the values of the different variables. This clearly shows three different possible tendencies on the effects of time pressure in professional context. This can also reflect the wide range of potential uncontrolled variables in the production of these translations – professional status of translators, use of machine translation post editing, teamwork, use of spell checkers, types of intermediary versions, payment for the translation, etc.-, but again, this merely shows the variety within the real-life environment in which these translations are produced and distributed.

Nevertheless, the question of whether translations that show signs of time pressure are released has still not been answered. For this reason, the second stage in this study uses as a benchmark the results of the study by De Rooze (2003, p.83), specifically those obtained with professional translators that translated 250 words in ten minutes under experimental conditions. This dissertation used journalistic texts in the experiments, a more content-oriented text type. While the speech translations under study can be considered cases of journalistic translation, they represent one instance in which journalistic translators produce more form-oriented texts. A common aspect between both translation contexts is that translation briefs in both cases highlight the importance of quick content transfer over reformulation of style.

In order to compare these studies, error counts for both studies were normalized to errors per 100 words. As this paper used four of the error types from De Rooze's study, only those 'error counts for accent-marks' (ACC), 'typography' and 'spelling' mistakes (ORT), 'calques' (CAS+CAL), 'others' (OT) and 'total errors' (Total) will be contrasted. Finally, it should be mentioned that in De Rooze's experimental study, the revision/edition was performed by the same subject under these time constraints, and no other person was involved. In the textual population compiled in our small corpus, it is impossible to identify whether the translations were revised and/or edited by a second party, an uncontrolled variable that needs to be taken into account.

Figure 4 shows the results of the error-count contrastive analysis between both studies, with results normalised to errors per 100 words. The results surprisingly show that almost all translations in the compiled corpus yield higher counts of errors in two variables, 'calques' and 'accent-marks'. In De Rooze's study, professionals working under pressure made 0.2 calque errors per 100 translated words, and 0.04 accent-mark errors. Only one translation (TRA1) showed zero errors in the accent-mark variable. In other words, 90% of the translations showed higher numbers of errors than professionals translating 250 words with a ten-minute deadline. Similarly, all translations (100%) showed higher levels of calquing errors, maybe due to the more creative nature of Obama's speech. The only variable in which the previous study showed higher values than all translations was OT, and this could be due to differences in the evaluation systems used in both studies. Nevertheless, other types, such as accent-marks and typography/spelling, do not allow for inter-rater variation among texts and text types. Two of the texts (TRA3 and TRA5) showed higher values for all variables except for this last one, OT, and they did show higher values for the variable 'total'. That is, they showed lower quality than that rendered by professional translators in De Rooze's study.

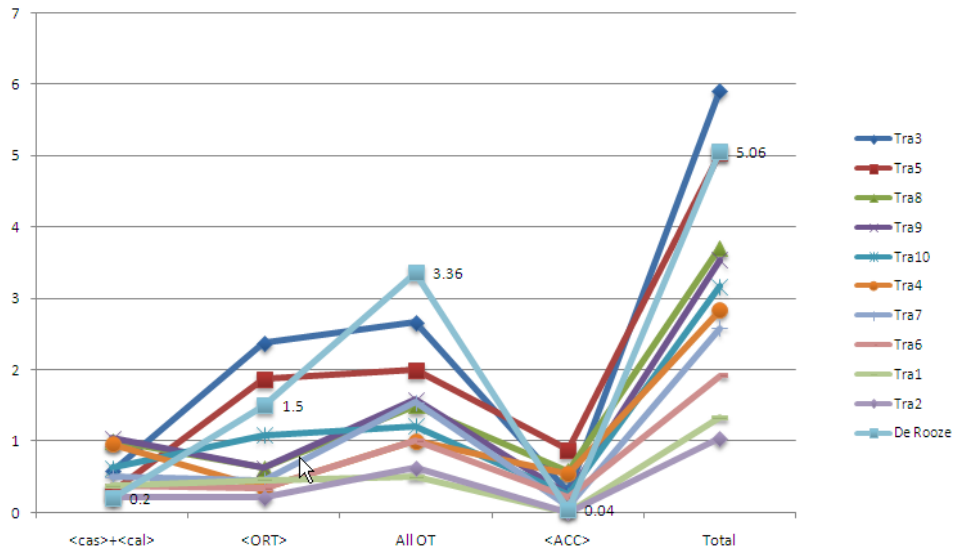

Figure 4. Contrastive study of error counts for all translations and the data for professional translators obtained by De Rooze (2003). Error values normalized to errors per 100 translated words.

In general, the study by De Rooze yielded 5.06 errors per 100 words, while the largest cluster of translations of Obama's speech show between 2.6 to 3.9 errors per 100 words. As previously mentioned, the differerences in variability in the evaluation process across raters and studies could be responsible for the higher amount of OT errors in De Rooze's study (3.36 errors/100 words). Nevertheles, typographic/spelling and accent-marks errors do not allow for uncontrolled rater subjectivity in the evaluation process as these errors are clear cut. Additionally, it was observed that the largest range of variation among the translations under study was precisely these two error types, typographic and accent-marks, with a range of five to sixty-six errors in the same text or 0.02 (TRA2) to 2.74 (TRA5) per 100 words. This could be an indication while translating longer texts under pressure, there is a tendency to overlook certain aspects of translation hygene such as accent-marks. Given this higher tendency to make typography-spelling errors and the more objective nature of the evaluation of these types of mistakes, it seems of interest to contrast these variables more in detail. Figure 5 shows the contrastive analysis in which accent-marks and typographic/spelling errors have been compounded. It can be clearly observed that two translations (TRA5, TRA3) present higher levels of errors than the study by De Rooze, while two more translations (TRA10, TRA8) show very similar values. This means that 40% of the translations do show levels of typographic errors similar or higher to those identified in this experimental study. Typographic errors can therefore be identified as a very prominent feature of translations under pressure that do find their way into published texts online in the international media.

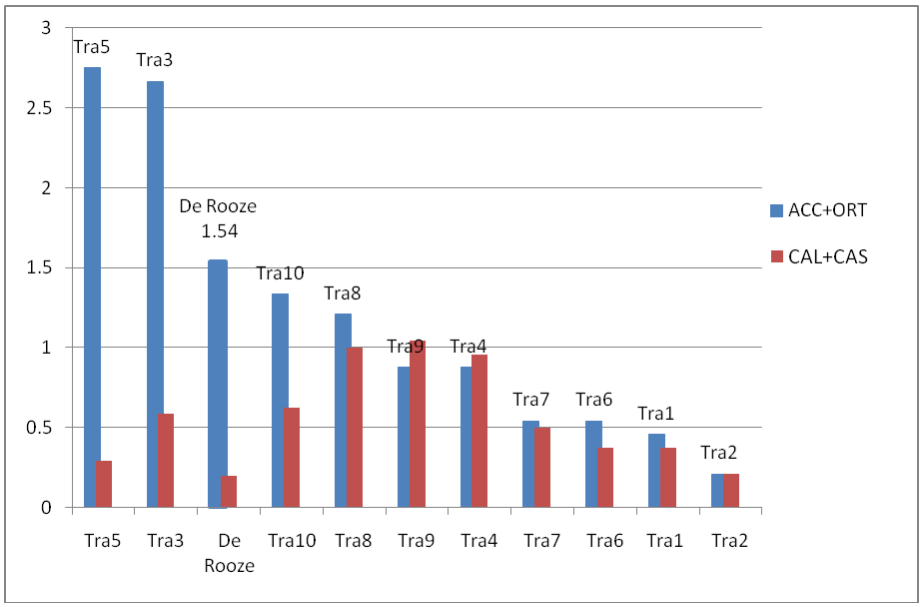

Figure 5. Contrastive analysis of typographic, spelling and accent-mark errors as well as calquing between text in the corpus and results by De Rooze (2003).

Figure 5 also includes calquing errors due to an unexpected correlation between typographic/accent-mark errors and calquing. Surprisingly, all translations show higher levels in the variable 'calquing' than those found by De Rooze. Nevertheless, and contrary to what would be expected from lower quality translations, those texts with the higher levels of typographic errors do not score as high in this last measure. This could be due in part to the adoption of omission as a strategy to cope with time pressure as the most difficult or creative segments are ignored and omitted. The higher levels of calquing errors precisely in the centre of the continuum could be due to the hypothesis set forward by Jensen (2000), according to which in more difficult segments there is a "more rapid and linear translation process" (2000, p.176). Thus, typographic error counts are lower than those found in De Rooze's study, but translators might resort to calquing in segments that are more difficult to translate.

Discussion and conclusions

Time pressure is one of the main situational factors in professional translation, and so far it has not been granted the attention that it deserves (Bayer-Hohenwarter, 2009). This study is a first and modest attempt at connecting results from experimental studies with the current professional performance as reflected in a small representative corpus. It follows a new trend to combine process-oriented research with product-based corpus studies (Alves et al. 2010). It has been found that there is a wide range of quality in terms of error counts and creativity in the translations compiled but, nevertheless, translations can be clearly grouped into three distinct categories in which type/token ratios, word counts, creativity and error counts correlate. The greater concentration of variable values was found in those translations with the lower quality, while the group with the wider variable variation was the group in the middle of the quality continuum. It was observed, as previously argued by several scholars (Colina, 2008; Angelelli, 2009), that

the notion of quality is context dependent: when errors and type/token ratios were factored in, TRA2 would be the translation with the higher level of quality among the translations in the corpus. Nevertheless, if creativity was factored in, understood as the combination of type/token ratios and successful resolution of creative problems, TRA7 would then receive the highest score in quality. This leads to a reflection about how the effect of time pressure in professional environments might be clearly dependent on two factors: (1) the quality of the editing or revision stages that might or might not be put in place by news agencies, as well as whether in certain cases these stages might be bypassed, mostly in which immediacy might be of paramount importance and, (2) that the effect might be clearly dependent on the style, skills and competence of the translators involved. This can be clearly seen in the translations that belong to the medium quality group, in which variable values showed the greatest variation. As an example, TRA6 placed first as far as creative problem resolution, third in error counts and sixth in standardized type/token ratios. Similarly, TRA10 placed third in the variable creativity, sixth in error count and eighth in type/token ratios. In contrast, TRA3 and TRA 5 placed between ninth and tenth in all measures, while TRA9 placed seventh in all variables. This shows that the traditional dichotomy found in the analysis of translation quality in web machine translation studies between access to content and quality expectations of users might not be as simple as it appears. In the corpus under study, translated texts represent a wide continuum of quality in which creativity and type-token ratios directly correlate with error counts. The question that requires some analysis is, therefore, whether quality in these translations should be related more to fewer errors, more creativity, higher lexical variety, etc., or a combination of all. In this type of highly literary and inspiring text translated under pressure, what is the role of creativity that is normally disregarded in these types of studies?

The analysis also sheds some light onto the strategies in the international media to deal with translation under pressure and the quick distribution of texts of great global interest. The strategies identified from lowest to highest effort on the part of the agencies are: (1) distributing the text directly in the original language, (2) translating excerpts of the text even when the text is presented as a complete translation of the speech, (3) although this would need to be further researched, using transcriptions of simultaneous interpreting broadcasts, (4) translating the text in-house even when this entails providing texts with varying degrees of quality, and (5) using an external translator as shown by the inclusion of the translator's name (one text in the corpus or 10% of translations).

As far as the question about whether features of translation under pressure found in experimental studies make their way into real published translations under pressure, and despite the uncontrolled nature of the production parameters for the text compiled in the corpus, it was found that both calquing, typographic and accent-mark errors are the most prevalent. The results of the contrastive study have shown that almost all translations show higher counts than the experimental study with professional translators by De Rooze (2003), with an interesting correlation between calquing and typographic issues. This has been explained by a potential strategy used in the lower-quality texts, in which difficult segments to translate are omitted, while those texts in the middle of the quality continuum might resort to calquing or doing a more 'linear translation'.

The results obtained raise several questions regarding the potential effects of the immediacy of the Internet and the fast pace at which news agencies translate news. It has been clearly observed that despite the

fascination around the world with the inauguration of President Obama, Internet users around the world might not have been able to grasp the extraordinary rhetorical and inspiring nature of his oratory skills that propelled him to the presidency. As the role of translation in international news agencies continues to increase (Bielsa & Bassnett, 2009), the features of the language of translation under pressure call for a more in-depth analysis, not only from an experimental or corpus-based textual perspective, but also into the sociological environment of their context of reception. This area of research might shed some light on how translations and the Internet might not just bring the world closer together, but also potentially separate source and target audiences through the unintended effects of translations under pressure.

References

Alves, F. P., Pagano, A., Neumann, S., Steiner, E. and Hansen-Schirra, S. (2010). Translation units and grammatical shifts. Towards and integration of product- and process-based translation research. In G. M. Shreve and E. Angelone (Eds.), *Translation and Cognition* (pp.109-142). Amsterdam-Philadelphia: John Benjamins.

Alvstad, C., Hild, A. and Tiselius, E. (Eds.) (2011) Methods and Strategies of Process Research. Integrative approaches in Translation Studies, Amsterdam-Philadelphia: John Benjamins.

Angelelli, C. (2009). Using a rubric to assess translation ability: Defining the construct. In C. Angelelli and H. Jacobson (Eds.), *Testing and assessment in translation and interpreting studies: A call for dialogue between research and practice* (pp. 13-47). Amsterdam-Philadelphia: Benjamins.

Baker, M. (1995). Corpora in translation studies: An overview and some suggestions for future research. *Target*, *7*(2), 223-243.

Bayer-Hohenwarter, G. (2009). Methodological reflections on the experimental design of time-pressure studies. *Across Languages and Cultures*, *10*(2), 193-206.

Bielsa, E. and Bassnett, S. (2009). *Translation in global news*. London-New York: Routledge.

Bowker, L. (2004). What does it take to work in the translation profession in Canada in the 21st century? Exploring a database of job advertisements. *Meta*, *49*, 960–972.

Bowker, L. and Barlow, M. (2008). A comparative evaluation of bilingual concordancers and translation memory system. In E. Yuste Trigo (Ed.), *Topics in language resources for translation and localization* (pp.1-22). Amsterdam-Philadelphia: John Benjamins.

Charron, M. (2005). Plus vite, encore plus vite : la traduction à l'heure de la mondialisation. *Translation Studies in the New Millennium: An International Journal of Translation and Interpreting*, *3*, 15-27.

Colina, S. (2008). Translation quality evaluation: Empirical evidence from a functionalist approach. *The Translator*, *4*, 97-134.

De Rooze, B. (2003). *La traduccion, contra reloj* [Translation against the clock], PhD Dissertation. University of Granada, Spain.

De Rooze, B. (2008). La traducción contra reloj. Consecuencias de la falta de tiempo en el proceso de traducción. In M. Fernández and R. Muñoz (Eds.), *Aproximaciones cognitivas al estudio de la traducción e interpretación* (pp.1-37). Granada: Comares.

Dragstead, B. & Hansen. I. (2007). Speaking your translation: Exploiting synergies between translation and interpreting. In F. Pöchhacker, A. Jacobsen, & I. Mees (Eds.), *Interpreting studies and beyond: A tribute to Miriam Shlesinger* (pp.251-274). Copenhagen: Samfundslitteratur.

Englund-Dimitrova, B. (2005). *Expertise and explicitation in the translation process.* Amsterdam-Philadelphia: John Benjamins.

Frawley, W. (1984). Prolegomenon to a theory of translation. In W. Frawley, (Ed.), *Translation. Literary, linguistic and philosophical perspectives* (pp.159-175). London-Toronto: Associated University Presses.

Gile, D. (1995). *Basic concepts and models for interpreter and translator training*. Amsterdam-Philadelphia: John Benjamins.

Hajmohammadi, A. (2005). Translation evaluation in a news agency. *Perspectives*, 13(3), 215-224.
Halverson, S. (2009). Psycholinguistic and cognitive models. In M. Baker & G. Saldanha (Eds.), *Routledge encyclopedia of translation studies* (pp.211-216). London: Routledge, second edition.
Hansen, G. (1999). Das kritische Bewußtsein beim Übersetzen. Eine Analyse des Übersetzungsprozesses mit Hilfe von Translog und Retrospektion. In G. Hansen (Ed.), *Probing the process in translation: Methods and results* (pp.43-67). Copenhagen: Samfundslitteratur.
Hansen, G. (2005). *Störquellen in Übersetzungsprozessen: eine empirische Untersuchung von Zusammenhängen zwischen Profilen, Prozessen und Produkten*. Habilitation Thesis, Copenhagen Business School, Denmark.
Hansen, G. & Hönig, H. G. (2000). Kabine oder Bibliothek? Überlegungen zur Entwicklung eines interinstitutionell anwendbaren Versuchsdesigns zur Erforschung der mentalen Prozesse beim Übersetzen. In M. Kadric, K. Kaindl, & F. Pöchhacker (Eds.), *Translationswissenschaft. Festschrift für Mary Snell-Hornby zum 60.Geburtstag* (pp.319-338). Tübingen: Stauffenburg.
Hernández, M. J. (2006). Técnicas específicas de la traducción periodística. *Quaderns, revista de traducció, 13*, 125-139.
Hernández, M. J. (2005). La traducción de los géneros periodísticos. In C. Cortés Zaborras and M. J. Hernández (Eds.) , *La traducción periodística* (pp.89-135). Cuenca: Ediciones de la Universidad de Castilla-La Mancha.
Hönig, H. (1998). Sind Dolmetscher bessere Übersetzer? *Jahrbuch Deutsch als Fremdsprache, 24*, 323-344.
Jääskeläinen, R. (2012). *Translation psychology*. Online paper. Retrieved 23 August 2012, from apps2.lessius.eu/hts/JAA-PSY.docx
Jensen, A. (1999). Time pressure in translation. In G. Hansen (Ed.), *Probing the process in translation. Methods and results* (pp.103-119). Copenhagen: Samfundslitteratur.
Jensen, A. (2000). *The effects of time on cognitive processes and strategies in translation*. Unpublished PhD Thesis, Copenhagen Business School.
Jiménez-Crespo, M. A. (n.d. Forthcoming). *Translation and web localization*. New York: Routledge.
Kenny, D. (2001). *Lexis and creativity in translation. A corpus-based study*. Manchester: St. Jerome.
Kussmaul, P. (1991). Creativity in the translation process: Empirical approaches. In K. van Leuven-Zwart and T. Naaijkens (Eds.), *Translation studies: The state of the art. Proceedings from the first James S. Holmes symposium on translation studies*, (pp.91-101). Amsterdam: Rodopi.
Kussmaul, P. and Tirkkonen-Condit, S. (1995). Think-aloud protocol analysis in translation studies. *TTR, 8*, 177-99.
Li, D. (2006). Translators as well as thinkers: Teaching of journalistic translation in Hong Kong. *META, 51*(3), 611-619.
Olohan, M. (2004). *Introducing corpora in translation studies*. London: Routledge.
Olohan, M. (2002). Comparable corpora in translation research: Overview of recent analyses using the translational English corpus, *LREC Language Resources in Translation Work and Research Workshop Proceedings*. 5-9.

Pöchhacker, F. (2009). *A new era or rhetoric: Interpreting the inauguration*. Paper presented at the 50th Annual Conference of the American Translators´Association, New York, USA.

Pym, A. (2009). Using process studies in translator training: self-discovery through lousy experiments. In S. Göpferich, F. Alves, F. and I.E. Mees, (Eds.), *Methodology, technology and innovation in translation process research* (pp. 135-156). Copenhagen: Samfundslitteratur.

Sharmin, S., Špakov, O., Räihä, K. and Jakobsen, A. L. (2008). Effects of time pressure and text complexity on translators' fixations. In *Proceedings of the 2008 symposium on eye tracking research & applications, ETRA '08* (pp.123-126). New York: ACM.

Shreve, G. & Diamond, B. (1997). Cognitive processes in translation and interpreting: Critical issues. In J.H. Danks, G.M. Shreve, S.B. Fountain, & M.K. McBeath, (Eds.), *Cognitive processes in translation and interpreting* (pp.233-251). Thousand Oaks: Sage Publications.

Spilka, I. V. (1984). Analyse de traduction. In A. Thomas, A. and J. Flamand (Eds.), *La traduction: l'universitaire et le praticien* (pp.72-81). Ottawa: Éditions de l'Université d'Ottawa.

Tirkonnen-Condit, S. (1996). What is in the black box? Professionality in translational decisions in the light of TAP research. In A. Lauer, H. Gerzymisch-Arbogast, J. Haller and E. Steiner (Eds.), *Übersetzungwissenschaft im Umbruch* (pp. 251-257). Tübingen: Narr.

Vinay J.-P. and Darbelnet J. (1958). *Stylistique comparee du francais et de l'anglais. Methode de traduction*. Paris: Didier.

Waddington, C. (2001). Different methods of evaluating student translation: The question of validity. META, 46, 312-325.