

УДК 81' 253

## On the problem of Interpreting-Psycholinguistics Interaction: Interlinguistic Interference

**Irina B. Rubert  
and Marina A. Kapitonova\***

*St. Petersburg State University of Economics  
30/32 Nab. kanala Griboedova, St. Petersburg,  
191023, Russia*

Received 04.09.2016, received in revised form 17.09.2016, accepted 10.01.2017

---

*Since more practitioners in translation and interpreting per se need systematic cognitive training and methodology, and since technology increasingly is becoming available at the present time, psycholinguistics may well serve as one of the most effective bases for direct answers on numerous problems in interpreting activity. The article represents a mini-observation on the fact how psycholinguistics and cognitive science contribute to the translation studies at the contemporary stage of scientific development. In particular, authors touch upon the problem of interlinguistic interference and share the opinion that this point may be another common ground for the field researches that allows maintaining interdisciplinary in humanities.*

*Keywords: interdisciplinary, interlinguistic interference, perceptual references, interpreting, cognitive sciences.*

*DOI: 10.17516/1997-1370-0047.*

*Research area: philology; psycholinguistics.*

---

### Introduction

One of the most significant strengths of written translation lies in its long reflection history and critics on how to translate correctly made by numerous prominent persons, including writers, philosophers and translators. The first idea of a fundamental scientific insight into translation emerged in almost the middle of the 20<sup>th</sup> century was supported mostly by purely linguistic aspects, i.e. the relationship between linguistic systems per se, between source and target texts or between the text and reality (or discourse). In any case, all these bodies of works created in comparatively

short period of time undoubtedly comprise a firm ground for the world's theory of translation and to ignore them now means to make a crucial mistake in any kind of translation studies. Still, in such an academic sense translation and interpreting, as two different types of bilingual activity, take different paths.

Thus, the "split" began in 1967 when Jiří Levý, a Czech translation theoretician, transferred the view from texts to translators and interpreters themselves together with their behavior: by exploiting the principle of mathematical game he discovered (for that time) that translators'

decisions were reasoned by some strategic considerations. In our observation, it was the very first step towards translation integration into psycholinguistics and cognitive sciences. Nevertheless, early academic papers devoted to interpreting included rather translation theory and critics than any empirical research, though there were a plenty of calls for that (Holmes, 1988; Toury 1995). Probably, one of the driving forces for the empirical researches was the involvement of practitioners, trainers and interpreters in studies as they were more focused not on the theory, but practical issues, including quality of work and strategies, competence, language skills and psycho-behavior of translators. Such view on the recent studies in this sphere partially defends interdisciplinary basis of psycholinguistic and translation and, consequently, helps the later to get closer to the notion “science” per se. In short, by this time translation and, in particular, interpreting researches have accumulated a large methodological pool, though many questions still remain unaddressed. Assuming that one cannot cover all the topic issues comprising this field, in this article we would like to present an observation on one of such “unresolved” problems – interlinguistic interference – from psycholinguistic and translation perspectives.

### **On the problem of definition**

In most cases, as it seems, one of the drawbacks of interdisciplinary (which is, by the way, an attribute of the modern science) is ambiguity of definitions: on the one hand it leads to endless arguments about the notion, on the other – opens new vectors for investigations. The same situation describes the meaning of “interference” in general and applied linguistics.

The term itself, as one probably may guess, has come from the other science – physics. In fact, it is quite interesting to track the whole etymology of this word:

*[\*bher (праиндоевроп. «протыкать») - \*ferire (лат. «наносить удар») - \*entre + ferire (фран. «соударяться») - \*interfere (англ. «вмешиваться») - \*interference (англ. «вмешательство/помеха»)].*

But coming back to physics, it is worth mentioning, that there are a number of quite clear and accurate definitions and explanations of this phenomenon. In the most abstract way, interference deals with waves, or light waves in particular: it is inter- intensification or decay of waves as the result of their superposition. This principle of interference has been transferred into linguistics and translation/interpreting researches in the full way possible, though with some amendments.

In linguistics all the present definitions of interference can be divided into two large groups, determining the vector of researches: pure linguistic (language) definitions and psycholinguistic ones. Though they are quite interconnected (since language activity, psychologic and cognitive processes are closely tied with each other) there is a sharp line between them, i.e. while linguistic notions explain interaction (and its consequences) between two languages in contact, the others develop cognitive, physiological and psychological mechanisms of this phenomenon and focus on bilinguals per se rather than on language systems:

*“...psycholinguistic aspect relates to the problem of “bilingualism – person” relationship, which includes patterns of L2 acquisition in childhood and adolescence, ability to learn L2, mental mechanisms of speech activity in L2 (i.e. rules interlinguistic identification) and influence of bilingualism on a person” (Karlinskii, 1990: 12).*

As we assume, the most common definition of linguistic interference was suggested by U. Weinreich, an American social linguist, which

is still quite actual, though there were some attempts to make it more precise or appropriate for the present researches in different spheres. According to his point of view

*“...the practice of alternate use of two languages is defined as bilingualism, and those individuals who perform this practice are bilinguals; the cases of departure from standards in any of the languages tracked in the bilingual speech (as the consequence of linguistic contact) we call interference”* (Weinreich, 1953: 22).

But in contrast, E. Haugen, an American linguist and pioneer of eco-linguistics, claimed that “interference not always can be considered as “departures” from the standard language, since this phenomenon can be free even in the source language” (Haugen, 1956). Moreover, sometimes he interpreted interference as a “linguistic overlap” within which the linguistic unit can exist in two language systems simultaneously. Obviously, these definitions have a strict linguistic nature and, probably, do not meet the requirements of contemporary scientific thinking (though, here we share an opinion that they have actually determined two vectors of the further, more thorough examination and classification of interference: destructive and constructive). Thus, there is another line in defining the view on interference from psychological and cognitive points of view.

These views arise mostly from the notion of bilingualism considered in medical, neurological and psychological perspectives. Considering the phenomenon within this context, we tend to follow the Russian psychologists, neurologists and neurolinguists (A. Luria, L. Vygotskii, V. Deglin), who one way or another touched upon this subject in their researches on memory, language and speech, language acquisition, brain asymmetry and different types of aphasia. In this article we are not aimed at a detailed consideration of all the experimental notions of interference

reflected in the human speech (there should be a separate observation). Still, to show the contrast between “pure linguistic” and “psycholinguistic” definitions, we are likely to formulate some general tendencies presented in these works: 1) a person (bilingual) is a place of linguistic engagement; 2) psychological aspect of interference is focused on the “bilingual – speech activity” relationship; 3) interlinguistic interference can represent the process of linguistic skills transfer; 4) sometimes interference is related as a lag in cognitive processes. As a summary, psycholinguistic understanding of interference reveals mostly not a result of this phenomenon, but the process of linguistic skills transferring inside the human brain per se together with those psychological and cognitive mechanisms that control it.

Almost all existing explanations of this phenomenon are based on the problem of what speech impact – negative or positive – interference has in general and in the context of cognitive processes, psychology and cross-cultural communication in particular? A probable solution for this hot-point can be found through the integration of psycholinguistics into translation studies and vice versa.

### **Interference in translation studies**

Recently it has become quite clear, that any anthropometric science or study should not only introduce a “surface” of some problematic issues, but provide an insight into the mechanisms and nature of phenomena. The same situation may well be applied to the sphere of translation studies (in the most general sense possible), which can definitely be enriched and enhanced by psycholinguistic and cognitive approaches.

Thus, for example, D. Gile, a prominent scholar of interpreting, by addressing cognitive concepts in interpreting (cognitive overload and limited resources of human attention) suggested

*Gile's Effort Model* for simultaneous interpreting analysis:

*"...that model pulls together operational components of interpreting into three "Efforts"[...] – the Listening/Analysis Effort, the Production Effort and the Short-term Memory Effort" (Gile, 1995: 154).*

This model is quite actual and widely used even in the present time, since, in our view, it represents a basic process scheme of interpreting each stage of which can be considered from different angles. Another expert and contemporary scholar of interpreting, B. Moser-Mercer examines different kinds of interpreting (simultaneous one in particular) from a pure psychological observation, but, at the same time, introduces an integration model of study, i.e. brings her thoughts and experiments into the sphere of neurology and neurophysiology:

*"investigations [...] into the human memory systems in conjunction with findings from neuropsychology and neurophysiology may well bring a step closer to the understanding of interpreting process and any strategies the interpreter might employ" (Moser-Mercer, 2001: 157).*

Other studies in the sense of cognitive-psychological perspective (Christoffels, 2006; Mizuno, 2005; Seleskovitch, 1977) develop such aspects as memory and language interconnection, memory capacity and skills, processing capacity and etc. Indeed, in the 21<sup>st</sup> century with the evolution of sophisticated expert scientific devices and technologies, those processes performing by interpreter's mind/brain are increasingly frequently analyzed with regard to the nervous system.

One way or another, all the researches mentioned above involve the problem of linguistic interference in interpreting and translation, whether as the result or psychological and cognitive phenomenon. Although all professional

translators are high-calibre bilinguals, it's hardly if ever claimed that they should be capable to translate equally well between all of their languages.

In the present research we share the opinion that translation (interpreting) is a *skill* – and certainly not a primary language skill, since monolinguals regularly get along perfectly well without it (Albert, Obler, 1978: 217). Indeed, we have every confidence in the extremely specific nature of that bilingual activity and claim (though it is already a common knowledge) that practice and proper training within the process of translation/interpreting learning are vital to gain a proficiency level.

As it has been stated, in the biggest part of translation studies the process of translation/interpreting involves two basic stages: perception and production. All of them are connected with the complex mental performance:

*«...текст ИЯ воспринимается при помощи перцептивных эталонов (perceptual references), и в результате перекодирования формируется текст переводящего языка...» (Alimov, 2011: 23).*

This short remark introduces a crucial notion of *perceptual reference*, which, in turn, grounds the further investigation of interference. Thus, it must be said about how we understand the process of perception and perceptual references per se. The first is not just a form of physiological and psychological activity, but rather a process of adaptation and, to some extent, of bilingual behavior control. With the help of perception people feel the surrounding and make decisions about situations: those challenges coped by the person in s/his activity within the process of adaptation determine those features and specific characteristics of objects which are necessary to behave in an appropriate way. The same, in fact, is applied to the process of translation/interpreting, since, we think, that situations of bilingual

performance are also may well be considered as the process of adaptation (linguistic, extra-linguistic, mental, psychologic and etc.).

«...При переводе переводчик имеет дело на начальном этапе с процессом восприятия речевого высказывания на ИЯ. Это восприятие на стадии идентификации осуществляется как процесс сравнения воспринимаемых объектов с перцептивными эталонами подобных объектов, хранящимися в памяти переводчика. Это сравнение происходит на основе эталонов слов как ИЯ, так и ПЯ: при отсутствии или недостаточной сформированности эталонов на одном языке переводчик с разной степенью осознаваемости использует перцептивные эталоны из другого языка. Именно эта подмена перцептивных эталонов одного языка перцептивными эталонами другого языка является психической основой интерференции...» (Alimov, 2011: 30).

Consequently, linguistic interference might be considered as *failures* in the process of adaptation and *substitution* of perceptual references as the result. Taking into consideration the fact that interference is quite a “flexible” phenomenon which may appear in all the language levels, it can be one (maybe even the major) of the reasons for accents, errors and omissions, utterance deformation and misunderstanding, and consequently, for the communication breakdown. Since there is a plenty of different explanations of translation/interpreting errors, we assume the fact that interference analyzed in the sense of translation/interpreting studies should be distinguished from code switching, which involves “some overlapping of the two languages” (Albert, Obler, 1978: 16). In this regard N. Hasselmo suggested that

“interference may occur at many linguistic levels, and in either production or perception [...] code switch regularly occurs at the boundaries of

*constituent units (words or phrases), rather than within them...[...] code switch may be triggered when an item in the context of speech is ambiguous between the two languages”* (Hasselmo, 1969).

Probably, it will be interesting to suppose that the level of proficiency in language skills does not determine appearance of interference. Though, for example, Martin L. Albert and Loraine K. Obler in their “The bilingual mind” note that:

“...Nonfluent speakers will always be suspect of experiencing interference; balanced bilinguals may not be exempt either, however. Finally, more research must be done on the ways in which the second language may interfere with the first. It is our observation that several years in foreign country may result in nonnative production of the speaker’s native language. This phenomenon, in which recent usage sets the structures predominance over earlier ones, may be an immersed in a new language...” (Albert, Obler, 1978: 211).

As we feel it, since one of the causes of interference in translation/interpreting is literal translation techniques and form-based translation, which actually, may occur both in amateur and professional activity (though, of course the last, in turn, catch researchers’ interest), then we cannot be sure that the only level of linguistic skills, training and practice are responsible for successful interlinguistic communication. We rather tend to think that it is a personal ability (which is rather inherently psychologically individual or even natural) to anticipate the incoming message:

“...anticipation enables the interpreter to formulate hypothesis in relation to structure and content of the source text, but this hypothesis has to be confirmed by evidence in the successive text. Thus, a variety of texture signals used appropriately can be relied upon...” (Albert, Obler, 1978: 83).

This fact is likely to explain why sometimes non-proficient interpreters and translators

perform more efficiently than experts. Though, of course, such cases are rather exception to the rules, than a common matter:

*“...translations by amateur are typically very literal, being in many instances almost word-for-word “verbal transpositions” rather than translation, whereas those by professional Ts are substantially more in agreement with the idiom of the target language...”* (Barik, 2001: 83).

It also should be noted separately about simultaneous translation, since it has already been confirmed as the hardest type of translation activity. The situation of simultaneous translation, as we assume, must be considered an instant of interlingual interference: linguistic difficulties (i.e. language transferring) are overcome together with those appearing in listening and simultaneous speaking processes. Thus, for example, in the research by D. Gerver, a British psychologist, who was interested in the memory matters, working memory capacity and storage and processing issues within interpreting, it is shown that a) better recall after interpreting than after shadowing reflected more complex processing operations in interpreting; and as a consequence, b) shadowing a text resulted in fewer errors and better comprehension than did simultaneous translation (Albert, Obler, 1978: 210). Indeed, the question of interlingual interference in simultaneous translation should present the main research focus for the modern R&D projects in translation studies, psycholinguistics and cognitive sciences due to relevance of the last in the context of contemporary global communication demands, multitasking scheme of brain and memory activity and involvement into different scientific fields that actually meets the requirements of interdisciplinary approach.

The bottom line is that interference may obtain or occur at absolutely all linguistic and even extra-linguistic level. By discussing the idea of translation we have also supposed that it is an unnatural

trained skill that can at the same time occur quite spontaneously (i.e. in the case of any emergency) and lead to some unexpected errors and failures on the one hand or to neutral or constructive results in the target text, on the other. The input system of a translator analyzes incoming information and helps s/him to build a hypothesis about what will follow next (that actually constitutes the basis of perceptual references processing) until it reaches any reasoned interpretation of the message. Some kind of “lags” in this system and in the process of perceptual references mechanisms inevitably lead to interference reflected through omissions, errors, speed loss, form-based and word-for-word translation and etc. Thus, to avoid such failures in interpreting/translation and to achieve the desirable result from communication we should probably make an insight into the nature of phenomenon and answer the question what inner processes make a person to take this or that (not always correct, as it has been showed) translation decision.

### **Challenges in research**

Despite a potential academic interest to the above mentioned problem of interference in interpreting concerned from the psycholinguistic perspective, researches encounter quite a lot of problems addressing the obtaining of absolutely comprehensive view. Though psycholinguistics and cognitive sciences have already achieved such level of experimental instruments that can pricelessly contribute to the sphere of translation studies, we share the opinion that there are two main groups of challenges which are still cannot be managed.

In our observation one of the most cardinal obstacles in this sense is difficulty in determination of suitable qualitative criteria. As D. Gile points out:

*“...many of them (indicators) used in psychological experiments are difficult to use because they require breaking down interpretation*

*into isolated tasks. On the other hand, holistic indicators, such as errors or omissions, lack sensitivity, precision and reliability, even though they can be useful during experimentations...*" (Gile, 1995).

Following this statement we introduce another challenge related to the psycholinguistic investigation of interference – a situation of artificial interpreting. To be more precise, we claim that by “breaking down interpretation into isolated tasks” one loses that essential atmosphere of a real, stressful interpreting/translation instance which requires tremendous strength and concentration from the person. As the result it leads to the exception of some extralinguistic aspects (or, actually, psychological aspects) from the investigation, i.e. stress and pressure influence, speed and attention characteristics, physical features of the environment in booths and etc. In the biggest part of such experiments, simulations push interpreters/translators (even professionals) to behave differently, because they as a rule are prepared to what they will be asked to do, and that knowledge distorts the whole experiment.

The matter is that we cannot obtain a “real-time” recording from interpreting tasks, i.e. we are not allowed to sit next to working interpreters to watch them carefully and do video- or sound records, since there is another side of the medal – ethics. So, in most cases, such type of researches seems to be not objective or lack enough amount of material which would meet all the criteria. The use of students (even of the final course) seems to be not adequate – though it is, probably, the easiest way possible, - since their skills, motivation, strategic behavior and experience to cope with difficult situations cannot be compared under such experiments and investigations.

The other group of potential obstacles relates to the problem of standards and guidelines which would determine what a “good translation” is do not exist. At the present time there are

permanent discussions about how to translate (and whether it is necessary to translate at all) this or that term, whether it is appropriate to use transliteration in that way, should the interpreters strictly shadow all the words and constructions in the target speech and etc. Besides, there is the question of what a standard in the language is in general and what techniques should we use to achieve that *correct* level of linguistic skills. Moreover, the problem of quality in translation and interpreting inevitably causes the problem of quality assessment, which is definitely vital for professional interpreters/translators in order to customize certain methods and techniques to meet the demands of modern clients and their communication goals.

### **Conclusion**

Translation and interpreting has undergone an increase in methodological innovation due to its close ties with and, thus, contribution to psycholinguistics and cognitive sciences. The experimental methods developed in the best traditions of anthropometric sciences, i.e. thinking-aloud and retrospective protocols, eye-tracking, spin dating, memory techniques, key-logging and etc., has enriched both spheres with important and useful information about how do professional bilinguals operate in two (or even more) languages. Nevertheless, as many scientists and linguists concern, a plenty of questions (as, the problem of interlinguistic interference) still remain unresolved.

Such thoughts are supported by a number of quite reasonable explanations, among which obstacles in conducting researches take, perhaps, the first place. As it has been described above it is essential to address the problem of interference in the sense of psychological mechanisms in order to answer the question how does it appear; what failures can occur; or what gaps might be met by interpreters during their performance? Perhaps,

the best way to find a certain common ground for all these studies is to follow a strict collaboration both internationally and interdisciplinarily, exchange ideas, methods and techniques to produce the most efficient training methodology, quality assessment criteria and standards to avoid that cross-communication distorts caused by interlinguistic interference.

### References

Albert Martin L., Obler Loraine K. (1978). *The bilingual brain*. NY/San-Francisco/ London, Academic Press.

Alimov V. V. (2011). *Interferentsiia v perevode [Interference in Translation and Interpreting]*. Moscow, KomKniga, 230 p.

Barik H.C. (2001). Simultaneous interpretation: qualitative and linguistic data, *In The Interpreting Studies Reader*. London, Routledge.

Christoffels I.K., A.M. B. de Groot and J.F. Kroll (2006). Memory and language skills in simultaneous interpreters: the role of expertise and language proficiency, *In Journal of Memory and Language*, (54), 324 – 345.

Gile D. (1995). *Basic concepts and models for interpreter and translator training*. Amsterdam: Benjamins. Available at: <http://interpreters.free.fr/simultaneous/copingtacticsgile.htm>

Hasselmo N. (1969). How can one measure the effects which one language may have on the other in the speech of bilinguals?, *In Description and Measurement of bilingualism: an international seminar*. Toronto, University of Toronto Press.

Haugen E. (1956). *Bilingualism in the Americas: a bibliography and research guide*. Alabama, American Dialect Society.

Holmes J. (1988). The name and nature of translation studies, *In Translated! Papers on Literary Translation and Translation Studie*. Amsterdam, Rodopi.

Karlinskii A.E. (1990) *Osnovy teorii vzaimodeistviia iazykov [Fundamentals of the theory of linguistic interaction]*, Alma-Ata, Gylym, 181 p.

Mizuno A. (2005). *Process model for simultaneous interpreting and working memory*. Rikkyo University. Available at: <http://www.erudit.org/revue/meta/2005/v50/n2/011015ar.pdf>

Moser-Mercer B. (2001). Process models in simultaneous interpretation, *In The Interpreting Studies Reader*. London, Routledge.

Seleskovitch D. (1977). Take care of the sense and the sounds will take care of themselves or why interpreting is not Tantamount to translating languages, *In The incorporated Linguist*, (16), 27 – 33.

Toury G. (1995). *Descriptive studies and beyond*. Amsterdam, John Benjamins Publishing.

Weireich U. (1953). *Languages in contact: findings and problems*. New York.

## **К вопросу о взаимодействии психолингвистики и устного перевода: межъязыковая интерференция**

**И.Б. Руберт, М.А. Капитонова**

*Санкт-Петербургский государственный  
экономический университет  
Россия, Санкт-Петербург,  
наб. канала Грибоедова, 30/32*

---

*На сегодняшний день общепризнанными остаются два момента: во-первых, многие практики устного и письменного перевода нуждаются в систематической тренировке своих когнитивных рабочих навыков, а во-вторых, постоянное развитие научных технологий и экспериментов, которые теперь становятся все более доступными для исследователей. Отмеченные выше факты, как считают авторы, могут стать отличным базисом для поиска ответов на многие вопросы, связанные с работой переводчика. В статье содержится мини-анализ проблемы того, как психолингвистика и когнитивные науки могут обогатить сферу переводоведения на современном этапе ее научного развития. В частности, авторы статьи затрагивают явление межъязыковой интерференции и разделяют мнение о том, что она может послужить еще одной общей площадкой для исследований, которые по своей сути поддерживают междисциплинарный характер социогуманитарных наук.*

*Ключевые слова: междисциплинарность, межъязыковая интерференция, перцептивные этапы, когнитивные науки, устный перевод.*

*Научная специальность: 10.00.00 – филологические науки; 19.00.00 – психологические науки.*

---