

Exploring the Impact of Directionality on Disfluencies in Simultaneous Interpreting

Sylwia Gierszal ^{a, *}, Andrzej Łyda ^a

^a *University of Silesia in Katowice, Poland*

Received October 16, 2023; Revised December 8, 2023; Accepted December 17, 2023

Abstract. This paper focusses on the concept of directionality in interpreting. The main aim of this study is to investigate four types of disfluencies in simultaneous interpreting performed by students and the impact of pausal phenomenon on directionality. Disfluencies being inseparable element of speech are the factor that has a substantial influence on interpreting process including directionality. The participants in this study were 12 advanced interpreting students who interpreted simultaneously two texts from A language into B language and two texts from B language into A language. Their outputs were later analysed taking into consideration four types of disfluencies and verified how they influence directionality. This study offers some insights into occurrences of disfluencies. Research findings show that students display tendency to produce more disfluencies while interpreting into A language. In addition, the obtained results highlight the necessity to focus not only on fluency but also on disfluencies while interpreting training to improve quality in simultaneous interpreting in both directions.

Keywords: *pausal phenomena, pauses, simultaneous interpreting, directionality, disfluencies.*

Гершал Сільвіа, Ліда Анджей. Дослідження впливу спрямованості на порушення в синхронному перекладі.

Анотація. Цю статтю присвячено поняттю напрямку в усному перекладі. Головною метою цього дослідження є вивчення чотирьох типів порушень у синхронному перекладі, здійснюваному студентами, та вплив явища пауз на напрямок перекладу. Бувши невід'ємним елементом мовлення, порушення є чинником, який суттєво впливає на процес усного перекладу, зокрема на його напрямок. У дослідженні взяло участь 12 студентів-перекладачів, які перекладали синхронно два тексти з мови А на мову Б та два тексти з мови Б на мову А. Пізніше їхні результати було проаналізовано з урахуванням чотирьох типів порушень і перевірено, як вони впливають на напрямок. Це дослідження дає певне уявлення про те, як виникають порушення в мовленні. Результати дослідження демонструють, що студенти виявляють тенденцію до більшої кількості порушень під час усного перекладу на мову А. Крім того, одержані дані вказують на необхідність зосередження уваги не лише на біжучості, а й на її порушеннях під час навчання усного перекладу для покращення якості синхронного перекладу в обох напрямках.

Ключові слова: *паузальні явища, паузи, синхронний переклад, напрямок, порушення.*

* Corresponding author. Sylwia Gierszal,  <https://orcid.org/0000-0002-8068-6211>,  sylwia.gierszal@us.edu.pl

Introduction

Directionality being one of the most contentious issues in the interpreting and translation studies is inherently connected with the question whether the interpreters should interpret only into the native language or also into a foreign language.

B-language interpreting has historically been perceived as being of lower quality, less fluent, as pointed out by Herbert (1953, p. 61), who claims that the interpreter should only use their mother tongue and by Seleskovitch (1978, p. 100) arguing that “simultaneous interpretation can only be done properly into one’s native language.” In addition, according to Seleskovitch (1968), it is the native language that allows the interpreter to best render the text, even though the interpreters have excellent knowledge of both A and B languages. In a similar vein, Selinker (1972) argues that interpreting into a foreign language is more likely to cause stress or ‘backsliding’, to use his term, and therefore the interpreter should only work in a language that causes less stress, i.e. the dominant or native language. Finally, it is often believed that simultaneous interpreting into a foreign language, or a non-dominant one, focuses on the extra cognitive load and greater need to monitor syntactic structures and prosodic features when speaking in B language and this is a reason for the loss of quality (Schweda-Nicholson, 1992).

However, This traditional approach presented by “Paris School” (i.e. Herbert, 1953; Déjean La Féal, 1998; Seleskovitch, 1999) has been questioned by many researchers (Denissenko, 1989; Snell-Hornby, 1997; Lorenzo, 1999; Campbell, 1998). At this point it is worth presenting Denissenko (1989), who argues that comprehension in the mother tongue being the most essential factor for transferring the message may also be the most constraining factor. This interpreter’s limitation results from “a wider choice of possible ways and means of conveying the same message.” Therefore, interpreting into A language may require more time than into B language where the scope of adequate means, for instance idiomatic phrases, to render the message is to some extent narrower.

Despite the plethora of studies on directionality, research that aims to explore the optimal interpreting direction still shows contradictory results, namely some researchers (Daro et al., 1996; Chang, 2005) find evidence in favour of interpreting into A language, while others (Tommola & Laakso, 1997; Tommola & Helevä, 1998, Wyatt et al., 2021) point out that interpreting into B may constitute equally or even more successful rendition. However, it should be noted that not only direction of the interpreting may influence interpreting output but other factors such as the source text context (Chang, 2005), expertise of interpreters (Barik, 1994; Bartłomiejczyk, 2004), language background of the recipients (Gile, 1990), the number of training hours in a particular direction (Donovan, 2004) and last but not least the combination of language pairs (Al-Salman & Al-Khanji, 2002; Kurz & Fäber, 2003).

Finally, the underlying rationale for interpreting both into A and B languages is geopolitical situation in the world which leaves behind historical dichotomy in favour of empirical studies on directionality. Therefore instead of rejecting the opposite

direction of interpreting performance of lower quality, it seems justified to investigate the reasons of disfluency to be able to provide a successful output in both directions.

Given the fact that in human communication words are almost always accompanied by additional components, i.e. disfluencies including hesitations, repetitions, restarting, false starts, restructuring, repairs, and consonant or vowel lengthening, the same pausal phenomena are reflected in simultaneous interpreting as there is a close affinity between these two processes, namely speech and simultaneous interpreting.

What needs to be emphasised here is that full understanding of speech production complexity including simultaneous interpreting requires investigating not only factors determining fluency but also disfluencies that constitute a fundamental area of research.

Disfluencies due to their multiple functions and the diversity of terms as observed by Shriberg (1994):

A rather bewildering number of different terms have been used to refer to classes of DFs, including: abridged repair, aposiopesis, appropriateness repair, anacoluthon, correction, different repair, error repair, false starts, filler, fresh start, filled hesitation, filled pause, full sentence restart, insertion, lexical repair, modification repair, production repair, repeat, repetition, reformulation, restart, sentence correction, sentence incompleteness, sentence restart, unfilled pause, word change and word omission. (p. 10)

reveal that in many cases they refer to the same hesitation phenomena analysed from various scientific perspectives, and this, in turn, generates a number of categorisation systems, just to name a few: Johnson et al. 1961, Magno Caldognetto et al., 1982, Shriberg, 1994, Tissi, 2000, Cecot, 2001.

As regards diversity of taxonomy, the general character of the categories distinguished by Johnson (1961, p. 3–4) might serve as a background within many disciplines including simultaneous interpreting where it is successfully implemented into the analysis of disfluencies.

1. Interjections of sounds, syllables, words or phrases. This category includes “extraneous” sounds such as Uh, er and Hmm, corresponding to the filled pauses of later research.
2. Part-word repetitions.
3. Word-repetitions.
4. Phrase repetitions.
5. Revisions, i.e. instances in which the content of a phrase is modified, or in which there is grammatical modification. This category also includes change of pronunciation.
6. Incomplete phrases.
7. Broken words.
8. Prolonged sounds.

Based on the above categories, four types of disfluencies have been distinguished for the purpose of this study, namely filled pauses, restructurings, repetitions and lengthenings.

The first category – filled pauses, regardless of the discrepancies arising from the linguistic perspectives studied, are the most numerous type of disfluencies and occur in the interpreting output as prolonged *yyy*, short *y*, *uhh*, *uhm*, *ee* and several other phonological variants in different languages.

The second category comprises restructurings which in this study denotes corrections of single words, phrases and repairs due to lexical or grammar changes and false starts. In addition, restructurings may also be represented as truncated words which are either completed or left to be replaced by a new word or phrase.

As concerns the repetitions of words or phrases (self-repeats), they constitute the third group of disfluencies after filled pauses and restructurings and refer to particular words or phrases. Repetitions are tools used to replace one word or phrase by the same one which allows the interpreter to gain time to find the appropriate lexical item while rendering their text. Finally, the last category constitutes lengthenings where the speaker prolongs the particular sound to plan the continuation of speech. It should be noted here that lengthenings taken into consideration are not the result of stuttering.

To sum up, this study is an attempt to answer whether directionality impacts the quality in simultaneous interpreting output performed by students taking into consideration four aforementioned disfluencies.

Method

Participants

The study included 12 students of the Department of English Philology in Sosnowiec (University of Silesia), half the subjects were women, the other half men. The age span of the subjects ranged from 22 to 24. All the participants were native speakers of Polish and lived in Poland while English was their language B. All the subjects were students of the first year of a MA programme in translation and interpreting who started simultaneous interpreting classes during their third year of a BA programme. In the course of simultaneous interpreting classes the students practised interpreting from Polish into English and from English into Polish.

Materials and Procedure

The corpus for analysis consists of 4 source texts, two from English into Polish and two from Polish into English, each text was about 15 minutes. The students were not familiar with the contents of the source texts before interpreting. The speakers and topics of speeches were presented before interpreting. The speeches have been selected and adjusted to the training level and referred to everyday aspects of life using simple language while specialised vocabulary occurred sporadically.

Each of the source texts was interpreted by 12 subjects, which amounts to 48 simultaneous interpreting outputs that were recorded during separate sessions in

the language laboratory and transcribed verbatim for analysis of disfluencies. The first stage was listening to the recordings and making transcripts, followed by a re-listening by the teacher with a review of the transcript to verify that all disfluencies had been covered. In the transcripts, the original spelling has been retained, along with additional comments from the trainee interpreters such as a grunt, a sigh or a laugh.

Results and Discussion

As regards the analysis of disfluencies, they were investigated in terms of their number in a particular interpreting output, namely while interpreting into A language and into B language. Looking at the total numbers, the following tendencies can be observed as presented in Table 1 below.

Table 1
Distribution of Disfluencies by Directionality

	Filled pauses	Restructurings	Repetitions	Lengthenings	Total
Eng-Pl	878	334	178	108	1498
Pl-Eng	342	73	87	41	543

The results of the analysis reveal that that the usage of filled pauses prevailed in both interpreting directions, i.e. from English into Polish and from Polish into English. The number of filled pauses in interpreting outputs into Polish amounts 878 (58.61%) and into English 342 (63.06%). Noteworthy is the fact that filled pauses constitute the most numerous group of disfluencies in all analysed target texts and their occurrence is illustrated in two extracts below.

//Kiedy **yy** Apple zaczęło rosnać, zatrudniliśmy kogoś kto miał nam pomóc, ale potem nasze **yy** wizje przyszłości się różniły. Nasz zarząd **yy** stanął po jego stronie. Kiedy miałem 30 lat **yyy** straciłem pracę. Wszystko to było bardzo przytłaczające. Nie wiedziałem co robić przez kilka miesięcy. Miałem wrażenie, że zawiodłem **yy** przedsiębiorców//

//It's being used in nuclear plants/ It's being used despite its ... detrimental effects, detrimental ... features/ It is being used by the **yyy** food industry and the **eee** drug industry/ So, approximately, half a century ago, Nathan Zohner conducted a study **yyy**, in America/

The findings show that students produce more filled pauses interpreting from English into Polish. Quite predictably, the tendency to overusing filled pauses in both directions can be attributed to difficulties with split attention between active listening and memorising, in particular working under the extreme time pressure. Therefore, whenever students encounter a problem with rendition of texts they resolve to using filled pauses as a time gaining strategy as argued by Clark and Wasow (1998, p. 201),

who emphasise that “When speakers cannot formulate an entire utterance at once, they may suspend their speech and introduce a pause or filler before going on”.

As for the distribution of restructurings, they are used by students to replace a truncated word or self-repair to express the same message in a different way or to express a completely different message. Restructurings may result from uncertainty or errors that are instantly noticed and repaired as indicated in the following examples from transcripts:

//Ee.. chcą normalnych żyć w żyć... chcą normalnych rzeczy w życiu.//

//and I'm willing to bet most of you has started their... have started studying their studying of foreign languages through knowing how to//

The data obtained in the course of the analysis of restructurings confirm a tendency to use them in both interpreting directions, but it purports to be significantly more frequent in interpreting into Polish. For Fox et al. (2002) restructurings are the processes where the speakers “stop, abort, repeat or alter their turn before it comes to completion”. It should be noted that sometimes it is difficult to find whether the student wants to change merely a structure or the meaning of the interpreting output.

Data collected in reference to repetitions show that they are used to help in preparing for the upcoming utterance and to formulate the appropriate content. Repetitions can be used not only as a repeating the same phrase or word but may acquire a different meaning in particular contexts as argued by Cook (2000, p. 29) “even where the repetitions are exact, the self-same sequences of words take on new meaning in new circumstances, or in the light of what has been done or said before”. Moreover, repetitions are widely defined as “a monologic and psycholinguistic phenomenon, i.e. one of the speech disfluencies typically occurring in the interpreters’ output” Straniero (2012, p. 29), which by and large, is considered as proof of self-monitoring process and online planning in the simultaneous interpreting.

//I was teaching basically everything, many subjects/ I could enumerate them until the end of this speech/ And lately, in my life, there was a great ... a great mile-milestone has been achieved and currently//

//Nie miałem... nie miałem miejsca do spania więc zatrzymałem się na podłodze mojego kolegi.//

Repetitions in this study are usually formed as a strategy of gaining time or reconnecting to an already spoken part of a sentence with the latter type being frequently reflected in students’ interpreting output.

The analysis shows that lengthenings are the least numerous group of disfluencies but still used considerably more often while interpreting into Polish than into English. Many examples reflect not only final vowel lengthening which is in line with the general tendency to lengthen final vowels in words and sentences (Klatt, 1975; Lindblom, 1978) but initial phonemes as well.

//Oczywiście to było nie możliwe żeby połączyć kropki **kiedyyy** byłem na studiach.

//It was one of the, those were two big awakenings, it was like cold water on my- pouring on my hot head that maybe I should ss- change my thinking a little bit aaand I did that.//

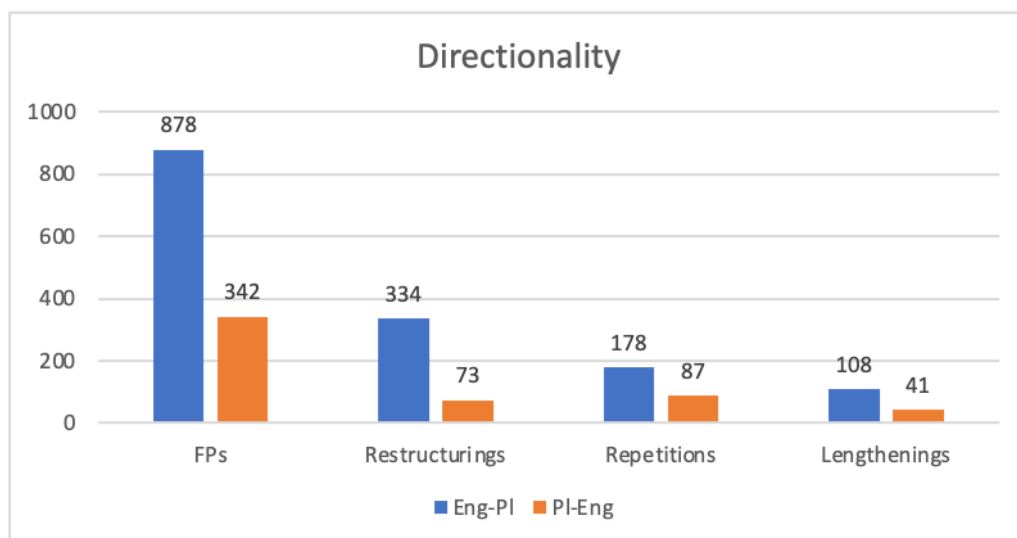
The discerned trend to lengthening initial and final vowels, but also consonants is particularly evident when translating into Polish language, for example: rep *lt-toksyyczny gaz*/, */zzyska na tym*/, */na całym terenie uuu-niwersytetu*/, *uu..uczelnia miała*.

It can be observed that lengthenings may serve to bridge the gap while waiting for a new material or express hesitation if supported by intonation. In addition, lengthening of the final vowel or consonant of a word does not mean interruption of speech, but continuation while processing the new part of speech to be uttered.

As illustrated below, students use disfluencies in their interpreting outputs in varying amounts, but with an indication that they use more of them when interpreting into Polish.

This observation is also confirmed by carrying out a statistical analysis.

Figure 1



Distribution of Disfluencies by Directionality

The analysis of the target texts shows that filled pauses occupy a dominant position on the list of disfluencies, 58.61% in A language and 63.06% in B language and are followed by restructurings 22.30% for A and 13.44% for B, repetitions 11.89% for A and 16.02% for B and lengthenings 7.21% for A and 7.55% for B. It provides evidence that the direction in which the interpreting is conducted has a strong impact on the occurrence of disfluencies.

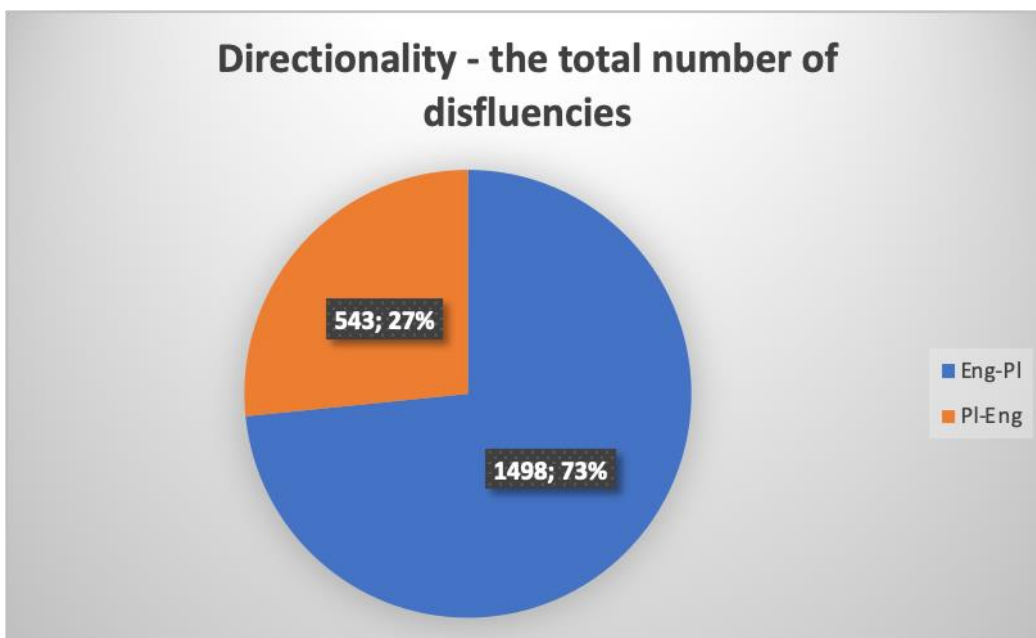
A statistical analysis was conducted to support the results obtained in the quantitative analysis to check whether there is a relationship between the incidence of disfluency and directionality.

Table 2
Interpreting Direction Versus Percentage of Discontinuity (Total) in the Utterances (Wilcoxon Test)

Directionality	N	Arithmetic mean	Median	Standard deviation	Wilcoxon Test p-value
English-Polish	12	4.43666	3.73784	2.15245	.012064
Polish-English	12	2.47831	1.98278	1.70433	

The results show that there are statistically significant differences in the percentage of disfluencies (Total) in the utterances in the considered populations determined by the interpreting directions ($p\text{-value} < .05$). It seems that significantly more disfluencies in the utterances concern the English-Polish direction (for this direction the mean and median are higher than for the Polish-English direction).

Figure 2
Percentage and Number of the Total Disfluencies in the SI Output



As can be seen from the Fig. 2 above, a marked difference was found between the two directions, which reflects the data obtained for particular categories of disfluencies. This may suggest that the impact of directionality on the interpreting output is prominent. The findings of significant differences in number of filled pauses

and other disfluency factors in two interpreting directions provide evidence that interpreting into A language is more problematic for interpreting students than B language.

Finally, a possible reason for the preference of interpreting into B language lies in the approach presented by Tommola and Helevä (1998), who similarly to Denissenko (1989), accentuate that:

If comprehension is central for the transmission of information content, one might expect that, for trainees, going from A to B might result in a more accurate performance than going in the standard direction of B to A. (p. 178)

This view is also supported by Al-Salman and Al-Khanji (2002), who conducted an empirical study on directionality and their results appear to be consistent with aforementioned and present studies, namely the majority of interpreting students were in favour of interpreting into their B language due to better comprehension of the source text. Nonetheless, according to Chmiel (2016) the reason behind this that students prefer interpreting into B language may be to some extent account for the fact that they are trained more in non-native language direction what is considered mainstream practice in large international organizations such as the United Nations and the European Parliament.

Contrary to prior mentioned studies, Lin et al. (2018), investigated directionality in simultaneous interpreting fluency considering five factors, *vide licet*, hesitations, interruptions, repetitions, corrections and silent pauses. Their findings also show that directionality is a substantial facet that has an impact on disfluencies, however, they reveal that interpreting into non-native language tends to yield more disfluent output than into native language. This observation is consistent with earlier survey results on interpreters' preferences over native language interpreting (Pavlović, 2007; Nicodemus & Emmorey, 2013; Choi, 2015).

Conclusions

In conclusion, disfluencies appear to be the factor that has an impact on directionality in simultaneous interpreting. The obtained results clearly confirm that while interpreting from English into Polish students produce more disfluencies. Similar results were obtained by Bartłomiejczyk (2004, 2006) where students assessed their interpreting output into A language as more problematic due to problems with comprehension, and linguistic and extralinguistic knowledge in B language. The underlying rationale for such reasoning by students may be to some extent caused by the fact that in case of encountered problems students resort to omissions. Thus, on the one hand omissions contribute to fewer number of disfluencies but on the other hand, the omitted parts may be meaningful for further understanding of the output, which may have a bearing on the quality of interpreting.

Understanding interpreting as a direction-dependent process allows a broader and more critical perspective to be taken on disfluencies. Chou et al. (2021) in their

study examined four factors of quality in interpreting (speech rate, quality of expression, completeness and delivery of information) performed by trainee interpreters. Their findings show an advantage for interpreting from language B into language A regarding delivery and quality of expression, contrary to the content category. Interestingly, they did not find any essential differences in filled and unfilled pauses between two interpreting directions which, in contrast, can be clearly observed in the case of filled pauses presented in the study that is the subject of this article.

In addition, in spite of the fact that directionality is still a controversial issue in interpreting studies, the current changing geopolitical situation requires a more flexible approach and therefore, it seems reasonable for students to practise translation in both directions while learning about their limitations.

Finally, this experimental study may contribute to a better understanding of the nature of disfluencies in terms of language direction and the above finding holds implications for interpreters training and practice. Regarding training, it appears recommendable to provide students not only with the notion of fluency but also disfluency which significantly affects the quality of their interpreting.

Disclosure Statement

No potential conflict of interest was reported by the authors.

References

- Al-Salman, S., & Al-Khanji, R. (2002). The native language factor in simultaneous interpretation in an Arabic/English Context. *Meta*, 47(4), 607-625. <http://dx.doi.org/10.7202/008040ar>
- Barik, H. C. (1994). A description of the various types of omissions, additions and errors of translation encountered in simultaneous interpretation. In S. Lambert & B. Moser-Mercer (Eds.), *Bridging the gap: Empirical research in simultaneous interpretation* (pp. 121-137). John Benjamins Publishing
- Bartłomiejczyk, M. (2004). Simultaneous interpreting A-B vs. B-A from the interpreters' standpoint. In G. Hansen, K. Malmkjear & D. Gile (Eds.), *Claims, changes and challenges in Translation Studies* (pp. 239-249). John Benjamins.
- Campbell, S. (1998). *Translation into the Second Language*. Longman.
- Cecot, M. (2001). Pauses in simultaneous interpretation: a contrastive analysis of professional interpreters' cognitive processing. An analysis of silent pauses in simultaneous interpreting. *The Interpreter's Newsletter*, 11, 63-85.
- Chang, C. C. (2005). *Directionality in Chinese/English simultaneous interpreting: impact on performance and strategy use*. Unpublished Ph.D. dissertation, University of Texas at Austin.
- Chmiel A. (2016). Directionality and context effects in word translation tasks performed by conference interpreters. *Poznan Studies in Contemporary Linguistics*, 52, 269–295.
- Choi J. (2015). Correlation between directionality, B Language acquisition and topic difficulty. *International Journal of Interpretation and Translation*, 6, 39–58).
- Chou, I. & Liu, K. & Zhao, N. (2021). Effects of Directionality on Interpreting Performance: Evidence From Interpreting Between Chinese and English by Trainee Interpreters. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.781610>

- Clark, H.H., & Wasow, T. (1998). Repeating Words in Spontaneous Speech. *Cognitive Psychology*, 37, 201-242. <https://doi.org/10.1006/cogp.1998.0693>
- Cook, M., & Laliĳee, M. (1970). The Interpretation of Pauses by the Listener. *The British Journal of Social and Clinical Psychology*, 9, 375-376.
- Darò, V., Lambert, S., & Fabbro, F. (1996). Conscious monitoring of attention during simultaneous interpretation. *Interpreting*, 1(1), 101-124. <https://doi.org/10.1075/intp.1.1.06dar>
- Denissenko, J. (1989). Communicative and Interpretative Linguistics. In L. Gran & J. Dodds (Eds.), *The theoretical and practical aspects of teaching conference interpretation* (pp. 155-157). Campanotto Editore.
- Donovan, C. (2004). European Masters Project Group: Teaching simultaneous interpretation into a B language. *Interpreting*, 6(2), 205-2016. <https://doi.org/10.1075/intp.6.2.06don>
- Fox, E., Russo, R., & Dutton, K. (2002). Attentional bias for threat: Evidence for delayed disengagement from emotional faces. *Cognition and Emotion*, 16(3), 355-379.
- Gile, D. (1995). *Basic concepts and models for interpreter and translator training*. John Benjamins.
- Johnson, W. (1961). Measurements of oral reading and speaking rate and disfluency of adult male and female stutterers and nonstutterers. *Journal of Speech & Hearing Disorders. Monograph Supplement*, 7, 1-20.
- Klatt, D. H. (1975). Voice onset time, frication, and aspiration in word-initial consonant clusters. *Journal of Speech and Hearing Research*, 18(4), 686-706.
- Kurz, I. & Färber, B. (2003). Anticipation in German-English Simultaneous Interpreting. *FORUM Revue internationale d'interprétation et de traduction / International Journal of Interpretation and Translation*, 1(2), 123-150.
- Le Féal, D. (1990). Some thoughts on the evaluation of simultaneous interpretation. In D. Bowen & M. Bowen (Eds.) *Interpreting—Yesterday, today and tomorrow* (pp. 154-160). State University of New York.
- Lin, Y. O., & Ly, O., & Liang, J. (2018). Predicting Fluency With Language Proficiency, Working Memory, and Directionality in Simultaneous Interpreting. *Frontiers in Psychology*, 9. <https://doi.org/10.3389/fpsyg.2018.01543>
- Lindblom, B. (1978) Final lengthening in Speech and Music. In E. Gårĳing, G. Bruce & R. Bannert (Eds.) *NordicProsody* (pp. 85-102). Department of Linguistics, Lund University.
- Lorenzo, M.P. (1999). La seguridad del traductor profesional en la traducción a una lengua extranjera. In G. Hansen (Ed.) *Probing the process in translation: Methods and results* (pp. 121–134). Samfundslitteratur.
- Magno Caldognetto, E., Vagges K., & Job R. (1983). Typology, distribution and duration of pauses in descriptions and interpretations of cartoons. In V. D'Urso & P. Leonardi (Eds.), *Discourse analysis and natural rhetorics* (pp. 171-178). CLEUP.
- Marmaridou, S. (1996). Directionality in translation processes and practices. *Target. International Journal of Translation Studies*, 8(1), 49-73. <https://doi.org/10.1075/target.8.1.04mar>
- Nicodemus B., & Emmorey K. (2013). Direction asymmetries in spoken and signed language interpreting. *Bilingualism: Language and Cognition*, 16, 624–636. <https://doi.org/10.1017/S1366728912000521>
- Pavlović N. (2007). Directionality in translation and interpreting practice: report on a questionnaire survey in Croatia. *International Journal of Interpretation and Translation*. 5, 79–99. <https://doi.org/10.1075/forum.5.2.05pav>
- Seleskovitch, D. (1978a). Interpreting for International Conferences. Pen and Booth.
- Seleskovitch, D. (1978b). Language and Cognition. In D. Gerver, & H. W. Sinaiko (Eds.), *Language interpretation and communication* (pp. 333-341). Springer.
- Seleskovitch, D. (1986). Comment: Who should Assess an Interpreter's Performance? *Multilingua*, 5(4), 236. <https://doi.org/10.1515/mult.1986.5.4.236>

- Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics in Language Teaching*, 10, 209-241. <https://doi.org/10.1515/iral.1972.10.1-4.209>
- Shriberg, E. (1994). *Preliminaries to a theory of speech disfluencies*. Unpublished Doctoral dissertation. University of California.
- Snell-Hornby, M. (1997). McLanguage: The identity of English as an issue in translation today. In M. Grosman, M. Kadric, I. Kovacic & M. Snell-Hornby (Eds.), *Translation into non-mother tongues in professional practice and training* (pp. 35-44). Stauffenburg Verlag.
- Straniero, S. F. (2012). *Repetitions in Dialogue Interpreting*. In C. J. Kellet Bidoli (Ed.), *Interpreting across genres: multiple research perspectives* (pp. 27–53). EUT. Retrieved from <http://hdl.handle.net/10077/7371>
- Tissi, B. (2000). Silent pauses and disfluencies in simultaneous interpretation: A descriptive analysis. *The Interpreter's Newsletter*, 10, 103-126.
- Tommola, J., & Laakso, T. (1997). Source text segmentation, speech rate and language direction: effects on trainee simultaneous interpreting. In K. Klaudy & J. Kohn (Eds.) *Transfere necesse est. Proceedings of the second international conference on current trends in studies of translation and interpreting* (pp. 186-191). Scholastica.
- Whyatt, B., Witczak, O., & Tomczak, E. (2021). Information behavior in bidirectional translators: focus on online resources. *The Interpreter and Translator Trainer*, 15(2), 154-171. <https://doi.org/10.1080/1750399X.2020.1856023>