Sight translation and interpreting
A comparative analysis of constraints and failures

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This experimental research describes sight translation by comparing it to simultaneous and consecutive interpreting. Since the beginning of interpreting research, sight translation has mostly been considered as a pedagogical exercise and interpreters are rarely trained in this task per se. However, sight translation, consecutive interpreting and simultaneous interpreting are performed under different conditions, and these determine how cognitive resources are managed and what strategies are adopted. The study compares the performance of six professional interpreters in sight translation, simultaneous interpreting and consecutive interpreting with a view to identifying particular constraints and problems. Results show that interpreters face different difficulties and use different efforts in each mode. Sight translation emerges as a complex and unique technique, whose cognitive demands on the interpreter are by no means less than those of simultaneous and consecutive.

Keywords: sight translation, simultaneous interpreting, consecutive interpreting, constraints, efforts, reading, listening, oral language, written language

Introduction

At the boundary between translation and interpreting, sight translation (ST) appears as a hybrid and rather unexplored phenomenon, used in various contexts and with different definitions. For many scholars, ST is just a pedagogical exercise for getting started in the techniques of consecutive interpreting (CI) and simultaneous interpreting (SI), an exercise by which interpreter trainees can learn to react quickly and improve their oral skills (Spilka 1966;
Curvers et al. 1986; Weber 1990; Falbo 1995; Viaggio 1995). Some of these authors acknowledge the differences between ST and interpreting from an oral message, but nevertheless recommend introducing the exercise in the early stages of an interpreter training program.

Ever since Jean Herbert (1952) characterized ST as a type of simultaneous interpreting, it seems to have been treated as such, at least from a theoretical standpoint. ST, CI and SI all have the same end product: an oral re-expression of the source message in the target language. However, the differences between these tasks should not be underestimated. The sight translator reads a written text, whereas the interpreter, in both the consecutive and the simultaneous modes, listens to a speaker. In interpreting from an oral message, source segments disappear once they are uttered. In ST, on the other hand, the source text remains visually accessible to the translator. Finally, as suggested by research in the field of cognitive psychology, the processes of reading and listening are not entirely similar.

This research is based on the hypothesis that there are significant differences between ST and interpreting with regard to information reception, processing, and production. The study compares ST to SI and CI by analyzing the performance of six professional interpreters in each mode, with special regard for the type of failures and difficulties observed in each case. This comparison should provide the basis for underlining the specificity and complexity of ST, so that its particular obstacles and efforts are taken into account in interpreter training.

Interpreting and sight translation constraints: The Effort Models

The Effort Models of Gile (1997) were developed to describe the interplay of different sets of cognitive operations involved in ST, SI and CI. These sets of operations are grouped into “Efforts”, which compete for a limited amount of processing capacity. The Listening and Analysis Effort (L) includes all reception and comprehension operations; the Memory Effort (M) designates the storing of information in the interpreter’s short-term memory for the time interval between the moment the speech is heard and the completion of its formulation; and the Production Effort (P) represents all operations extending from the mental representation of the message to its actual formulation in the target language. In SI, these three efforts make demands on the interpreter’s processing capacity at any point in time, together with a Coordination Effort (C), which represents the additional cognitive load required for managing the three
efforts simultaneously. When the sum of available capacity exceeds total requirements, the necessary cognitive balance between the Efforts is disrupted, which results in failure sequences with different errors and omissions. SI can be modeled as follows:

$$SI = L + M + P + C$$

In CI, speech comprehension and production are separated into two phases. The L Effort and the M Effort involved in the first phase of CI are similar to the L Effort and the M Effort in SI. The P Effort is obviously absent in this phase, but there is a Note-taking Effort (N), which involves selecting the essential information to be noted and implementing an efficient note-taking technique.

$$CI \ (\text{first phase}) = L + M + N + C$$

In the second phase, there is a Rem component, which consists of recall from long-term memory, and a Read component, or deciphering of the notes. The P Effort is the same as in SI.

$$CI \ (\text{second phase}) = \text{Rem} + \text{Read} + P$$

According to Gile, only the first phase is critical in terms of cognitive competition among the efforts. In the second phase, the interpreter produces his/her speech at his/her own pace and therefore does not have to manage processing capacity under as much time pressure as in SI.

In ST, the L Effort is replaced by a Reading and Analysis Effort (R). According to Gile, while the P Effort is similar to that of SI, there is no M Effort as in SI and CI, since the information remains available all the time on paper. Moreover, as ST is not paced by a speaker, the interpreter can decide when to allocate more processing capacity to the R or the P Effort, as the need arises.

$$ST = \text{Reading} + \text{Production}$$

However, as some of our results might suggest, there seems to be a Memory Effort involved in ST as well, similar to the short-term memory demands of SI. In both tasks, the Reception and Analysis operations overlap with the Production phase, so the interpreter produces a target-language version of sentence A while reading/listening to sentence B. Although in ST the interpreter can control his/her rhythm of perception, smooth delivery is possible only when s/he starts reformulating while still reading. Moreover, syntactic differences between languages may force the interpreter to store some information in memory until it can be appropriately inserted in the target-language speech.
Therefore, while some of the most important constraints of consecutive and simultaneous interpreting are absent, ST has some added difficulties, as Gile himself points out. In the R Effort, for instance, sight translators are not helped by the prosodic features of oral language (tone, hesitations, pauses) and may need more time and effort to understand complex written sentences with embedded clauses while translating aloud at a smooth pace. ST also poses a greater risk of source-language interference, as words and phrases remain before the sight translator’s eyes.

The risk of source-language interference in ST has been pointed out by several authors. After observing that sight translators experienced many problems of expression when they were working into their mother tongue, Brady (1989:182) concludes:

It would therefore seem that, as regards source-language interference, sight translation is a considerably more hazardous operation than simultaneous interpretation. (…) It should be more difficult to retain only the meaning of the message when the words that carry it are in black and white in front of one’s eyes.

Martin (1993:404) makes a similar point:

Although the instant comprehension factor and the need for instant analysis of cognitive content present in interpreting is similar in sight translation, the hybrid nature of the latter requires more effort to be put into attaining independence from the source language text than is the case with written translation and interpretation.

But what exactly makes ST different from SI and CI? And why does ST seem to be a more demanding task for the interpreter? The studies by Viezzi (1989a, 1989b, 1990) provide the basis for our assumption that different mental processes may be at play. Viezzi followed up a line of research based on the depth-of-processing hypothesis (Craik & Lockhart 1972), which suggests that information retention in memory depends on the depth of the analysis required to encode the input. Lambert (1989) had found higher retention scores after CI than after SI, and concluded that retention was adversely affected by the concurrent vocal production in SI. Viezzi replaced CI with ST, expecting this task to yield a higher retention score than SI, because it does not involve the processing of two audio signals. However, information retention rates were lower in ST than in SI. Based on the Craik and Lockhart hypothesis, Viezzi argued that processing takes place at a deeper level in SI, and that the processes of ST and SI differ from the outset, since information is presented in different ways in each case.
This unexpected finding indicates that the difference between sight translation and simultaneous interpretation does not lie only in the perception modes or in the processing leading to comprehension. (...) In sight translation, information is constantly available to the interpreter who does not immediately need to process the incoming information chunks, storing them for some time before articulating the translation. In simultaneous interpretation, the form in which the message to be translated is presented imposes on the interpreter behaviour patterns leading to longer and deeper processing. (Viezzi 1990:58)

Oral and written language

The two main differences between the input in ST and in interpreting from an oral source are related to the opposition between oral and written language, and between the reading and listening processes.

To a large extent, the interpreting process is shaped by the nature of oral language. For Seleskovitch and Lederer (1989), oral language facilitates the instant comprehension of ideas, and its “evanescence” makes it easier for the interpreter to retain only meaning and forget words. At the linguistic level, there are differences in the mechanisms used by oral and written language to convey a message. Chafe and Danielewicz (1987) suggest four main analytical parameters by which oral and written texts clearly differ: lexical variety, sentence construction, level of vocabulary, and involvement and detachment. Oral language tends to rely on hypotaxis, because the capacity of listeners’ short-term memory is limited. In contrast, written language favors parataxis, and subordinate clauses are also common. Readers can always go back and read a sentence again. The vocabulary of a written text is generally richer than that of an improvised speech, since writers have time to weigh every word, look up synonyms, and search for elegant constructions. Oral speeches make more use of popular expressions, idioms and neologisms. Finally, the author of an oral speech is likely to be more involved with the audience, because of its presence during the actual creation of the speech.

Does this mean that written language is more complex than oral language and that, because of this, ST is more complicated and more difficult to perform than interpreting from an oral source? As Halliday (1987) points out, oral and written language are both complex; each has its own particular mechanisms and specificities. Therefore, it is argued here that the main difficulty of ST lies not in the written nature of the source text, but in the smooth coordination of the R, M and P Efforts, while struggling against increased visual interference from the source language.
Reading and listening

According to some research in the field of cognitive psychology, auditory and visual stimuli are not processed in exactly the same way:

The mechanics of perception are somewhat different for audition and vision. Listeners receive a continuous signal over which they have very little control. They are forced to process the signal immediately regardless of whether they are prepared to receive new information or whether they are still processing the immediately preceding signal. Readers, in contrast, receive successive “snap-shots” from eye fixations that are under their control (Danks & End 1987:276).

These differences in the reception of the signal have an obvious impact on how it is processed and stored. Readers can manage their rhythm of perception; in other words, they can decide to invest more time in a difficult sentence, or go back and read the paragraph again. Listeners depend on the speaker’s pace; their reception is mono-sequential. Consequently, readers and listeners do not concentrate on the same elements. While listeners are bound to pay attention to the gist of the message, readers tend to recall the actual words of a text. Several empirical studies in the field of cognitive psychology have confirmed this divergence (Hildyard & Olson 1984; Sachs 1974; Crowder 1972). Hildyard and Olson (1984), for example, explain it in terms of the “Enabling Inferences”, or the informal inferences which the reader or listener must draw to understand the text/speech. Both readers and listeners make these inferences, but readers tend to differentiate the statements (what was actually said) from the inferences derived and try to remember the former. Although the experimental subjects were not interpreters or translators, these studies can support our hypothesis regarding the higher risk of source-language interference in ST.

In summary, there are several important differences between ST and interpreting from an oral source. Information is presented in a different way, using different linguistic resources (punctuation in the written text vs. prosodic features in the oral speech, etc.). The message is processed differently because of different time constraints and cognitive operations, and components stored in memory also seem to vary in each case. Table 1 summarizes and highlights the specificity of ST compared to the consecutive and simultaneous modes of interpreting.
Table 1. Differences between SI, CI and ST

<table>
<thead>
<tr>
<th>Reception conditions</th>
<th>SI</th>
<th>CI</th>
<th>ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input = oral speech</td>
<td>Input = oral speech</td>
<td>Input = written text</td>
<td></td>
</tr>
<tr>
<td>Presence of speaker</td>
<td>Presence of speaker</td>
<td>Absence of author</td>
<td></td>
</tr>
<tr>
<td>Prosody</td>
<td>Prosody</td>
<td>Punctuation</td>
<td></td>
</tr>
<tr>
<td>High demand on short-term memory</td>
<td>Use of long-term memory and notes</td>
<td>Continuous access to information in the text</td>
<td></td>
</tr>
<tr>
<td>Attention-sharing between two parallel audio signals</td>
<td>Attention-sharing between audio signal and notes (first phase)</td>
<td>Attention-sharing between visual input and oral production</td>
<td></td>
</tr>
<tr>
<td>Sequential reception (message is perceived only once)</td>
<td>Sequential reception (message is perceived only once)</td>
<td>Non-sequential reception (reader can go back)</td>
<td></td>
</tr>
<tr>
<td>Speaker-paced</td>
<td>Speaker-paced</td>
<td>Interpreter-paced</td>
<td></td>
</tr>
<tr>
<td>Simultaneity of SL speech production and translation</td>
<td>Short time delay between SL speech production and translation</td>
<td>Considerable time delay between SL text production and translation</td>
<td></td>
</tr>
<tr>
<td>Coordination of Listening, Memory and Production Efforts</td>
<td>Separation of the Listening and Production Efforts</td>
<td>Coordination of Reading and Production Efforts</td>
<td></td>
</tr>
<tr>
<td>Monitoring production while listening</td>
<td>Monitoring production while using notes</td>
<td>Monitoring production while reading</td>
<td></td>
</tr>
<tr>
<td>Progressive access to new information while reformulating</td>
<td>Access to information prior to production</td>
<td>Progressive access to new information (no previous reading)</td>
<td></td>
</tr>
<tr>
<td>High risk of interference</td>
<td>Low risk of interference</td>
<td>Extreme risk of interference</td>
<td></td>
</tr>
<tr>
<td>Speaker-paced</td>
<td>Interpreter-paced</td>
<td>Interpreter-paced</td>
<td></td>
</tr>
<tr>
<td>Possibility of help by colleague in booth</td>
<td>No help of colleague</td>
<td>No help of colleague</td>
<td></td>
</tr>
</tbody>
</table>

Materials and methods

The experiment was designed to compare constraints, obstacles and efforts in ST, SI and CI on the basis of the types of failures observed in each case. Six professional freelance interpreters, all of whom had at least nine years of experience, participated in the study. The subjects (Interpreters 1 to 6) were
divided into three groups: each group interpreted three different texts on a rotating basis: one text in SI, one text in CI and another one in ST. In other words, all six interpreters translated the three texts, and all six performed the three tasks, but the mode in which each one of the texts was interpreted/sight translated (SI, CI and ST) differed, depending on the group. This design was adopted to assess individual performance in each task and the translation of the same three texts in three different modalities by different interpreters.

The interpretation was done from English into Spanish, the mother tongue of all six subjects. The three texts (Text A, Text B, and Text C) were excerpts from chapters of a single report on the North American Free Trade Agreement, “NAFTA at seven”, published by the Economic Policy Institute in Washington in 2001. Texts had 806, 836 and 786 words respectively (8 to 10 minutes, read at 110 wpm on average). The experiment was conducted in interpreting laboratories, in Caracas, Venezuela, and Montreal, Canada.3 For the SI test, texts were tape-recorded, and the interpreters listened to the speeches through headphones. For the CI test, the speech was read aloud, with the reader pausing every 3–4 minutes to give the interpreter time to translate. Although presenting the speech for CI in three sections could be viewed as methodologically problematic, we think that our design is in line with interpreters' typical working conditions in CI these days. Furthermore, this approach was used in another experiment comparing SI and CI, by Viezzi (1993), who justifies it as follows: “(...) contrary to M. Lederer’s statement, in the experience of the author of this paper, when working in CI, most interpreters prefer translating speeches divided into relatively short segments or even on a sentence by sentence basis” (p. 390).

Texts were “oralized” for the simultaneous and consecutive interpreting tasks. For example, written punctuation marks such as colons, parentheses or dashes were replaced by “this means”, “in other words”, etc. Long phrases with several embedded clauses were simplified (see sample text in Appendix). For the ST task, interpreters had less than five minutes to read the text before starting to translate it aloud. This was done for two reasons. First, in real professional situations interpreters often have some time to quickly read the text prior to sight translating. Second, as Gile (1995) points out, one of the main coping tactics in ST is to mark text difficulties before starting the translation, such as segmenting long sentences, identifying main verbs and subjects, etc. For our experiment, the interpreters were not specifically advised to mark up the text, but were given a pen and told that they could, if needed, write or underline elements. As a result, their marked texts would provide some hints to the strategies used and the difficulties encountered.4
We acknowledge that our design put sight translators at an advantage regarding source-text content, and we were aware of this from the beginning. But, as mentioned before, our intention was also to analyze the professional subjects’ approach to a written text and to have a written record of what they thought was difficult or worth marking. To our knowledge, this kind of analysis has never been done before with experienced professionals.

Performance was analyzed on the basis of failures (errors) observed in each mode. Errors were divided into meaning and expression failures. Meaning failures included mainly changes in meaning, omissions and incomplete sentences. For the purpose of this study, omissions were counted as meaning errors when they resulted in information loss. When the information omitted was redundant or repetitive, omissions were accepted as a legitimate strategy. Expression failures consisted of syntax and style problems, lexical problems (inappropriate terminology and collocations, calques) and grammatical mistakes. When an error fell into both categories, it was counted in both. Such cases of dual classification were not numerous, however, and their impact on the results is negligible. By way of illustration, the transcription of one interpreter’s ST performance on Text B, with an indication of meaning and expression failures, is given in the Appendix. A single judge first identified and classified errors directly from the recordings. The results were subsequently reviewed by a second assessor, who relied only on the transcription. Discrepancies were not measured; the judge and the assessor met and discussed the few that did occur until they reached an agreement.

Results and discussion

Failures observed in ST for all interpreters differed greatly from those recorded in SI and CI. All interpreters had fewer meaning problems and more expression problems in ST than in SI or CI.

While we admit that interpreters may have been in a more advantageous position in ST than in the other two modes with regard to content, we believe that our results can be seen as an indication of important differences between constraints and difficulties in ST, on the one hand, and interpreting, on the other. In fact, there is a striking asymmetry between ST and CI, with a nearly exact reversal of the two categories: meaning failures accounted for 76% in CI and 25% in ST; expression failures comprised 75% in ST and 24% in CI. Although the performance conditions for ST were close to those for CI (interpreters first
listened to the text and then translated it with the help of notes as written support), there is greater linguistic interference from the source text in ST. This is mainly because SL words remain visible in black and white, but also because notes in CI are the result of the interpreter’s analysis and thus represent mostly ideas, not only words.

As for individual performance on each task, all interpreters had more meaning failures in SI and CI and more expression failures in ST, as shown in Figures 2, 3 and 4.

The breakdown of failures in each task may shed more light on the particular constraints in the three modes:

(a) **Sight Translation**: Most expression failures were syntactic or grammatical; lexical problems occurred as well, primarily in the form of calques and the use of corrupted lexical items, such as “desigualitaria” instead of the adjective “desigual”, which is the correct Spanish equivalent of the English *unequal* (we refer to this type of mistake as barbarisms). Very few omissions were reported (3% in general), a finding that was highly predictable, since all information remained in the text. Syntactic and grammatical mistakes consisted mostly of lack of agreement between subject and verb, or between pronouns and the nouns they referred to. Although the information was always accessible in the text, subjects seem to have suffered from coordination problems and short-term
memory failures. They often lost the referent and forgot the gender, number and person. The problem may have been exacerbated by the fact that inflection is more common in Spanish, and adjectives, pronouns and verbs need to be put into proper agreement.

Example 1:

Text A

_These export platforms (...) are isolated from the rest of the Mexican economy. They do not contribute much to the development of Mexican industry (...)_

Interpreter 2

_Estas plataformas de exportación (...) están aislados del resto de la economía mexicana. Ellos no contribuyen mucho al desarrollo de la industria mexicana (...)_
In Example 1 there is a long subordinate clause between the subject (export platforms) and the verb (are). Interpreter 2 apparently forgot that the subject of the main sentence was platforms (feminine in Spanish) and did not use the corresponding feminine past participle of the verb isolated in Spanish ("aisladás"). Additionally, she translated they (platforms) as “ellos”, which is not only a problem of grammatical gender ("ellas" would have had to be used to refer to platforms), but also a syntactic calque of the English structure, since the pronoun is usually omitted in Spanish (a correct translation of this sentence would be: “Estas plataformas de exportación (…) están aisladas del resto de la economía mexicana. No contribuyen mucho al desarrollo de la industria mexicana”). According to Viezzi (1989b), the perceptual span in reading is no more than fifteen typographical spaces to the right and four to the left, so the interpreter’s eye may not grasp every word of a sentence while s/he is reformulating it aloud at the same time. Therefore, coordination of the different tasks in ST seems as essential as in interpreting from an oral source. The sight translator needs to know at what point s/he can look ahead to identify key words and units and anticipate conceptualization, while planning and executing his/her expression in the target language. As can be seen in Example 2, the two interpreters who sight-translated this passage had trouble locating the main noun (flows) within the long English noun clause, and one of them had several false starts:
Example 2:

Text B

*Both Canadian foreign direct investment and portfolio flows to the U. S. grew much faster than did U. S. flows to Canada during this period.*

Interpreter 5

Tanto… la inversión directa extranjera canadiense y la cartera… perdón… tanto la cartera como la inversión directa extranjera hacia Canadá fluye… No. La cartera y la inversión directa extranjera canadiense fluye a… hacia los Estados Unidos de una manera mucho más rápida de lo que era el flujo de Estados Unidos hacia Canadá durante este periodo.

Interpreter 6

Tanto la inversión directa… eh… externa de Canadá y sus flujos de portafolio hacia Estados Unidos crecieron mucho más rápido que los flujos de Estados Unidos hacia Canadá durante ese periodo.

In addition to coordination, ST seems to involve a Memory Effort, which is probably similar to the M Effort in SI and is critical to ensuring coherence and cohesion. Example 3 illustrates the importance of short-term memory in ST and how the written source-text seems to exert a greater influence over the interpreters’ expression. Both subjects who sight-translated the passage had problems with the verbal tense used in Spanish to translate the English *meant*. The Spanish verbal system distinguishes between preterite or definite past, to refer to an action completed, and imperfect past, for an action that remained incomplete in the past or that never took place. In this case, the text is dealing with the unfulfilled promises of leaders who promoted NAFTA; in other words, all that was going to be accomplished by the treaty, but was not. To express incompleteness in Spanish, a verb in imperfect past ought to have been used for the English *meant*. In ST, probably due to the greater source-text influence and an M Effort failure, subjects used verbs in the preterite, implying that the treaty had actually met all its goals. In contrast, subjects who interpreted the passage in SI and CI apparently understood and followed the line of thought, since they all used verbs in imperfect past.

Example 3

Text B

*But in the public debate that preceded implementation of the free trade deal, delivering the goods, according to proponents, meant rising productivity levels and rising incomes.*

Interpreter 5 (ST)

Pero en la arena pública que antecedió la puesta en práctica de este tratado de libre
comercio, la entrega de bienes, de acuerdo con los partidarios, significó el aumento de los niveles de productividad y de los ingresos.

Interpreter 6 (ST)
Pero en el debate público que precedió la instrumentación del acuerdo de libre comercio, la... el cumplimiento de las promesas, con... conforme a lo que opinan sus proponentes o sus propulsores, entró un aumento de los niveles de productividad.

Interpreter 1 (SI)
Sin embargo, en el debate público que precedió a la implantación de este acuerdo de libre comercio, (...) cumplir con las promesas, según los partidarios, significaba aumentar los niveles de productividad y aumentar los ingresos.

Interpreter 2 (SI)
Sin embargo, en el debate de la opinión pública, esta instrumentación del acuerdo de libre comercio solamente significaba incrementar los niveles de productividad.

Interpreter 3 (CI)
Pero, en el debate público realizado antes de la implantación del TLC, se igualaba este tratado con un aumento en la producción, y un aumento en los ingresos.

Interpreter 4 (CI)
Sin embargo, los debates que se llevaron a cabo públicamente antes de firmar el acuerdo del TLC, en esa época, lo que se prometía era aumentar la productividad y aumentar los ingresos de los trabajadores.

Furthermore, the greater fixation of words and phrases in memory during reading may explain the high rate of barbarisms and anglicisms. For example, the segment domestic demand appeared in all three texts. Interpreter 2 translated it correctly in SI and CI (i.e. “demanda interna”), but fell victim to the well-known anglicism “demanda doméstica” in ST. Barbarisms included the use of “inigualdad” (inequality) instead of “desigualdad”, and “similaridades” (similarities) instead of “semejanzas”. These terms were correctly translated in SI and CI. Visual interference thus seems to be stronger than interference from the audio source.

Many failures involving a change or loss of meaning seem to have been caused by expression problems such as false cognates, which can be regarded as another indication of the higher source-text interference in ST. Very few meaning failures seem to have been caused by comprehension problems. This is not surprising, since subjects had been allowed to read the text beforehand. However, this prior conceptualization was apparently overshadowed by the great coordination, memory and production demands during the actual ST process. In other words, although interpreters had read the text twice (during
preparation and while sight-translating), some of them seemed to have difficulty coordinating the silent reading and oral production efforts.

(b) *Simultaneous*: Most failures observed in SI consisted of omissions (32%) and changes in meaning (30%). Elements that were most frequently omitted by all interpreters included (in decreasing order) nouns in enumerations, modifiers (adjectives and adverbs), short subordinate clauses, numbers and proper names. About a third of these omissions occurred in long and dense sentences, with high processing capacity requirements. For the remaining two thirds, it is difficult to identify the cause of failure, as the sentences in question did not contain an obvious problem trigger. Failures may have been the result of a “chain reaction” (Gile 1995) or a deficit in the M Effort. Example 4 illustrates omissions in a dense segment. The underlined English items were omitted in Spanish. There is also a meaning error in *offloading of state responsibilities*, translated wrongly as “incremento de la responsabilidad pública” (*increase in public responsibility*), which may reflect a chain reaction. This meaning error is underlined in the Spanish text.

Example 4

Text B

Successive waves of corporate restructuring, such as bankruptcies, mergers, takeovers, and downsizing, have been accompanied by public sector restructuring, with downsizing, deregulation, privatization, and offloading of state responsibilities. Public sector spending and employment have declined sharply, and publicly owned enterprises in strategic sectors such as energy and transportation have been transferred en masse to the private sector.

Interpreter 2

El paso sucesivo de lo que era la reestructuración corporativa, con las fusiones y el downsizing, se ha visto acompañado por la reestructuración del sector público y también lo que es la desregularización, la privatización y la mayor… o el… el incremento de la responsabilidad pública. Y las compañías de… o que…… como por ejemplo las compañías de servicio, todas ellas relacionadas al sector público, han sido transferidas al sector privado.

Changes in meaning seem to have been caused mostly by comprehension problems, which themselves could reflect insufficient processing capacity for the Listening and/or Memory Efforts. Like omissions, they occurred in dense and complex passages, but also sporadically, in sentences without any specific textual problem triggers. The passage in Example 5 seems to have been particularly difficult; both subjects in SI and one in CI failed to understand the relation between the social adjustments announced, which were actually clearly stated and not vague, and the promise of rising productivity levels. Interpreter 1 and...
used a negative sentence (“no social adjustments were promised”), followed by a disjunctive conjunction (“however they promised higher incomes”), which makes the sentence incoherent (i.e. if there will be no social adjustments, there is no need for “however” before higher incomes, since this is a positive result). Interpreter 3, though she changed the source text meaning also, produced a coherent passage (“no adjustments of any kind were promised, but rather higher incomes and high productivity”).

Example 5

Text B

FTA and NAFTA boosters did not promise vague social adjustments, however; they sold the agreements based on rising productivity and rising incomes.

Interpreter 1 (SI)

El TLC y el Área de Libre Comercio, sus partidarios no prometieron grandes ajustes sociales, pero vendieron estos acuerdos basados en esa idea de una mayor productividad y mayores ingresos.

Interpreter 2 (SI)

El TLC no prometió ajustes sociales, sin embargo aquellos que lo promocionaban sí vendieron el acuerdo diciendo que iba a incrementar el salario entre otras cosas.

Interpreter 3 (CI)

Aquellos que apoyan el tratado de libre comercio no prometieron en ningún momento ajustes sociales (…), sino un aumento en la productividad y un aumento en los ingresos.

Nearly 20% of the changes in meaning in SI concerned numbers. All three texts had numbers, mostly dates and percentages. There was only one six-digit figure in one text. The mistakes observed in our data seem to corroborate, to a certain degree, the trend reported in the experimental study by Mazza (2001). Entire dates and small integers (2 digits) were almost always interpreted correctly, while ranges of dates and percentages proved troublesome for all interpreters (in more than 50% of the cases they were wrong). Furthermore, we noted a different approach for dealing with numbers between SI and CI. More figures were omitted or expressed by approximation (with “almost”, “nearly”, “a lot of”) in CI than in SI, but more mistakes were made in SI. In other words, interpreters tried to convey the exact figure in SI, whereas in CI they often omitted numbers or gave an approximation.

Expression problems (37%) were less frequent in SI than in ST (75%), but more common than in CI (24%). They consisted of syntax and grammatical mistakes similar to those observed in ST (lack of subject-verb agreement, loss of reference) and were probably caused by short-term memory failures.
(c) *Consecutive*: Most failures observed were omissions (44%) and changes in meaning (29%). Omissions were more frequent and of a different nature than in SI. While in SI they involved the loss of specific information, such as figures, names, adjectives or adverbs, elements of enumerations, etc., in CI, interpreters sometimes omitted entire passages. We believe that most omissions and changes in meaning were due to note-taking failures, as interpreters seemed to have trouble understanding their notes or recalling information. This hypothesis is consistent with observations reported by Mead (2000) in his study of trainee interpreters’ pauses in CI, in which subjects felt that hesitation resulted as much from problems in rereading notes and resolving logical inconsistencies as from linguistic problems. As can be seen in the following example, interpreter 5 had trouble with the segment *investment flows* in CI, but translated it correctly in ST. Therefore, this mistake does not seem to stem from a lack of comprehension or unknown terminology, but from a failure either in taking notes or in deciphering them.

**Example 6**

**Text A**

While trade and *investment flows* increased dramatically, per capita income actually declined (…) 

Interpreter 5 (CI)

Según el experto… eh… hubo un aumento del flujo y…… eh… un aumento del flujo de caja, pero una disminución de los ingresos.

**Text B**

*Two-way investment flows have also increased greatly* (…) 

Interpreter 5 (ST)

Los flujos de inversión en ambos sentidos también han aumentado… eh… grandemente.

With respect to note-taking failures, cohesive ties and conceptual relations seemed to pose a serious problem for all subjects. They recalled ideas and words, but sometimes forgot the exact relationship between them — as in rendering *the impact on workers* by “el impacto de los trabajadores” (*the impact of the workers*). This finding might seem surprising, given that all interpreters were experienced professionals trained in CI. However, interpreters today work more in the simultaneous than in the consecutive mode, so some degradation in note-taking technique can be expected if this skill is practiced very infrequently.

Changes in meaning were sometimes substantial, with the interpreter’s
version only faintly resembling the content of the original or even amounting to a “parallel speech”, as illustrated in Example 8, where the subject had apparently noted isolated items and failed to establish the exact relationship among them: growth in service sector employment in urban areas is translated as increase in the importance of urban areas, migration and services; developed economies is other countries economically developed with higher social and economic stability, and the last idea is rendered as most of the country’s growth after NAFTA is in the privatization sector.

Example 8

Text C

The most important trend in urban employment in Mexico is the growth in service sector employment, as is happening in most economies. But rapid employment and production growth in trade and service industries poses two problems for the Mexican economy. Unlike service sector jobs in developed economies, Mexico’s non-industrial activities do not include a strong and dynamic sector of high value-added services. Even in the case of the growing employment in financial service activities, which is a process clearly associated with privatization (…)

Interpreter 2

La tendencia… esta tendencia de mayor importancia en las zonas urbanas, es decir, de mayor expansión y emigración en las zonas urbanas, del sector urbano, mayor ampliación en el sector de servicios e inclusive de la privatización ha generado dos problemas graves en México. México, vemos que en el sector de actividad industrial no tiene como otros países de mayor desarrollo económico, mayor estabilidad económica y social… grandes servicios de valor agregado y gran parte de la expansión que se ha dado en el país después de la instauración del TLC ha sido más bien en lo… que es el sector de la privatización (…)

The fact that there were fewer expression problems in CI than in SI and ST can be explained by the separation of the production phase from the reception and analysis phase in CI. Moreover, there is a lower risk of source-text interference because of the limited duration of verbatim memory for auditory information (Crowder 1972; Danks & End 1987).

Conclusions

Despite the methodological limitations of this experimental study, our results indicate that there are some important differences between the constraints involved in ST and in interpreting from an oral source. In SI and CI, memory
saturation and note-taking problems seem to account for a great number of the failures observed, whereas the continuous presence of the source-language text seems to be the greatest obstacle for the sight translator, impacting on TL expression and on the coordination of silent reading and oral translating. Visual interference seems to be stronger than audio interference, and the sight translator may have to devote more effort to resisting this influence in ST than in SI, sometimes at the expense of fluency. Although it may seem that there is almost no Memory Effort in ST because source-text information is always accessible, our results indicate that the sight translator has to rely on short-term memory to retrieve information from the beginning of sentences, or the formulation s/he has already embarked on, especially where grammatical structures differ markedly between the two languages. In this regard, one of the most effective coping tactics would be to mark key elements and segment units during the preparation phase, if the interpreter is allowed to read the text prior to sight-translating. Gile (1995), for instance, suggests using slashes and brackets to separate subordinate clauses from main clauses, and Martin (1993) recommends using active voice, especially when translating from English into Romance languages such as Spanish, with inflection and grammatical gender. A specific training methodology for ST would undoubtedly help to make interpreters more aware of these particular constraints. More research is certainly needed to fully explore the issues raised by this study and to increase our understanding of ST, this unique and complex task that has remained largely unaccounted for in interpreting studies.

Notes

1. Interpreting is used here in reference to the spoken modality. Sign language interpreting has not been taken into consideration.
2. This article presents some of the results of the author’s MA thesis submitted to the University of Montreal in December 2002 under the supervision of Prof. Georges L. Bastin. The title of the thesis is *La traduction à vue. Étude comparative de trois modes d’interprétation*.
3. Five of the six interpreters were in Caracas, and one was in Montreal. The same person reading the text for CI was in both locations.
4. For an analysis of the interpreters’ coping tactics in ST, SI and CI, see Agrifoglio (2003).
References


Appendix

Text B used for the ST task (underlined passages were slightly modified for the CI and SI tests).

False Promises: Canada in the Free Trade Era

It has been 12 years since the Canada-U. S. Free Trade Agreement (FTA) was implemented and seven years since it was renegotiated, extended to Mexico, and renamed NAFTA, the North American Free Trade Agreement. And NAFTA is now the template for the Free Trade Area of the Americas initiative, for which presidents and prime ministers from the hemisphere were scheduled to meet in Quebec City in April 2001 to set a course for its completion by 2005.

Major adjustments have taken place in the Canadian economic and social landscape since the government promised a new dawn of prosperity in 1989, when the FTA went into effect. Trade with the U. S. has expanded dramatically during these 12 years. Canada's exports are now equivalent to 40% of its gross domestic product, up from 25% in 1989. More than half of Canadian manufacturing output now flows south of the border, and Canadian producers account for less than half of domestic demand. This north-south trade boom has been mirrored by a relative decline in trade within Canada. Trade has also become more concentrated with the U. S. — from 74% to 85% of exports — and less concentrated with the rest of the world. Two-
way investment flows have also increased greatly. Both Canadian foreign direct investment and
portfolio flows to the U.S. grew much faster than did U.S. flows to Canada during this period.
Growth performance in the 1990s was worse than in any other decade of the last century except
the 1930s. Average per capita income fell steadily in the first seven years of the decade and only
reached 1989 levels by 1999. By comparison, per capita income in the U.S. grew 14% during
this period.

Canada has become a noticeably more unequal society in the free trade era. Real incomes
declined for the large majority of Canadians in the 1990s; they increased only for the top fifth.
Employment became more insecure and the social safety net frayed. While productivity has
grown — rapidly in some sectors — wages have not. And the overall productivity gap with the
U.S. has not narrowed as free trade proponents predicted; rather, it has widened recently.
Unemployment in the 1990s averaged 9.6% compared to the U.S. rate of 5.8%. This level of
unemployment was higher than in any other decade since the 1930s. While average worker
earnings were stagnant, casualized (or nonstandard) employment exploded, as people struggled
to cope during the prolonged slump and restructuring.

Paid full-time employment growth for most of the decade was almost nonexistent. The absolute
number of full-time jobs did not recover its 1989 level until 1998. Self-employment skyrocketed,
accounting for 43% of new job creation between 1989 and 1999. Part-time employment
accounted for another 37% of net employment growth during 1989–99. More than half of this
growth was involuntary — due to the inability of people (mainly women) to find full-time work.
Temporary work grew from 5% to 12% of total employment during the first half of the decade.
Successive waves of corporate restructuring — bankruptcies, mergers, takeovers, and downsizing
— have been accompanied by public sector restructuring — downsizing, deregulation, privatiza-
tion, and offloading of state responsibilities. Public sector spending and employment have
declined sharply, and publicly owned enterprises in strategic sectors such as energy and transpor-
tation have been transferred en masse to the private sector.

The Canadian employment situation has unquestionably improved in the last two years, though
workers have yet to reap any benefits in terms of improved earnings. However, with the erosion
of their social protections Canadians have become more dependent on the private labour market
than at any time in the last 40 years. As one observer put it, workers are now flying without a
net. As the economy slows in 2001, this employment resurgence may prove to be short-lived, and
the future for Canadian workers is once again clouded.

Canadians are far enough along now in this adventure to answer the question: “Have the FTA
and NAFTA delivered the goods that were promised?” The answer depends on whom you ask.
For those who wanted to diminish the role of government as an active player in the economy and
provider of collective social protections, and for those who wanted to improve the environment
for business competitiveness by disciplining wages, NAFTA and its predecessor have been a
success. But in the public debate that preceded implementation of the free trade deal, delivering
the goods, according to proponents, meant rising productivity levels and rising incomes. It meant
ushering in a golden age of prosperity for all Canadians. That was the promise to the Canadian
public. The answer here is clearly no.

FTA and NAFTA boosters did not promise vague social adjustments, however; they sold the
agreements based on rising productivity and rising incomes. By this standard the treaties have
clearly not delivered, and their proponents can only offer the weak defence that things would have been worse in the absence of the agreements. Workers and policy makers in the FTAA countries may want to take the Canadian experience into account before buying into these unproved promises.

Interpreter 5 – Sight Translation

Expression failures are marked with single underline; meaning failures are marked with double underline. Dual cases (expression and meaning problems) are marked with italics.

Han pasado doce años desde que… el tratado de libre comercio entre Canadá y Estados Unidos se puso en práctica y siete años desde que se renegoció, se amplió a México y se renombró Tratado de Libre Comercio de América del Norte. El TLC ahora es el modelo para el Área de Libre Comercio de las Américas… de la iniciativa… perdón… para la iniciativa del Área de Libre Comercio de las Américas, para la cual… para la cual los presidentes y los primeros ministros del hemisferio tienen… pautado… eh… una reunión en la ciudad de Quebec en abril del año 2001 y harán su… completación o culminación para el año 2005.

Los ajustes principales han tenido lugar en la economía canadiense y en el panorama social desde que el gobierno prometió una nueva… un nuevo horizonte de prosperidad en el año 1989, cuando el TLC se puso en práctica. El comercio con los Estados Unidos se ha expan-dido espectacularmente durante estos doce años. Las exportaciones de Canadá ahora tienen un equivalente del 14% del PNB y aumentó del 25% en el año 1989. Más de la mitad de la producción manufacturera canadiense ahora fluye hacia el sur de la frontera y los productores canadienses…… eh… reciben menos de la mitad de la demanda doméstica. Este comercio norte-sur se ha reflejado por una… eh… ha tenido como reflejo una declinación relativa en el mercado con Canadá. El comercio también se ha concentrado mucho más con los Estados Unidos, ha pasado del 74% al 85% en lo que respecta a las exportaciones y está menos concentrado con el resto del mundo. Los flujos de inversión en ambos sentidos también han aumentado… eh… grandemente… tanto…… la inversión directa extranjera canadiense y la cartera…… perdón… tanto la cartera como la inversión directa extranjera hacia Canadá fluye…… No. La cartera y la inversión directa extranjera canadiense fluye a… hacia los Estados Unidos de una manera mucho más rápida de lo que era el flujo de los Estados Unidos hacia Canadá durante este periodo.

El rendimiento del crecimiento en los años 90, o en la década de los años 90, fue peor que en cualquier otra época del… siglo, a excepción de la década de los años 30. El ingreso per cápita… per cápita promedio… eh… se mantuvo estable en los primeros siete años de la década y únicamente se recuperó… recuperó los niveles en 1989 para el año 1989. En comparación, el ingreso per cápita en el creci… En comparación, el ingreso per cápita en los Estados Unidos aumentó en 14% durante este periodo.

Canadá se ha vuelto una sociedad más desigual en el área de libre comercio, esto es algo que es muy palpable. Los ingresos reales disminuyeron para la gran mayoría de los canadienses en la década de los años 90. Únicamente aumentaron a los… a los primeros cinco. El desempleo se volvió más inseguro y la seguridad social se tambalea. Mientras que la productividad ha aumentado rápidamente en algunos sectores, no ha sido lo mismo para los salarios. Y la brecha de productividad total con los Estados Unidos no ha disminuido, tal y
como lo habían predicho los... eh... partidarios del libre comercio. En su lugar o por el contrario han disminuido, sobre todo recientemente.

El desempleo en la década de los años 90 tuvo un promedio de 9,6%, comparado con la tasa norteamericana... estadounidense de 5,8%. Este nivel de desempleo fue mayor que en cualquier otra década, desde la década de los años 30. Mientras que el... el... las ganancias del trabajador promedio se estancaron... eh... surgió un empleo... no estandarizado, no normalizado... un empleo informal... mientras que... eh... las personas luchaban por... eh...... luchaban para lidiar durante este proceso de reestructuración y de estancamiento prolongado.

El empleo a tiempo completo y pagado... prácticamente era... fue inexistente durante toda la década. El número total de trabajos a tiempo completo no fue recuperado... no recuperó su nivel de 1989 sino hasta 1998. Las libres profesiones se dispararon... y... eh... llegando a 43% de... nuevos empleos entre 1989 y 1999. El empleo a medio tiempo... eh... llegó a 37%...... en lo que respecta al crecimiento del empleo neto durante el periodo de 1989 a 1999. Más de la mitad de este crecimiento fue involuntario, debido a la incapacidad que tenían las personas, específicamente las mujeres, de encontrar trabajos a tiempo completo. El trabajo temporal aumentó... pasó de 5% a 12% con respecto al empleo total durante la primera mitad de la década.

Se produjeron reestructuraciones corporativas en masa, en lo que respecta a las bancarrotas, fusiones, reestructuraciones, ajustes... esto todo... eh...... esto se produjo al mismo tiempo que la reestructuración del sector público, en donde también se produjo una... una desregulación, una privatización y la descarga de las responsabilidades del Estado. El gasto del sector público y el empleo del sector público también disminuyeron ampliamente, y las empresas del Estado en los sectores estratégicos tales como la energía y el transporte fueron transferidos al sector privado de una manera masiva.

La situación del empleo canadiense ha mejorado... sin lugar a dudas en los últimos dos años, a pesar de que los trabajadores aún no han percibido los beneficios en lo que respecta a mejorar sus ganancias. Sin embargo, al... al... al estar socavada la protección social de los canadienses, se han vuelto cada vez más dependientes del mercado privado, si se compara... eh... con la situación en los últimos 40 años. Tal y como lo... consideró un observador, ahora los trabajadores o los obreros están volando, entre comillas, sin tener una base o un nido al que apoyarse. A medida que la economía disminuye en el año 2001, este resurgimiento del empleo... eh... va a resultar ser de corto plazo y una vez más el futuro para los trabajadores canadienses se verá ensombrecido.

Ahora los canadienses que están embarcados en esta aventura tratan de responder a la siguiente pregunta; ¿Acaso el TLC y el TLC de América del Norte... produjeron las promesas... eh... que se habían pensado? La respuesta depende de a quién se le pregunte. Para aquellos que querían disminuir el papel del gobierno como un actor activo en la economía... y eh... como proveedor de lo que son las protecciones sociales colectivas y para aquellos que quieren mejorar el entorno para la competencia comercial al disciplinar, por así decirlo, los salarios, el TLC de América del Norte y su predecesor han sido un éxito. Pero en la arena pública que antecedió la puesta en práctica de este tratado de libre comercio, la entrega de bienes, de acuerdo con los partidarios, significó el aumento de los niveles de productividad...
y de los ingresos… y el aumento de los ingresos. Esto significó el florecimiento en una edad
de oro de prosperidad para todos los canadienses. Esa fue la promesa para el público
canadiense. Aquí la respuesta es evidentemente que no.

El TLC y el TLC de América del Norte… perdón… los partidarios del TLC y del Tratado de
Libre Comercio de América del Norte no prometieron ajustes sociales vagos. Sin embargo,
ellos vendieron estos tratados basándose en un aumento de la productividad y en aumento
de los ingresos. A través de este… eh… esta norma o estándar, los tratados evidentemente no
han dado… no han cumplido con sus expectativas y los partidarios únicamente pueden
ofrecer una defensa débil de que… se defienden diciendo de que las cosas hubiesen sido peor
si no se hubiese puesto en práctica este tratado. Los trabajadores y los… eh… los políticos en
los países del… eh… del Tratado de Libre Comercio de las Américas querrán tomar en
consideración la experiencia canadiense antes de… eh… tomar unas empresas… antes de
tomar en consideración unas promesas que aún no han sido cumplidas.

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