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Interpreting at the European Institutions: faster, higher, stronger

La interpretación en las instituciones europeas: más rápido, más alto, más fuerte

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Abstract: The workplace of simultaneous conference interpreters appears to have changed relatively little since early veterans provided the first simultaneous interpreting service during the inter-war and post-war period. On the face of it, the task, too, appears to have remained the same, as simultaneous interpreters continue to relay spoken discourse from one language into another language in real time. A closer analysis of the task and its inherent constraints, however, reveals a different picture: in fact, modern-day simultaneous interpreting at international organizations can be likened to the Olympics of the profession. In keeping with the Olympic motto, speakers speak ever faster, the likelihood that they will be reading a prepared presentation is ever higher and their accents are ever stronger.

In this contribution I set out to explore these three parameters as the three principal challenges for simultaneous interpreters working at international organizations. The analysis will begin with an overview of these factors' incidence across major international organizations as a backdrop against which to scrutinize them further.

The discussion of the first parameter, speed, will begin with a critical discussion of the recommendations made by early practitioners and still upheld by many professional

associations, as they appear to be in stark contrast with the professional reality encountered by interpreters working in international organizations.

The examination of the second parameter, i.e., the read nature of discourse, highlights the unique features of this modality and outlines the repercussions it inevitably has on the product.

The consideration of the third and final parameter, accent, starts with the isolation of accent as measurable and salient phonological feature of language to the exclusion of other features of what has become known in the literature as International English, Global English or English as Lingua Franca (ELF).

For all three parameters a theoretical analysis of the phenomenon including their impact on the interpreting process are provided in an in-depth exploration of the cognitive processes involved in simultaneous conference interpreting at international organizations.

Key words: Simultaneous interpreting, European Institutions, speed, accents, interpreting with text

Resumen: El lugar de trabajo de los intérpretes simultáneos de conferencia parece haber cambiado relativamente poco desde que los primeros veteranos ofrecieran los primeros servicios de interpretación simultánea durante el período de entreguerras y de posguerra. Diríase que la propia tarea también ha permanecido sin cambios, puesto que los intérpretes simultáneos siguen transformando el discurso oral de una lengua a otra en tiempo real. Un análisis más detallado de esta labor y de sus restricciones inherentes, no obstante, nos muestra una situación diferente: de hecho, la interpretación simultánea actual en las organizaciones internacionales puede definirse como las Olimpiadas de la profesión. En línea con el lema olímpico, los oradores hablan todavía más rápido, la probabilidad de que estén leyendo una presentación preparada de antemano es todavía más alta y sus acentos son todavía más fuertes.

En este artículo me propongo explorar esos tres parámetros por ser los tres retos principales para los intérpretes simultáneos que trabajan en organizaciones internacionales. El análisis comenzará con una presentación general de la incidencia de estos factores en las principales organizaciones internacionales, que servirán como telón de fondo sobre el que analizar estos parámetros en mayor profundidad.

La discusión del primer parámetro, la velocidad, comenzará con una discusión crítica de las recomendaciones propuestas por los pioneros en el campo y que todavía mantienen muchas asociaciones profesionales, pero que parecen mostrar un drástico contraste con la realidad profesional que los intérpretes encuentran al trabajar en organizaciones internacionales.

El examen del segundo parámetro, la naturaleza leída del discurso, subraya las características únicas de esta modalidad y traza un panorama de las repercusiones que acarrea de manera inevitable sobre el producto.

Las consideraciones acerca del tercer y último parámetro, el acento, comienzan con un análisis aislado del acento como una característica mensurable y destacada del lenguaje, independiente de otros rasgos de lo que se ha dado en llamar “inglés internacional”, “inglés global” o “inglés como lingua franca”.

Con respecto a los tres parámetros, se ofrece un análisis teórico del fenómeno que incluye su impacto en el proceso de interpretación, así como un examen en profundidad de los procesos cognitivos implicados en la interpretación simultánea de conferencias en las organizaciones internacionales.

Palabras clave: interpretación simultánea; instituciones europeas; velocidad; acentos; interpretación con texto

1. INTRODUCTION

Simultaneous conference interpreting, as it is known today, with soundproof booths and sound equipment to transmit both the original and the interpretation, was born at the international organizations. More precisely, the technological solution to the challenge of having to provide real-time translation into different languages to participants of one and the same meeting was successfully tested at the International Labour Organization in the late 1920s (Baigorri-Jalón 2014), although it only gained widespread visibility some 20 years later, during the highly mediatized Nuremberg Trials following World War II (Seeber 2015a). Owing to its potential to reduce the time required for «oral translation» of discourse into multiple languages and the associated financial savings¹, simultaneous interpreting technology was soon installed in most international and intergovernmental organizations. For the European Union (founded as the European Communities in 1957), simultaneous conference interpreting has been a catalyst of multilingual and multilateral diplomacy, from its early days when it operated with four official languages, to the present, where some meetings are held in 24 official languages, and sometimes complemented by regional languages such as Arabic, Chinese, Japanese or Russian. Crucially, 90% of all interpreting services at the European Institutions are provided in the simultaneous mode (DG SCIC, nd).

The Interpreting Services of the European Commission, the European Parliament and the European Court of Justice collectively account for 325,000 interpreting days each year, half of which are serviced by the approximately 1,000 staff interpreters, whilst the other half is serviced by freelance interpreters from Europe and all over the world. Against this background, the EU can be considered easily the single largest employer of professional conference interpreters worldwide. To put things into perspective,

1. Thanks to this new technology, according to Gaiba (1998), the ILO saved an estimated GBP 32,000, which, adjusted for inflation, roughly translates to GBP 1.8 million

according to recent AIIC statistics (AIIC, nd), the entire UN system (comprising its headquarters, offices and all specialized agencies worldwide) account for 34% of all freelance work serviced by AIIC members within the so-called agreement sector, while the European Union alone accounts for 35%.

Since the creation of the European Communities some 60 years ago, however, a number of key parameters have changed, with a repercussion on the nature of its multilingual meetings. The enlargement of the European Union, for example, entailed the aforementioned increase in official languages, leading to a theoretical total of 552 language combinations to be covered. Additionally, it also increased the use of so-called «asymmetric language regimes», allowing all delegates to speak their respective languages, but only providing simultaneous interpretation into a sub-set of those languages, and «reduced language regimes», where interpretation is only offered from and into the three or five most widely spoken languages (DG SCIC, nd). This inevitably means that some delegates will express themselves in a language other than their own. Another development, probably also owing to the growing number of delegates attending certain types of meetings (e.g., the joint assembly of the three communities started out with 142 members in 1958, while the European Union's Plenary currently has 751 members; European Parliament, nd.), is the very strict time-keeping applied during oral debates. During full debates in the European Parliament's Plenary, for example, rapporteurs have six minutes to present committee reports. During short presentations, this time is reduced to four minutes, followed by MEP comments of no more than one minute each, and finally a reaction by the European Commission of no more than five minutes. Similarly, during the first 30 minutes of Question Hour, political groups can put one-minute questions *on any subject* to Council, the President or Vice President of the Commission, the High Representative or the President of the Eurogroup with the possibility of a 30-second supplementary. During the remaining 30 minutes, speaking time is limited to one minute both for questions and, indicatively, also for answers (European Parliament, nd). These examples clearly illustrate the importance attached to time-keeping during debates, which inevitably leads to an increase in speaking speed, as speakers attempt to maximize the limited amount of time allotted. Finally, and probably as a consequence of the aforementioned lack of time, MEPs mostly prepare written statements to be read out in the Plenary, sometimes at excessively high speed, while impromptu speeches have become extremely rare (Defranq et al. 2015).

These three features, i.e. the fast, accented and read nature of speech, have become formal hallmarks of discourse at the European Institutions. Importantly, these features also have their bearing on the interpreting process – whether they appear isolated or in combination with each other. It is no coincidence, therefore, that at the European Parliament speed, written speeches and accents top the list of challenges encountered by interpreters (Feder 2017).

The aim of this article, therefore, is to discuss these features and their interaction from the perspective of language processing in general, and simultaneous conference interpreting in particular.

2. SPEED

2.1. *Speed in production and comprehension*

The speed at which people speak is among the factors that determine both the clarity and the intelligibility of discourse (Rodero 2012). But while we all seem to have an intuitive sense of when discourse is fast or slow, research suggests that listeners are not very reliable judges of speech rate, especially when the utterances under scrutiny are spoken with an unfamiliar accent or in an unfamiliar language (Laver 1994). Interestingly, early research (e.g., Osser and Peng 1964) concludes that language-related differences in speech rate are merely the result of subjective impressions and that the latter are confounded by differences in speaking style, rather than speed. This view still finds some support (e.g., Roach 1999), although more recently an increasing amount of evidence (e.g., Pellegrino et al. 2011, Rodero 2012) appears to suggest that such language-contingent differences do indeed exist. The challenges to objectively establishing the speed of oral discourse are two-fold: on one hand the construct of speech rate comprises two related yet different phenomena, and on the other hand, the very measures applied to quantifying speech rate belong to different linguistic categories (Riccardi 2015).

The first challenge relates to a fundamental characteristic of human speech: that it is, in fact, characterized by pauses. Some of the pauses are grammatical and function as signposts for listeners, allowing them to better understand and follow the syntactic structure of an utterance (Rodero 2012). Other pauses are rhetorical and aim at facilitating comprehension by highlighting new or particularly relevant information in spoken discourse (Hargrove and McGarr 1994). Regardless of the category they belong to, pauses inevitably affect the perception of spoken discourse and potentially skew its measurement. Consequently, a fundamental distinction needs to be made between speech rate, which refers to the average speed of an utterance, including all pauses and hesitations, and articulation rate, which refers to the average speed of an utterance without them (Riccardi 2015).

The second challenge consists in finding an adequate measure for speech rate. Of the three most common ones –words per minute (wpm), syllables per second (sps) and phonemes per second (pps)– the first relates to grammatical units, while the latter two relate to phonological ones. Accordingly, wpm would appear to be an appropriate measure for speaking rate in spite of possible challenges in identifying what does or does not constitute a «word» in spoken discourse, which, as we know, is replete with

hesitations and repairs. The latter two measures, sps and pps, on the other hand, appear to be better suited to measure articulation rate. Here, too, however, there might be challenges in identifying phonetic syllables or phonemes, not all of which are necessarily realized in spoken utterances (Laver 1994).

Against this background, it is interesting to note that factors like age and sex, but also native status, affect speech rate. For example, speech rate has been shown to be higher among men than among women, higher among native speakers than among non-native speakers, and to generally decline with age (Riggenbach 1991, Yuan et al. 2006). Average speech rate among English native speaking adults has been reported between 150 and 190 wpm, and can reach up to 200 wpm in conversation (Laver 1994). The average native listener is said to comfortably follow discourse spoken at 150 to 160 wpm, but can still follow discourse at rates of 210 wpm without any loss in comprehension (Omoigui et al. 1999), and even presentation rates of 500 wpm seem to only marginally deteriorate it (Voor and Miller 1965).

As already mentioned, there is recent evidence for language-specific differences in speech rate – both as regards speaking rate and articulation rate. In a comparative study of (national) radio presenters, Rodero (2012) finds significant language-inherent differences in speaking rates. Spanish presenters (209.96 wpm) are the fastest speakers, followed by Italians (192.46 wpm), French (188.93 wpm) and English (167.54 wpm). These data seem to tally with the findings of Pellegrino et al. (2011) who measured the average articulation rate in different languages. Their results show average Spanish articulation rate (7.82 sps) to be faster than French (7.18 sps), Italian (6.99 sps) and English (6.19 sps). These data warrant the conclusion that different language communities may not only use but also expect different speech rates in oral discourse.

2.2. Speed and simultaneous interpreting

Although we have seen that listening comprehension is robust in native speakers even when speech rates exceed 200 wpm, from a processing perspective, the rate at which speech must be recognized and parsed is not insignificant (Wingfield et al. 2003). Similarly, input rate, in other words the speech rate of speakers at an interpreted event, bears the potential of affecting the simultaneous interpreting process, as the latter is conditioned by its real-time nature (Seeber 2015a). Much like listeners, interpreters must process speech at the rate it is being delivered by the speaker. Consequently, speech rate is generally considered an important input variable in the literature (Riccardi 2015) and was already addressed early on by practitioners and scholars. At the Nuremberg trials in 1945/6, for example, speakers are said to have been instructed to speak at 60 wpm (Gaiba 1998), while at an AII

symposium on interpreter training in 1965, a speech rate between 100-120 wpm was allegedly considered to be «comfortable» (Pöschhacker 2016: 124). This magical figure of around 100-120 wpm re-appears in later publications (e.g., Gerver 1976; Chernov 1978; Seleskovitch 1978; Lederer 1981) and, to this day, is quoted by scholars as being reasonably comfortable (see Riccardi 2015). And yet, perhaps influenced by the changes briefly illustrated above, some have begun adjusting their expectations in terms of speech rate to what seems to be a (not so) new reality. This reality is best exemplified by corpus analyses such as EPIC (European Parliament Interpreting Corpus), that among other things reports the delivery rate of sample speeches given during a specific series of plenary part-sessions of the European Parliament (Monti et al. 2005). Perceiving a need to adjust their qualification of speech rate to their corpus, the authors adopt the following reference values: up to 130 wpm is termed *low speed* input, up to 160 wpm *medium speed* input and above 160 wpm *high speed* input. Similarly, albeit from an interpreter's perspective, Setton and Dawrant (2016) qualify speeds of 100-120 wpm as *easy*, those of 120-140 wpm as *moderate*, those of 140-160 wpm as *challenging* and those at over 160 wpm as *difficult*. A possible paradigmatic shift seems to have emerged. Some 35 years ago, Lederer (1981) suggested that improvised discourse at 150-170 wpm should be considered a threshold beyond which simultaneous interpreting cannot be performed. Setton and Dawrant (2016), on the other hand, posit that at 160 wpm, professional conference interpreters are able to provide a mostly complete, albeit compressed, version, while at speeds over 160 wpm, even skilled professionals will drop content and resort to so-called «gisting» strategies to keep up. Crucially, this does not necessarily consider the specificity of the Plenary session of the European Parliament (and other comparable multilingual events), where the vast majority of speeches are read, rather than improvised. The contrast, then, between Lederer's (1981) recommended upper threshold for read speeches at 100 wpm and the reality of read speeches clocked at speeds upwards of 160 wpm at the European Parliament is rather striking.

What is more, these figures are not unique to the European Institutions. Recent samples collected during sessions of the United Nation's Human Rights Council (Barghout et al. 2015) and the United Nations' Universal Periodic Review (Barghout et al. 2016) respectively suggest average speech rates of 150 wpm (with peaks of 188 wpm) and 160 wpm (with peaks of over 190 wpm). In both contexts, speeches are far more likely to be read than spontaneously delivered. This means then that the type and the speech rate of discourse that interpreters are expected to work with in institutional contexts are comparable to that of radio presenters.

What remains unclear, to this day, is the amount of (additional) load the human processor is subjected to when having to execute the processes required for simultaneous interpreting (see Seeber 2011) in less time. In other words, whilst the process may well be successful at speeds far beyond the often-quoted (yet by now

possibly somewhat quaint) rate of 100-120 wpm, research has not yet quantified the amount of additional load generated. Also, comprehension benchmarks based on studies using compressed speech might not be applicable, as important elements of human speech may get altered when speakers increase their speech rate. Miller et al. (1984), for example, suggest that even trained speakers inadvertently introduce subtle changes to articulation, pauses and intonation when trying to speak faster. By doing so, they deteriorate the quality of the signal available to the interpreter for processing. This means then, that the quality of the signal between natural speech at low rates and at high rates may well be different.

3. READ DISCOURSE

3.1. *Read discourse in production and comprehension*

While the most obvious difference between written and oral discourse may be the channel used for its transmission (Van Dijk 1997), there are other dissimilarities beyond solely the medium used to convey a message. Crystal (1995), for example, identifies seven points of contrast between spoken and written discourse. Spoken discourse is said to be dynamic because it is transient; spontaneous with little room for complex planning; enhanced by extralinguistic cues; marked by prosody; characterized by long coordinate constructions; often personal in nature; and replete with false-starts and hesitations. Written discourse, on the other hand, is said to be static because it is permanent; carefully crafted; devoid of deictic expressions to avoid ambiguity; marked by layout and format; characterized by subordinates, balanced syntactic patterns, and low-frequency vocabulary; aimed at the communication of facts and therefore dense; and well-formed and reviewed. This list may not be exhaustive, but it illustrates the multidimensional differences between the two types of discourse (Paltridge 2006). Using written discourse in order to engage in oral communication, however, may cause a mismatch between the features pertaining to the discourse and those expected by the listener. One of the inherent physical constraints of having to read (and thus look at a manuscript, except when teleprompters are available), for example, is the likely inability to establish eye contact with the audience. The latter, however, constitutes one of several types of unconscious yet important co-verbal behavior (Kleinke 1986). Gestures, for instance, are usually executed in sync with speech. They combine imagery and linguistic content and provide valuable additional signal for the listener (McNeill & Duncan, 2000). However, seeing that the content of written discourse is not created, but merely articulated when it is presented, the frequency of such gestures is likely to decline. It also appears reasonable to assume that the correlation between intonation patterns and expressed ideas (Chafe 1994) will be weakened, if not entirely

lost, when those ideas are developed during the drafting stage of written discourse, in other words long before it is presented orally. Additionally, Goldman-Eisler (1968), suggests that pauses reflect choices conditioned by situations of uncertainty, and can relate to content, syntax and lexicon. Pre-empting these choices by planning the entirety of discourse upstream means eliminating such pauses.

3.2. Read discourse and simultaneous interpreting

Conference interpreters are regularly confronted with speakers reading out prepared manuscripts (Gile 1995; Monacelli 2009) and, as we have seen, many of the meetings held at the European Institutions are no exception to this trend. For interpreters, this means either attempting to emulate the characteristics of the incoming written discourse in their oral output, or attempting to transform and adapt these characteristics to match those pertaining to oral discourse. Because the simultaneous interpreting process unfolds in real time, both likely generate considerable load. The specific cognitive implications for the interpreting process, however, depend on whether or not the manuscript that is being read is accessible to interpreters.

When interpreters do not have access to a text being read for the purpose of simultaneous interpreting, many if not all of the characteristic features of written discourse are likely to generate additional processing load.

The fact that written discourse tends to be carefully crafted and well formed suggests a higher degree of idiomaticity and metaphorical use of language. In processing terms, the latter may require more options (the literal and the metaphorical) to be entertained in parallel (Swinney & Cutler 1979) during the comprehension process, and non-literal meaning to be assigned downstream (McDonald & Carpenter 1981). Both the processing delay and the additional parallel processing will likely generate additional cognitive load for the interpreter (Seeber 2011). Additionally, processing of idioms in bilinguals appears to be slowed down as a function of the similarity of idioms between source and target language, with identical and similar idioms being processed more slowly than different ones (see Heredia & Cieślicka 2015).

The use of low-frequency vocabulary, yet another characteristic of written discourse, will confront the interpreter with the word frequency effect (Johns et al. 2012), according to which words occurring less frequently in a given language will be recognized less quickly and less accurately, particularly in a noisy environment. As we have seen above, from a language processing perspective, simultaneous interpreting can be considered to entail a noisy environment. Consequently, it is likely to be negatively affected by a low-frequency lexicon.

The increased use of (sometimes multiple embedded) subordinate clauses is also not inconsequential for the simultaneous interpreting process. On one hand, it

has been suggested that these clauses generate additional processing load during comprehension (Chafe 1982) although this view is no longer universally shared (Gayraud & Martinie 2007). On the other hand, the potential need for increased syntactic restructuring because of language-specific difference (e.g., verb-final subordinate clauses in German) has been documented (Seeber & Kerzel 2011).

Lexical density, in other words the proportion of content (i.e. lexical) words over function (i.e. grammatical) words used within a clause, is higher in written discourse than in spoken discourse. When producing the former, content words are packed more tightly into clauses, but when producing the latter, they tend to be extended over different clauses (Paltridge 2006). There is some indication (Dillinger 1994) for density-contingent increases of load for simultaneous interpreters, although the evidence is not yet conclusive.

When interpreters do have access to the text (it being understood that the timing of such access is of crucial importance), this does not necessarily imply that all challenges inherent to having to interpret written discourse are offset, as is sometimes erroneously assumed by the uninitiated.

We know, for example, that although the human brain can integrate audiovisual information (i.e., auditory and visual information presented on two channels, as is the case when interpreters have access to the manuscripts being read), this integration is only successful when the information is presented fairly synchronously, within a window of 300 ms (see Seeber 2017). This means that the text facilitates processing during simultaneous interpreting so long as interpreters are able to keep up with and are reading along with speakers. From a purely mechanical perspective, this should not be a problem. Even average readers can easily read at a speed of 250 wpm (Fry 1963), which, as we have seen, is much faster than the top speech rates clocked at the European Institutions. The extent to which spoken language processing during reading affects reading speed, however, is still unclear. Interpreters report being able to coordinate listening and reading whilst interpreting most of the time, provided they receive the text between 10 and 15 minutes beforehand (Cammoun et al. 2009). In fact, first evidence from eye-tracking experiments suggest that interpreters usually lag behind the speaker when they read during simultaneous interpreting with text (Seeber 2015b). An additional challenge is the potential of increased priming (in other words, lexical and syntactic interference) from the source text because the signal is available both on the auditory and the visual channel.

In spite of these difficulties, professional conference interpreters report using the text in an attempt to attenuate some of the challenging characteristics of written discourse. Over 70% of respondents in Cammoun et al.'s survey (2009), for example, consider the text an important tool to address the challenge of complex syntax, while 54% believe that the text is helpful to deal with the idiomaticity of written discourse. It would appear, therefore, that interpreters are able to facilitate the transfer of written

discourse into oral discourse when they are given access to the manuscript at least 10 to 15 minutes before the text is read.

4. ACCENT

4.1. *Accents in production and comprehension*

When attempting to learn a new language, learners usually experience a certain degree of overlap between the pronunciation of their first and their learned language. This phenomenon is commonly referred to as *foreign accent* (Kirkova-Naskova 2010), and it is particularly relevant seeing that on a global scale people speaking only one language are outnumbered by those speaking two or more. While the scholarly literature still seems to be divided over the definition of what constitutes a bilingual speaker (see Grosjean 2016), the differentiation between second languages (L2) and foreign languages (FL) seems helpful for the discussion at hand. Although both can refer to languages learned after L1 is fully established, a language learned and spoken in an environment in which it is widely used (e.g., in the case of immigrants) is referred to as L2, while a language learned exclusively in an educational environment (e.g., in the case of languages learned at school) or through the media, is referred to as FL (García Lecumberri et al. 2010). Consequently, while for L2 speakers speech perception is mainly conditioned by the quantity of signal, for FL speakers it is conditioned by both its quantity and quality.

Although there is evidence suggesting that native listeners can accurately detect foreign accent in speech samples as small as a single vowel or consonant (Flege 1984), not all the phonological differences perceived by them actually impact comprehension. Conversely, FL speakers listening to foreign-accented speech have the dual challenge of imperfect signal and imperfect knowledge. Inaccurate phonemic processing, however, inevitably leads to a cascading effect with an increased number of possible alternatives at the word recognition stage, which in turn requires more sentence-level context to resolve it (García Lecumberri et al. 2010).

It is sometimes forgotten that the speech of non-native speakers differs from that of native speakers not only at segmental, but also, and perhaps even more crucially, at the suprasegmental level (Baese-Berk and Morill 2015). In fact, prosodic errors of speech are perceived as potentially more detrimental to comprehensibility than phonetic errors (Kirkova-Naskova 2010). Similarly, speech rate not only tends to be substantially slower among non-native speakers; it also tends to be more variable than in native speech (Guion et al. 2000). There is evidence that this variability negatively affects speech perception (Sommers et al. 1994).

Finally, *foreign accent* refers to the phonological phenomena of L2 or FL speech, which is often inextricably linked to other linguistic characteristics e.g., syntactic and lexical features. The use of English as a global contact language has led to the creation of simplified types of formalized English, e.g., Basic English, Nuclear English, Threshold Level English, Globish, or Basic Global English, all characterized by grammar and phonology simplified to different degrees (Grzega 2006). More recently, the concept of English as a Lingua Franca (ELF) has gained traction, including in the field of translation and interpreting studies. To date, however, the definition of this construct is primarily characterized by sociological concepts like power and rights (Hülmbauer et al. 2008). Unlike its predecessors, ELF is descriptive rather than prescriptive, and is said to include all forms of English used by persons who share neither language nor culture (Firth 1996). Although at first sight this description might seem to associate ELF with L2 or FL speakers, proponents of the construct suggest that, «it can of course also include native speakers when they engage in intercultural communication» (Gnutzmann 2000: 357). This all-encompassing definition of the concept, albeit perhaps adequate for a debate on its social status and function, does not reach the necessary level of granularity for it to be isolated and studied in replicable experiments.

4.2. Accents and simultaneous interpreting

There is evidence suggesting that (even unfamiliar) native accents do not generate substantial additional processing cost during comprehension in quiet conditions. Under noisy conditions, however, non-native speakers do indeed perform considerably worse than native speakers (Adank et al. 2009) at comprehending accented speech. Seeing that the simultaneous conference interpreting process is characterized by constant noise (as both the speaker's and the interpreter's output overlap, yet both need to be processed for comprehension and monitoring purposes, see Seeber 2011), and that most (if not all) interpreters working at the European Institutions work into their L1 (with the exception of those who provide so-called «retour»), it stands to reason that even native accents generate additional processing cost for them. Furthermore, we have seen that there is a processing cost associated with the comprehension of *foreign accented* speech, both for native speakers and for non-native speakers. In noisy environments, however, speech perception of non-natives suffers considerably more than that of native speakers (García Lecumberri et al. 2010). Following the above rationale, the processing of foreign-accented speech should therefore be associated with even more cost for the interpreter.

Our discussion also suggests that factors other than mere accent, including prosodic features of discourse, may negatively impact comprehension. The highly variable speaking rate found in non-native speakers, for example, may decrease

listeners' ability to predict upcoming constituents and thus make non-native speech more difficult to comprehend (Baese-Berk and Morrill 2015).

Finally, we have seen that *foreign accented* speech rarely exists as an isolated feature of speech, and particularly in the European Institutional context, occurs as one of many facets of non-native English. A recent survey among conference interpreters (Albl-Mikasa 2010) corroborates the notion that interpreters (feel they) have to invest additional capacity for source text comprehension. Respondents report that non-standard pronunciation, syntax and lexicon by non-native speakers impede their anticipatory and inferential processing. However, it is not only the higher-level processes that could be affected by substantial deviations from grammatical and prosodic norms. Significant distortions of the signal (whether it be stylistic infelicities, idiomatic inadequacy, grammatical mistakes or prosodic shifts) may well hinder the interpreter's ability to rely on the automatic processing necessary for simultaneous interpreting (Seeber 2011). Consequently, the interlanguage speech intelligibility benefit reported by Bent and Bradlow (2003), which suggests that common language background shared by speakers will affect the intelligibility of foreign-accented speech, may well extend to features other than accent. Interpreting English spoken by a German speaker (with phonological, syntactic and lexical intrusions from that language) may thus well generate less cost to an interpreter who either speaks German or who works into German, as suggested by Albl-Mikasa (2010). In bilingual settings, or settings with a limited number of languages, this effect might partly attenuate the additional cost incurred by interpreters. In a truly multilingual context like the European Institutions, it may be less relevant, seeing the number of potential sources (currently 23 of them) of foreign language influence.

5. WHEN THEY ALL COME TOGETHER: A CONCLUSION

Much like in a Triathlon, where athletes complete in three different disciplines sequentially, I chose to address the challenges of speed, the written nature of read discourse and accent, one after the other. While this choice was driven by an aim for clarity, however, it does not reflect reality, where the three challenges rarely stand alone. In fact, as laid out in the introduction, at many meetings in the European Institutions, the aforementioned challenges overlap, making the interpreter's job a truly complex endeavor. We have seen that, all things being equal, fast(er) speech is more difficult to interpret than slow(er) speech; written discourse is more problematic than oral discourse; and non-native speech is more challenging than native speech. Consequently, it would seem plausible that the combination of any two, or even all three, of these factors will inevitably increase the processing cost for the interpreter even further. That, however, might be too simplistic an assumption.

It is true that certain speech rates, lexical and propositional density, and degree of idiomaticity can only be attained when reading prepared statements. However, it would appear that certain non-native accents, lexicon and grammar can only be decoded *thanks to* such a prepared statement (this, again, implies that interpreters are given access to it). Cognitively speaking, it is the access to a redundant (or, depending on the degree of deviation from accepted norms, complementary) signal that makes processing possible (see Seeber 2017). This view finds support among interpreters who regard the text as useful (regardless of how long in advance it is made available to them) to deal with heavy accents, with lack of intonation and with high speech rates (Cammoun et al. 2009). One can conclude, therefore, that interpreters' timely access to manuscripts is of crucial importance in environments where non-native speakers read written statements at high speed, such as the European Institutions.

Olympian Triathletes benefit from technological advances, making their swim suits more streamlined, giving their bikes efficient bearings and gear sets, and improving the gait mechanics of their running shoes. In a similar way, conference interpreters should be provided with all available technologies that hold the potential of increasing the signal to noise ratio for the interpreter, and by doing so, reducing processing cost. This, in turn, will enhance the performance during what can truly be called the Olympics of conference interpreting.

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