

## ENGLISH LOANWORDS AND THE PRESENCE OF HESITATION PHENOMENA IN SPEECH OF EUROPEAN SPANISH AND MEXICAN SPEAKERS: AN APPROACH

Agnes Illésné Weeber  
Eötvös Loránd University  
(Hungary)

[agnes.weeber@email.com](mailto:agnes.weeber@email.com)

<https://orcid.org/0000-0002-7279-911X>

Received: 18/05/2022. Accepted: 20/12/2022. Published: 28/12/2023

Recommended citation:

Illésné Weeber, Á. (2023). English loanwords and the presence of hesitation phenomena in speech of European Spanish and Mexican speakers: an approach. *Phonica*, 19, 137-161. <https://doi.org/10.1344/phonica.2023.19.137-161>

### Abstract

This article analyses the prosodic adaptation of Anglicisms in a spontaneous speech context by native European Spanish and Mexican speakers. The change of code between languages may carry prosodic markers (Navracics, 2014), which can be a disfluency phenomenon, such as a short pause or syllable lengthening for hesitation — these being the two most common hesitation patterns (Deme & Markó, 2013). The research has been conducted on filled pauses and lengthening of the Spanish and Mexican language varieties, based on audio corpus of native Spanish and Mexican speakers, following Cantero's method of *Prosodic Analysis of Speech* (2019) with modest changes.

In this preliminary study, we have found that hesitation can be observed in the context of Anglicisms in the majority of both Mexican and Spanish speech productions, but a difference was discovered in its placement within the sentence. Furthermore, according to the sample, the relative syllable lengths of European Spanish speakers on a lengthened syllable differ more from the previous or the average syllable length of the speaker than in the case of slower Mexican speakers, where it is not always an obviously detectable phenomenon. Therefore, the decrease of speech rate around Anglicisms in the case of European Spanish speakers is more noticeable. Although longer syllables were also observed on Anglicisms themselves, the extent of this prolongation differed from the degree of syllables containing the hesitation phenomenon, and was probably caused only by the slower articulation of consonant clusters characteristic of Anglicisms.

**Keywords:** Anglicisms; Prosody; Hesitation; Code change; Peninsular Spanish; Mexican Spanish



© 2023 The authors. This is an open access paper under the [Creative Commons 4.0 International \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/) license, which allows the article's reproduction, distribution and public communication, whenever authorship and the journal's title is quoted.

## Préstecs anglesos i la presència de fenòmens de vacil·lació en la parla d'espanyols d'Espanya i de Mèxic: una aproximació

**Resum:** Aquest article analitza l'adaptació prosòdica d'anglicismes en un context de parla espontània per part de parlants nadius espanyols europeus i mexicans. El canvi de codi entre llengües pot portar marques prosòdiques (Navracsics, 2014), com pot ser un fenomen de disfluència: una pausa o l'allargament d'una síl·laba, els quals són els patrons de vacil·lació més comuns (Deme & Markó, 2013). Aquesta investigació tracta les pauses i els allargaments en les dues varietats esmentades i es basa en un corpus d'àudio de parlants nadius, seguint el mètode de l'*Anàlisi prosòdica de la parla*, de Cantero (2019), amb canvis modestos.

Com a resultat d'aquest estudi preliminar, hem trobat que es pot observar vacil·lació en el context dels anglicismes a la majoria de produccions, tant mexicanes com espanyoles, però que hi ha una diferència en la seva ubicació dins de l'oració. A més, segons la mostra, la longitud relativa de les síl·labes dels hispanoparlants europeus en una síl·laba allargada difereix més de la longitud de la síl·laba anterior o mitjana del parlant que en el cas dels parlants mexicans, més lents, en els quals no sempre és un fenomen evidentment detectable. Per tant, la disminució de la velocitat de la parla al voltant de l'anglicisme en el cas dels hispanoparlants europeus és més notòria. També es van observar síl·labes més llargues en els anglicismes, en els quals el grau d'aquesta prolongació diferia del grau de síl·labes que contenien el fenomen de vacil·lació, fenomen que, probablement, va ser causat per l'articulació més lenta dels grups de consonants característics dels anglicismes.

**Paraules clau:** Anglicismes; Prosòdia; Hesitació; Canvi de codi; Espanyol peninsular; Espanyol mexicà

## Préstamos ingleses y la presencia de fenómenos de vacilación en el habla de españoles de España y de México: una aproximación

**Resumen:** Este artículo analiza la adaptación prosódica de anglicismos en un contexto del habla espontánea por parte de hablantes nativos de español europeo y mexicano. El cambio de código entre lenguas puede llevar marcas prosódicas (Navracsics, 2014), como podría ser un fenómeno de disfluencia: una pausa o el alargamiento de una sílaba, los cuales son los patrones de vacilación más comunes (Deme & Markó, 2013). Esta investigación trata las pausas llenas y alargamientos de las dos variedades mencionadas, basándose en un corpus de audio recopilado de hablantes nativos, siguiendo el método del Análisis prosódico del habla, de Cantero (2019), con cambios modestos.

Como resultado de este estudio preliminar, hemos visto que se puede observar vacilación en el contexto de los anglicismos en la mayoría de las producciones, tanto mexicanas como españolas, pero que hay una diferencia en su ubicación dentro de la oración. Además, según la muestra, la longitud relativa de las sílabas de los hispanohablantes europeos en una sílaba alargada difiere más de la longitud de la sílaba anterior o promedio del hablante que en el caso de los hablantes mexicanos, más lentos, en los que no siempre es un fenómeno evidentemente detectable. Por lo tanto, la disminución de la velocidad del habla en torno al anglicismo en el caso de los hispanohablantes europeos es más notoria. Aunque también se observaron sílabas más largas en los anglicismos, en los cuales el grado de esta prolongación difería del grado de sílabas que contenían el fenómeno de vacilación, fenómeno que, probablemente, fue causado sólo por la articulación más lenta de los grupos de consonantes características de los anglicismos.

**Palabras clave:** Anglicismos; Prosodia; Hesitación; Cambio de código; Español Peninsular; Español mexicano

## 1. Introduction

One of the most characteristic changes in the Spanish language of the 21st century was a change in vocabulary as a result of globalization and technological development. The frequent use of newly arrived English words has been investigated by several studies in recent years (e.g. Pratt, 1980; Rodríguez González, 1999; Gómez Capuz, 2000; Rodríguez Medina, 2000). Its most common areas of occurrence are the ones most affected by globalization: science, technology, economics, commerce, fashion, sports, health, and the language of social networks. Anglicisms are lexical linguistic elements of Anglo-Saxon origin and are more or less integrated into the language of the host country's language, in this case, Spanish (Rodríguez Medina, 2000, p.102).

During their integration, these words can go through various modifications: they can be adapted to spelling, pronunciation, or morphology. In this study, we focus on the prosodic changes and adaptation of Anglicisms in the Spanish environment as the phonetics of a language refers not only to its segmental elements, but also to its suprasegmental aspects, like intonation, rhythm and stress. The suprasegmental phonological features appearing in the context of Anglicisms—which could be the increase of melody, the decrease of articulation tempo or a linguistic interruption—may differ in the European Spanish and the Mexican dialects. The reason for the discrepancy could be found in geographical, historical and social differences. Different disfluencies, like a short pause or syllable lengthening while hesitating, the repetition, correction or explanation of the used Anglicism—characteristic of the individual, and of the language—are the natural features of spontaneous speech, since in spontaneous speech, in addition to articulation planning, we must also pay attention to the form and content of the text (Bóna 2016, 166).

English language has a pragmatic charge that indicates a kind of “cultural superiority”, so the use of English often fulfils this pragmatic function: in this case the code changes. By code change, we mean intentional or accidental switching between languages. Foreign elements such as sounds, derivative morphemes, conjunctions, words, fixed expressions, or intonations can intrude into the conversation encoded in the base language, and when it has a communicative function, the phenomenon of code changing occurs (Cantero & De Arriba, 1996, p.587, 589). English, as a world language—mostly because of its special technical terms—, often yields loanwords to replace missing Spanish words or to use words that are more accurate and easier to express in English. Pragmatic-free loanword use is not easy to distinguish from code changing (Cantero & De Arriba, 1996, p.589), but the second one can be predicted when interruptions, or hesitations are detected (Navracics, 2014, p.93). Therefore, the present research compares the hesitation phenomena before words of English origin—empty and filled pauses, as well as syllable lengthening—based on the spontaneous speech pattern of 5-5 speakers of the two language varieties. Thus, the analysis of prosodic changes in the environment of Anglicisms can also provide an answer to the question of whether it is possible for one language variant to undergo the code change, and not typical for another variant. The amount of data analyzed here is not suitable for claiming a real conclusion. Therefore, this work is presented as a preliminary research, according to which it comes clear which values are necessary to analyze and evaluate in a research done on a larger corpus.

The work is structured as follows: in the theoretical background, we present the use of Anglicisms in the Spanish context, list possible prosodic disfluencies, changes and the theory of code changing, and mention some of the historical-social differences between Spain and Mexico that may cause differences in the use of Anglicisms. Then we describe the hypotheses, the corpus, and the research methodology. Using the speech analysis software Praat (Boersma & Weenink, 2019), we segmented and annotated the selected audio files, which then were standardized (Cantero, 2019) in two different ways to obtain results independent of the individual characteristics of the speakers. The results are presented in tables and boxplots made by Excel (Office 365). We summarize the results and, in the end, formulate possible goals for further studies.

## 2. Theoretical background

### 2.1. The use of Anglicisms

For the purpose of describing new things and phenomena –for which the language does not have the accurate expression yet– it is necessary to use a new word, a neologism. Neologisms can be created within the language, or they can come from a foreign language. Intralinguistic neologisms can be obtained by creating new words, assigning new meanings to existing words, or by morphological transformations (e.g. suffixation, abbreviation). Neologisms inherited from a foreign language can be distinguished according to the fact that the foreign language pattern is received and translated into the host language (these are loan translations or calques, and can also be suffix patterns, word structures or pronunciation variants following a foreign pattern) (Lanstyák, 2002, p.2), but can be “borrowed” without translating them, as well. Neologisms borrowed from a foreign language are words that have entered the host language and are called foreign words by terminology. We speak of a foreign word until the word taken over is fully integrated phonetically and morphologically into the system of the host language, but after a while, they can become established until the point that their foreign origin is no longer recognizable (Kiss, 2002, p.210). An Anglicism is defined as a borrowing from the Anglo-Saxon environment, which can stabilize or disappear from the language, even in a short time (Colón & Gimeno, 2006, p.68). Its stability depends largely on the degree of adaptation, and it should adapt to pronunciation, spelling, and morphology.

The degree of adaptation and the use of Anglicisms –specific to the individual–, depends on several factors, such as the age of the individual, his or her social status, the channel of communication, and the topic discussed. The most common areas of Anglicisms are the disciplines that have been most affected by globalization in recent decades: science, technology, economics, commerce, fashion, sports, health, and the language of social networks. Many international brands have become “new concepts”, most of which were originally denominated by English words (e.g., *Facebook*, *Twitter*, etc.). In recent years, a large number of thematic, regional, and summative collections of Anglicisms have emerged (Haensch, 2005; Gómez Capuz, 2000, 2004; Vázquez Amador, 2018; Moreno-Fernández, 2018; Rodríguez González, 2017). The use of Anglicisms is also affected by the regulation of the *Real Academia Española (RAE)* - *Royal Spanish Academy* and other suggestions of dictionaries, but the law of “minimum effort” may also explain the choice to use simple, short Anglicisms instead of their existing Spanish versions (e.g., *duty-free sales* or *establecimiento de venta de productos libres de impuestos*) (Rodríguez González, 1996, p. 115). The rooting of loanwords also depends on the development of new semantic values. All this greatly influences the degree of adaptation of the Anglicism and its establishment. Over time, common terms used by many speakers (e.g. *freaky* > *friqui*) are added to the RAE dictionary. The non-profit Fundéu Institution, also supported by the RAE, is the official source for guidance on the use of emerging Anglicisms at the earliest, as the organization is committed and up to date in promoting Spanish or at least integrated to Spanish versions (e.g. *router* > *rúter* or *enrutador*). Nevertheless, in the case of an ever-changing, “living” language in use, the adoption of these rules does not necessarily have the desired effect: Anglicisms may, over time, be incorporated into Spanish despite the existence of their Spanish equivalents.

### 2.2. Code changing

#### 2.2.1. The phenomenon of code changing

By code change, we mean intentional or accidental switching between languages. Changing code is therefore usually studied in a bilingual environment: we might think that in order to be called bilingual, one must meet the condition of speaking two languages at almost the same, native level. This may be the case in bilingual regions, but surprisingly, bilingualism is a much broader concept

based on the following definition: “bilingualism is the regular use of two or more languages” (Grosjean, 1982, p. 230). However, bilingualism is not a necessary condition for code-switching: Cantero & De Arriba (1996) distinguishes between code-changing in bilingual and monolingual environments. In bilingual environments, the reasons for the alternate use of the two languages are the continuous adaptation to the environment, the expression of identity, and switching by topic (for taboos). At the same time, in monolingual environments, we can talk about dialectological code changes or register changes, language changes due to the presence of a foreign language student, or the use of a loanword in case of a missing term or for highlighting it in its context. As has found Grosjean *et al.*, “the prosody of code-switches does not always follow the pattern of the guest language: if the code switch is short and is a minor syntactic unit, then it might well be integrated into the prosody of the base language” (2013, p.65-66). Based on these, since in our present study we are only examining short English expressions intruded into Spanish, we expect a less noticeable prosodic difference on the English word itself. With the help of a summary table about the pronunciation in the target language, I will present what was experienced in the case of the words we examined. The examination of the target language pronunciation is really necessary in terms of the interpretation and evaluation of the results, since the foreign language level of the speaker will not necessarily be consistent with his/her loanword-pronunciation realized in the Spanish environment. The foreign pronunciation of a foreign word could cause a detectable prosodic break in the native language environment. Besides, examining the context of Anglicisms can be also important.

### 2.2.2. *The prosody of code changing*

Code changing can only happen if certain conditions are met: these are the principles of controlling the fulfilment of the pragmatic function and linguistic congruence (Navracsics, 2010, p.73; 2014, p.175). The occurrence of a code change is predicted by prosodic signs: these can be a rise in the melody before the examined word, a decrease in the articulation tempo, or often a linguistic interruption, such as pause, hesitation, or possibly repetition, correction, or explanation of an Anglicism. In the case of code-mixing (used in the work of Navracsics to describe linguistic mixing without pragmatic function), the listed phenomena are not observed (Navracsics, 2010, p.93). In Navracsics' work (Navracsics, 2010, 186), for the purpose of examining the relation between code changing and stalling phenomena he collected data from 22 monolingual and bilingual speakers (Hungarian and English, German, Serbian, Russian, Romanian or Croatian speakers). It can also be read in other works that hesitation, as a phenomenon of stuttering, is usually followed by a lexical search (Shantz, 2012, p.44), and thus, its presence is closely related to the presence of an Anglicism “wedged” into the native language context.

In the following, we give a brief theoretical overview of the acoustic disfluencies as prosodic differences.

## 2.3. Prosodic disfluencies

Recordings made in laboratories and text-to-speech recognition of texts read without interruption have developed greatly in recent decades, which has led to an increasing focus on spontaneous speech. Spontaneous speech is filled with various disfluencies, characteristic of the individual and the language, since in spontaneous speech, in addition to articulatory planning, we must also pay attention to the form and content of the text (Bóna, 2016, p.166). We call interruptions those phenomena that control the planning-articulation processes and break the continuous speech and do not add content to what is said but can contribute productively to comprehension (Gósy 2003, p.275). There is no universally accepted systematisation of the phenomena involved, which may be due to the different frequency and significance of different hesitating phenomena in each language. We can distinguish between silent or filled pauses, syllable lengthening, repetitions and corrections, such as restarting or changing words. In addition to the above, several other incidents break the continuity of speech, such as linguistic (phonological, sequential) errors, slips of the

tongue, which often remain uncorrected by the end of the utterance (Gósy 2003, p. 261). Speech and background noises, silent and filled pauses, and syllable lengthening are among the acoustic disfluencies.

### 2.3.1. Acoustic disfluencies

When examining acoustic interruptions, it may seem appropriate to analyse silent pauses and filled pauses together because of the similar terminology, but their function and operation differ significantly. Silent pauses can be of varying lengths - pause, silence, stop (Bóna, 2016, p.160) - and can serve several purposes, such as facilitating the segmentation and understanding of the content (Gósy, 2003, p.258), as long as they are on the boundary of syntactic units (Gallardo-Paúls, 1996, p.67). Standing on their own, they do not indicate hesitation, only if they are accompanied by a prolongation or a filled pause (Campione & Véronis, 2005). In this case, we can speak of a planning break (Gallardo-Paúls, 1996, p.67). Vowel lengthening and filled pauses play an equal role in oral communication: their purpose is to gain time to plan and reorganise the remaining content and structure of the utterance (Stepanova, quoted by Machuca & Ríos 2016, p.69), without interrupting it (Rebollo Couto, 1997, p.667). The lengthening can fall on a filler word or a syllable that does not break the curve of discourse. By filled pause, we mean meaningless vowel articulation, which can appear at any stage of the utterance, often at the beginning of it. The pause-filling sound of the Spanish language is most often realised as an [e] sound (Machuca *et al.*, 2015), but the [a] sound and various nasalisations may also appear, such as [m] (Rodríguez *et al.* 2001, p.2). The length of filled pauses and the number of occurrences per speaker vary greatly: the length of speech is not directly proportional to the number of interruptions in speech (Rodríguez *et al.* 2001, p.4). These two apparently different phenomena have the same melodic characteristics: the lengthening and the filled pauses are characterised by a persistent vowel and a flat or slightly descending frequency curve (Campione & Véronis 2005, p.44). Keeping the melody level indicates to the audience that what is being said is not over yet. Based on the analysis of Goto *et al.*, these two phenomena can be classified into one category and can be detected with high accuracy using the same algorithm using speech recognition software (1999, p.227). In my analysis, I also examine these two phenomena together.

## 2.4. Speech rate and lengthening

### 2.4.1. Speech rate and acoustic rate

To characterise the degree of sound prolongation and the length of the filled pause, we need to describe the concept of speech tempo. Speech rate refers to the number of speech signals per unit of time including pauses, while the articulation rate is divided by the number of speech signals required to create them, without pauses (Bóna, 2016, p.159), most often in words/minutes or syllables/seconds. According to Madrid (2008, p.258), although silent pauses do not count towards articulation rate, filled pauses and lengthening do. Speech rate shows large individual variations in age, gender, personality, speech topic, etc. Moreover, it also changes continuously during the speaker's speech. The tempo of less emphatic words (e.g. adjectives, pronouns, conjunctions) is relatively fast (Hegedús, 1957, p.225), while longer syllables can be observed in emphasised syllables or at the end of the discourse, so we can observe a slower tempo (Fletcher, quoted by Bóna, 2016, p.160). The average speech rate varies by language (Gósy, 2004, p.205). There is a difference in the speed of peninsular and Latin-American Spanish speakers. Based on nearly six hours of reading and spontaneous speech analysis, Santiago and Mairano (2017) observed that the articulation tempo is faster in reading than in spontaneous speech, and Castilian speakers pronounce about a syllable more per unit time (1 sec) than Mexicans. Furthermore, it was found that the difference between the length of accented and unaccented vowels was larger for Mexican speakers (15%) than for Spanish speakers (7%).

### 2.4.2. *Speech rate and relative lengthening*

Baditzné (2020) conducted a comparative analysis of the absolute- and the relative lengthening of syllables containing hesitation phenomenon based on a corpus of northern and southern Spanish speakers. According to her results, faster speech has proportionally shorter lengthening in the syllable which contains hesitation phenomenon, so the difference in relative lengthening between the two regions is not relevant, despite the fact that southerners speak faster. Thus, the difference in the rate of speech does not lead to a difference in the degree of relative lengthening detected: it is advisable to examine the rate of speech, the absolute duration and the relative duration of the syllables together. The purpose of the present study is precisely this: a comparative analysis of the lengths of filled pauses and syllable lengthening of speech, collectively referred to as hesitation phenomena, in the Mexican and Spanish language variants, on a corpus containing Anglicisms in spontaneous speech. We hypothesise the presence of hesitation phenomena in the environment of Anglicisms, and also that the absolute or relative length of vowel lengthening of Anglicisms and of hesitations may be different in the two language variants.

### 2.4.3. *Speech rate and vowel reduction*

The speed of speech and the length of syllables can also be affected by vowel reduction. Vowel reduction is typical in Mexican Spanish. It is important to note that vowel weakening or loss does not depend on the syllabic position in relation to the accent of the word, but on the consonants that surround the vowel. For example, a sequence of a voiceless consonant in stressed syllable (usually the voiceless alveolar fricative /s/) + vowel + voiceless consonant in unstressed syllable (e.g. [pesos]) highly promotes the reduction (Serrano, 2006). In this article, by vowel reduction I mean a process in which an unstressed vowel reduces to a schwa, which is a linguistic phenomenon characteristic of the English language. According to the literature, the Spanish vowel set is dialectologically uniform, “the differences in vowel quality or even in phonemic inventory that can be seen in the geographical and social varieties of English are non-existent in Spanish” (Hualde, 2014, p. 124). “A notable exception to Spanish vowel stability is the evidence of shortened, deleted, or devoiced vowels, a phenomenon that occurs in other languages, and which has been documented in Mexico City Spanish” (Dabkowski, 2018, p.1), but not typical of Peninsular speakers (Benet et al. 2012, p. 438). Based on the above mentioned, the presence of vowel reduction in the speech product of speakers can also be a measure of target language pronunciation, may affect the syllable lengths measured on Anglicisms, and we rather assume the presence of this phenomenon in the speech of Mexicans.

## 2.5. Historical background

According to a survey by Instituto Cervantes (2020), the Spanish language has about 489 million native speakers, and is characterised by significant regional-dialectal diversity due to its large geographical extent. Of all countries, Spain is active in promoting itself as the global centre of authority for the language (Graddol, 2006, p. 61). In my research, I compare the Spanish dialect from Spain as the widely received “standard language version” (Johnson & Milani, 2010, 47) and the Mexican dialect as the language version with the largest number of speakers.

To understand regional differences, we need to see how differently Spanish and Mexican languages are related to the English language. The influence of English as a world language is present in both areas because of geographical and historical reasons. We can also say that - especially for US citizens - their mother tongue English is the essence of their national identity: “a Christian monolingual nation where individuals from many lands abandon old loyalties and become simply American” (Valdés *et al.*, 2003, p. 3). American “superiority” is also indicated by studies in the field of “American exceptionalism”, which can be criticized on several points (Walt, 2011, p. 72). Of course, this also means that the learning of any foreign language is not considered an important goal for English speakers, the English language is considered to be authoritative in

everything. This, in a reverse way, increases the prestige of English language. Furthermore, the close relationship between Mexico and the United States may play an outstanding role when examining the linguistic differences between the two Spanish language variants. Since gaining independence in 1821, Mexico has had an ongoing historical, economic, political, and cultural relationship with the United States. It has resulted in a significant linguistic impact on the Mexicans, for whom the English language represented the desired “American dream” (Franco & Lara, 2016, p.78-100). This ambivalent relationship can be formulated as follows: “Many factors are involved in the range of attitudes toward English on the part of Mexican students. One is the imposition of the language on the Spanish speaker as an international *lingua franca* that he or she must possess to achieve professionally, academically, and economically. Another is the prestige associated with becoming a speaker of English” (Francis & Ryan, 1998, p. 25).

In Spain, by contrast, in the first half of the 20th century, the Franco regime severely restricted the use of words of foreign origin that came with the Industrial Revolution and the European intellectuals. Although strict linguistic nationalism has declined since the 1960s, it has been replaced by linguistic purism as many people, especially linguists and academics, have rejected the sudden appearance of foreign words (Rodríguez González, 1999, p.103-109). This attitude is still represented today in academic standards and opinion articles on language use. This may have slowed the spread of Anglicisms in Spain.

Undoubtedly, there are certain Anglicisms that are unique to certain regions of Latin America. However, due to the diffusing role of the media and the internet, a significant proportion of Anglicisms appear in both European and American Spanish language variants (Franco & Lara, 2016, p.92). Indeed, globalisation is leading to a homogenisation of Anglicism worldwide: thus, the discrepancy between dialects may not be realised purely on a lexical basis. Thus, analyses that go beyond vocabulary may be more important in detecting dialectological differences. In conclusion, examining the extent of adaptation of English-derived loanwords and their phonological-prosodic manifestations could lead us to suggest dialectological differences.

### 3. Hypotheses

This paper focuses on the prosodic phenomena around Anglicisms in Spanish and Mexican native spontaneous speech, formulating the following hypotheses:

- (1) We hypothesise the presence of hesitation phenomena in the environment of Anglicisms. This could be a filled pause or the lengthening of a syllable.
- (2) We suppose that the absolute length of hesitation or the degree of lengthening compared to the preceding syllable or the average syllable of the speaker may differ in the examined language variants. In the case of Spanish speakers, the use of Anglicisms is preceded by a relatively prominent hesitation phenomenon, but in the case of Mexican speakers, it is not.
- (3) We assume that speech rate may decrease in one or both variants while pronouncing the Anglicism, and so lengthening may affect the Anglicism itself.

To confirm these hypotheses, a corpus was compiled in which it was possible to examine hesitation phenomena around Anglicisms in Spanish and Mexican native speakers’ speech. This was followed by a comparative, preliminary analysis, which is detailed in the Methodology chapter.



## 4. Corpus

### 4.1. Worksheet

The corpus used in this preliminary study consisted of 2-minute-long audio recordings from 5 Spanish and 5 Mexican speakers that contain 27 tokens of Anglicisms from both language variants. In order to analyse the prosodic environment of Anglicism in the participants' spontaneous speech, we had to produce a worksheet that activates their use of Anglicism. According to Navracics (2014), a good experimental method for examining targeted words could be comics or some images with some English text. We also made sure that the drawings concern topics where Anglicisms are very common. The drawings shown in Figure 1 evoke Anglicisms of office and school life, electronic devices, make-up, sports and performance. The task of the participants of the experiment was to answer the following question: "Based on the drawings, tell how the invasion of new *gadgets* affects your professional (work, school) and private life. Use the vocabulary which expresses most the changes also present in everyday communication. Try to talk for about 2 minutes maximum. Remember to record it, please."

*Cuente basándose en los dibujos de las dos diapositivas siguientes, cómo afecta su vida laboral, escolar y privada la invasión de los nuevos gadgets. Utilice el vocabulario con el que se puedan expresar mejor los cambios también presentes en la comunicación cotidiana. Intente hablar unos 2 minutos como máximo. Recuerde grabarlo, por favor.*

Figure 1. Worksheet to activate the use of Anglicisms in Spanish context.

## 4.2. The informants' profile

As the use of Anglicisms is influenced by several factors, it was important that the speakers were similar in age, educational and English level, and whether they lived in the capital or in the countryside. To clarify these data, a form with personal information was filled out by the speakers. We also received permission to use their recordings for analytical purposes. Sound recordings were made by mobile phone or laptop, and their quality was adequate for sound analysis. The following table shows the speakers' data (Table 1), and the Anglicisms observed in the utterances.

| Code                    | Age, sex | Education level | City              | Level of English | Device used            | Anglicisms used  |
|-------------------------|----------|-----------------|-------------------|------------------|------------------------|--|
| <b>Spanish speakers</b> |          |                 |                   |                  |                        |  |
| Sp01-1-5                | 20/f     | BA              | Murcia            | B1               |                        | <i>influencer, followers, Instagram, eStudentGrid, supercute</i>           |
| Sp02-6-12               | 22/f     | BA              | Murcia            | B1               |                        | <i>iPad, Facebook, Instagram, WhatsApp, online, influencer, Photoshop</i>  |
| Sp03-13-18              | 29/m     | MA              | Cáceres           | B2               |                        | <i>to-do-list, check-check, gmail, castings, marketing, influencer</i>     |
| Sp04-19-22              | 37/f     | PhD             | Córdoba           | C1               | <i>iPhone 8</i>        | <i>scrolling, cool, show, influencer</i>                                   |
| Sp05-23-27              | 38/m     | MA              | Madrid            | B2               | <i>Lenovo PC</i>       | <i>gadgets, smartphone, netflix, likes, gadgets</i>                        |
| <b>Mexican speakers</b> |          |                 |                   |                  |                        |  |
| Mex01-1-2               | 22/f     | BA              | Pachucha, Hidalgo | B1               | <i>Huawei P30</i>      | <i>whatsapp, okay</i>  |
| Mex02-3-6               | 24/f     | BA              | Pachucha, Hidalgo | B1               | <i>iPhone SE</i>       | <i>gadgets, variable, extras, shows</i>                                    |
| Mex03-7-11              | 29/f     | MA              | Morelia           | B2               | <i>Galaxy s20 plus</i> | <i>gadgets, gadgets, offline, online, offline</i>                          |
| Mex04-12-20             | 31/m     | PhD             | Ely, UK           | C2 (bil.)        | <i>Nokia G10</i>       | <i>gadgets, laptops, iPods, emails, gadgets, gadgets, gadgets, bonding</i> |
| Mex05-21-27             | 29/m     | BA              | Mérida, Yucatán   | -                | <i>Samsung A30</i>     | <i>whatsapp, whatsapp, facebook, memes, shows, Netflix, streaming</i>      |

Table 1. The informants' data.

As it shows, a corpus of 54 spontaneous utterances has been elaborated (27 from Spain and 27 from Mexico, with an average of 5 Anglicisms produced per person: 2 male and 3 female informants, respectively). The average age was 29 in Spain and 27 in Mexico. We can see significant differences in English knowledge, though, which could have affected the results of our analysis. The examination of the target language pronunciation is really necessary in terms of the interpretation and evaluation of the results, since the foreign language level of the speaker will not necessarily be consistent with his/her loanword-pronunciation realized in the Spanish environment. The foreign pronunciation of a foreign word could cause a detectable prosodic break

in the native language environment. To investigate it, we categorized the degree of pronunciation of the examined words in the target language on a three-level scale, the table of which is included (Table 2). The detected vowel reduction /ə/ was also marked. Most of the pronunciations occurred in the Spanish-English intermediate category because at the same time they wore Spanish and English features.

|             | words        | Spanish pronunciation | Inter pronunciation | English pronunciation | vowel reduction |
|-------------|--------------|-----------------------|---------------------|-----------------------|-----------------|
| Sp01.1      | influencer   |                       | x                   |                       |                 |
| Sp01.2      | followers    |                       | x                   |                       | ə               |
| Sp01.3      | Instagram    | x                     |                     |                       |                 |
| Sp01.4      | eStudentGrid |                       | x                   |                       | ?               |
| Sp01.5      | supercute    |                       |                     | x                     | ə               |
| Sp02.6      | iPad         |                       | x                   |                       |                 |
| Sp02.7      | Facebook     |                       |                     | x                     |                 |
| Sp02.8      | Instagram    |                       | x                   |                       |                 |
| Sp02.9      | WhatsApp     |                       | x                   |                       |                 |
| Sp02.10     | online       |                       |                     | x                     |                 |
| Sp02.11     | influencer   |                       |                     | x                     |                 |
| Sp02.12     | Photoshop    |                       | x                   |                       |                 |
| Sp03.13     | to-do-list   |                       | x                   |                       |                 |
| Sp03.14     | check-check  |                       |                     | x                     |                 |
| Sp03.15     | gmail        |                       | x                   |                       |                 |
| Sp03.16     | castings     |                       | x                   |                       |                 |
| Sp03.17     | marketing    |                       | x                   |                       |                 |
| Sp03.18     | influencer   | x                     |                     |                       |                 |
| Sp04.19     | scrolling    |                       |                     | x                     |                 |
| Sp04.20     | cool         |                       | x                   |                       |                 |
| Sp04.21     | show         |                       |                     | x                     |                 |
| Sp04.22     | influencer   |                       | x                   |                       |                 |
| Sp05.23     | gadgets      |                       | x                   |                       |                 |
| Sp05.24     | smartphone   |                       | x                   |                       |                 |
| Sp05.25     | Netflix      |                       |                     | x                     |                 |
| Sp05.26     | likes        |                       |                     | x                     |                 |
| Sp05.27     | gadget       |                       | x                   |                       |                 |
| Mex01.1     | whatsapp     |                       | x                   |                       |                 |
| Mex01.2     | okay         |                       | x                   |                       |                 |
| Mex02.3     | gadgets      |                       | x                   |                       |                 |
| Mex02.4     | variable     |                       |                     | x                     |                 |
| Mex02.5     | extras       | x                     |                     |                       |                 |
| Mex02.6     | shows        |                       | x                   |                       |                 |
| Mex03.7     | gadgets      |                       | x                   |                       |                 |
| Mex03.8     | gadgets      |                       | x                   |                       |                 |
| Mex03.9, 11 | offline      |                       | x                   |                       |                 |
| Mex03.10    | online       |                       | x                   |                       |                 |
| Mex04.12    | gadgets      |                       |                     | x                     |                 |
| Mex04.13    | laptops      |                       |                     | x                     |                 |
| Mex04.14    | iPods        |                       |                     | x                     |                 |
| Mex04.15    | emails       |                       |                     | x                     |                 |
| Mex04.16-19 | gadgets      |                       |                     | x                     |                 |
| Mex04.20    | bonding      |                       |                     | x                     |                 |
| Mex05.21    | whatsapp     |                       | x                   |                       |                 |
| Mex05.22    | whatsapp     |                       | x                   |                       |                 |
| Mex05.23    | Facebook     |                       |                     | x                     |                 |
| Mex05.24    | memes        | x                     |                     |                       |                 |
| Mex05.25    | show         |                       | x                   |                       |                 |
| Mex05.26    | Netflix      | x                     |                     |                       |                 |
| Mex05.27    | streaming    |                       |                     | x                     |                 |

Table 2. Target pronunciation and vowel reduction.

## 5. Methodology

### 5.1. Standardisation protocols

To examine the hesitation phenomena occurring in the environment of the Anglicisms, as well as the possible change in the pronunciation tempo of the Anglicisms, the segmentation of speech products is indispensable. Using the speech analysis software Praat (Boersma & Weenink, 2019), we marked and measured the absolute length of the perceivable silent pauses, the filled pauses and the vowel lengthening, and noted other disfluencies like corrections, filler words or explanations of the used foreign terms.

As it is advisable to examine the rate of speech, the absolute duration and the relative duration of the syllables together, as a possible solution, this research method follows the three-step analysis protocol of Prosodic Analysis of Speech (Cantero 2019, p.493), modified with a proposal from a previous study on the subject (Baditzné 2020, p.87), and a new standardisation procedure was developed based on this, so it is a second analysis method. Cantero's theory offers a solution for linguistic analyses independent of speakers' individual characteristics, in terms of melody, intensity, and duration: his measured results are complex, and thus more informative, as the characteristic prosodic values (in case of the duration of syllables, in seconds) are relatives to the previous syllable.

During the process, it is first necessary to segment and annotate the audio file prepared for analysis through a speech analysis software like Praat (Boersma & Weenink, 2019). During segmentation, in the case of examining duration, Cantero assigns the distances between intensity peaks to each syllable in his work. We measured the syllable lengths instead, although, in the Spanish language, the syllable boundaries are not easy to determine (Cantero, 2019). What we needed for this research was the length and lengthening of certain syllables, and not detecting the increasing or decreasing tempo of the speaker. That is why we have worked with the syllable lengths. The data obtained were entered into an Excel sheet for data management, standardisation, and charting. During standardisation, the data within an utterance were standardised: in practice, this meant that the first syllable of the utterance was designated as 100% long, and then the percentage deviation from the previous syllable was indicated syllable by syllable. Therefore, we obtained the degree of (percentage) prolongation observed, compared to the previous syllable.

Prosodic changes in speech (like intensity, melody or tempo) are always perceived in their context, so Cantero's model is the closest one to approximating what the listener experiences. However, the protocol did not provide a solution for all cases: in case of hesitation phenomenon in the first syllable, or when a silent pause was followed by a lengthened syllable, it may have turned out to be relatively shorter. The same was observed while accumulation of hesitation phenomena: due to the nearly identical length of the second filled pause, it did not stand out as a "longer syllable compared to the previous syllable" after standardisation, even for definitely long syllables. This is one of the reasons why a second standardisation model was needed, to compare each syllable's length not to the previous syllable but to the average syllable length of the speaker.

To determine the average syllable length, we took all the utterances of the speaker and determined the mean and standard deviation of all syllable lengths, excluding silent pauses. As the sum of the mean plus standard deviation, we obtained the threshold number, above which syllables were denoted long, lengthened syllables. This second method was independent of the environment in which the hesitating phenomenon was located in the speech product. In the following, we will present the methods summarised here in more detail and illustrate them with examples.

## 5.2. Segmentation and annotation

Segmentation requires a precise definition of the syllable: and it calls for special attention in Spanish. In case of “careful pronunciation” (Hualde *et al.* 2010, p.92), the hiatuses are classified into two syllables (e.g. *rí.o* ‘river’), while diphthongs and triphthongs belong to one syllable (e.g., *pues* ‘well’). There are more complex phenomena in our corpus, such as synaloephas (e.g. *pa.ra.un* ‘for an’), co-articulation of identical vowels at the interface of word boundaries (e.g. *pa.ra / a.rrí.ba* ‘to up’) and resyllabifications (e.g. *lo.so.tros* ‘the others’). During annotation, filled pauses and silent pauses had to be marked. Filled pauses were marked with the sound closest to the pronounced sound, [e] or [m], mainly, and silent pauses with “P” for pause. Additional short pauses in sound files were acoustic pauses before plosive sounds since these sounds are blocking the flow of air, so the vibration of the vocal cords does not appear on the spectrogram before releasing it (Hualde *et al.* 2010, p.58; Hualde 2014, p.45). These voice-onset-time pauses with their 0.05s of length (Iribar & Turrez, 2010) were classified to be part of the following syllable during segmentation (Kovács, 2019, p.17-22), when it started with plosive sound.

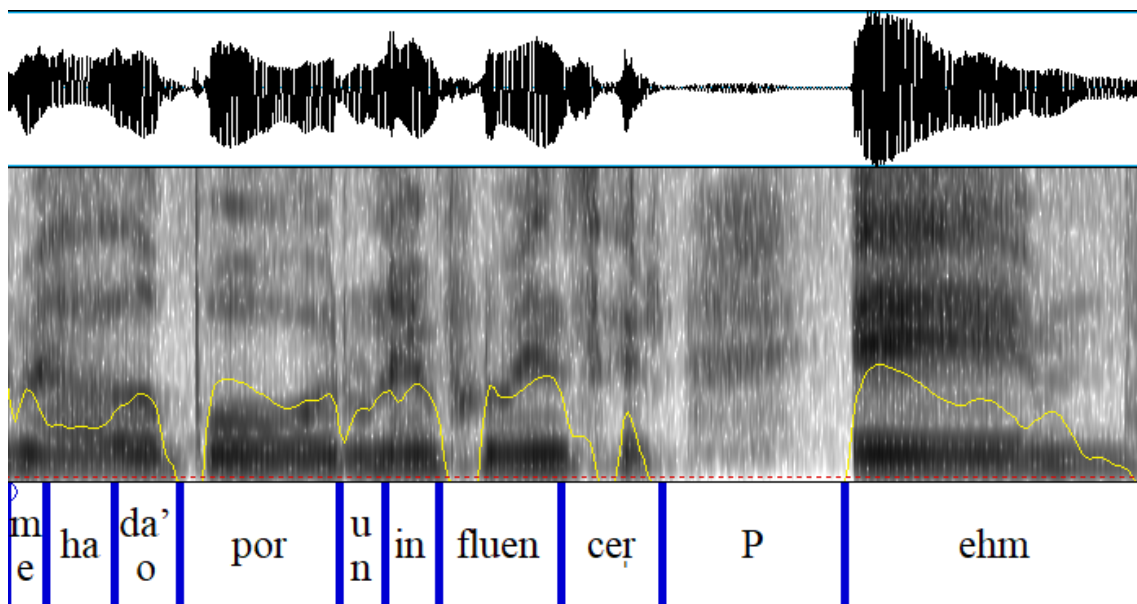
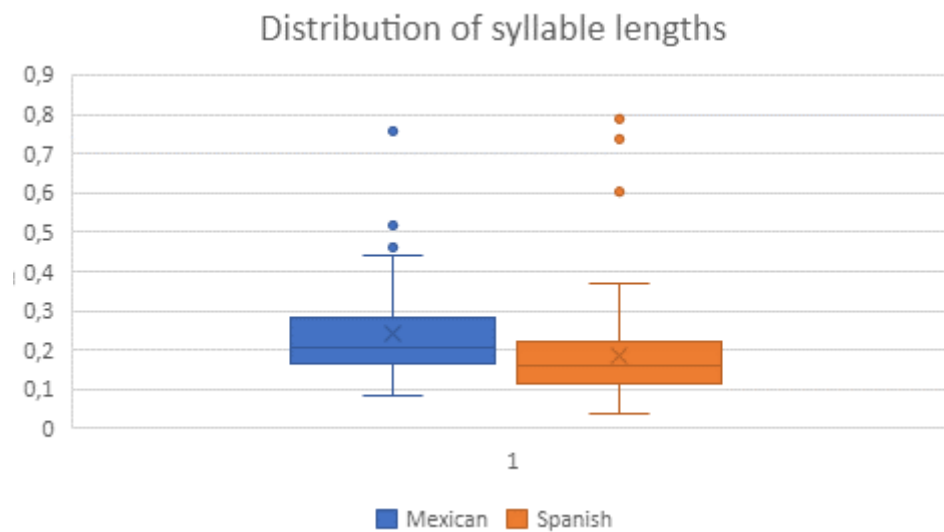


Figure 2. Segmented and annotated fragment of utterance Sp01-1-1. (*‘me ha dado por un influencer\_ehm.* ‘I follow an influencer\_er.’)

After segmentation shown in Figure 2, we measured each syllable length and organised the data of each speaker’s utterances into Excel windows. We used an additional program (script<sup>1</sup>) fitted to Praat to determine the syllable length, which automatically evaluated the length of the segmented syllables. The boxplots of Figure 3 show all the absolute syllable lengths (in seconds) from two different speakers (*Mex03* and *Sp01*), with the observed outlier data, which are filled pauses or syllable lengthening in all cases (so the silent pauses are not included).

<sup>1</sup> The script used in the analysis was written by Márton Bartók, Lingual Articulation Research Group, Momentum 2016-2021 – Hungarian Academy of Sciences & Eötvös Loránd University.

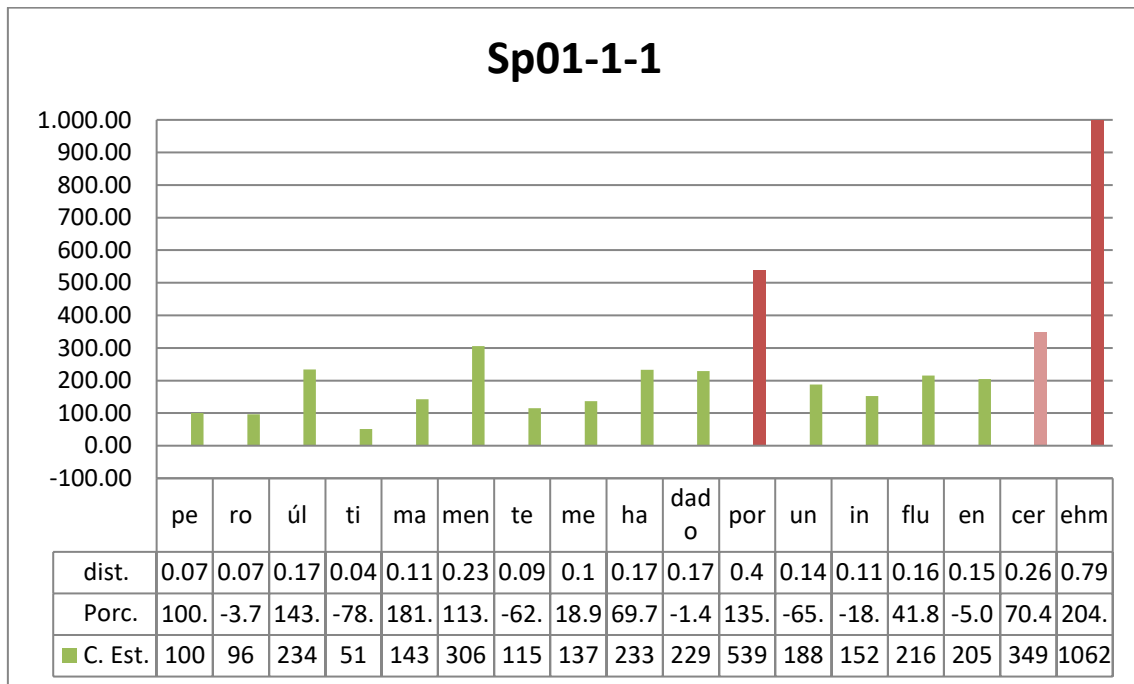


**Figure 3.** Distribution of syllable lengths (in seconds) from two different speakers of the two examined language variant. (*Mex03* as Mexican and *Sp01* as Spanish informant.)

It is clear from the diagrams that standardisation is needed to compensate for the individual differences: a slight lengthening of the average syllable length of a faster speaker may show the same percentage change as a syllable lengthening in a longer syllable of a slower speaker. In terms of perception, therefore, we can perceive syllables of the same length once prolonged and at other times not, depending on the tempo environment, and thus, the speaker.

### 5.3. Standardisation: relative lengthening to the previous syllable

The standardisation procedure was performed first following Cantero’s duration standardisation model. We supplemented our existing data sets for each utterance with the standardised duration by taking the first syllable as 100% and then proportioning each additional syllable to the previous syllable: a positive value for a longer syllable and a negative value for a shorter syllable. In addition, the values proportional to the first syllable of the utterance are indicated as the first reference point. The standardised values are also plotted on a graph for a more spectacular representation. In each utterance, the syllables containing hesitation phenomena were highlighted, as well as the lengthened syllable of Anglicisms. Figure 4 shows the values and graph according to the standardisation model mentioned. The lengthened syllable, *por* ‘for’, is 135% higher than the previous syllable, and has around the 5,39x length of the first syllable. In this case, the first syllable is an extremely short one: examining the total speech product of this speaker, this prolongation up to 0,4s of length is not an extremely outlier data. The filled pause on this utterance, *ehm* ‘er’, is 204% longer than the previous syllable ‘*cer*’ (from the word ‘influencer’, marked by lighter colour in Figure 4), which is the last and slightly lengthened syllable of an Anglicism. The difference from the previous syllable does not seem to be as remarkable as the deviation from the first one according to the table, where we measured a value of multiplication of nearly 11 times.



**Figure 4.** Standardised data for the utterance coded Sp01-1-1 on a diagram. (*Pero últimamente me ha dado por un influencer eh*. ‘But lately I follow an influencer, er.’).

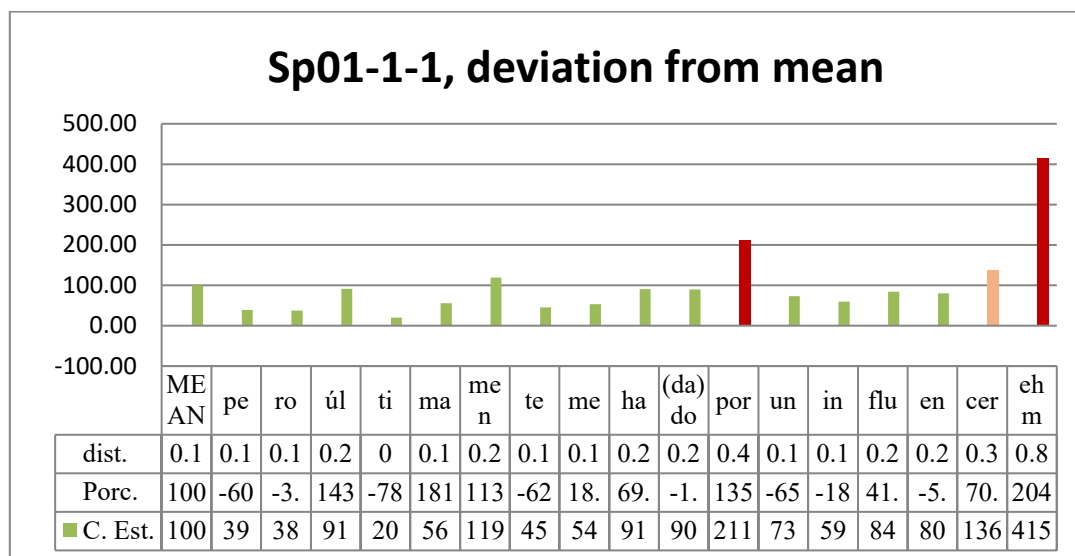
### 5.4. Standardisation to the average syllable length

Besides Cantero’s model, another standardisation procedure was developed. For this, the difference compared to the average syllable length of speakers was used. The average articulation rate characteristic of each speaker was determined from all the syllable lengths of the speaker examined without silent pauses, and the percentage difference from this average value of filled pauses, vowel lengthening and Anglicisms was measured. This was necessary, on the one hand, because prolongations at the first syllable of the statement were common in our corpus. With the previous procedure, their relative lengthening could not be measured, as the syllable containing the hesitation phenomenon itself served as the reference point. The successive accumulation of longer syllables after a long silent pause was also problematic – apparently, in these cases, the percentage difference from the previous syllable was low, while these were actively lengthened syllables. Furthermore, we obtained a false result with the previous model, even when two short syllables stood in a row where although the second was significantly longer, but still around the average length (not lengthened). The standardisation steps were as follows: the first two steps were to calculate the mean (M, in seconds) and the standard deviation of the syllable lengths (SD, in seconds) based on the speaker’s total speech product. The third step was to take the difference between all syllable lengths from the mean and divide it by the mean to get their relative deviation from the mean (in %). Finally, we selected values that were greater than the quotient of the standard deviation and the mean (the relative standard deviation, RSD), these were our outlier values (extraordinarily short and long syllables). By choosing the extraordinarily long syllables, we obtained our lengthened syllables, which we were able to evaluate without data loss and data deformation. The threshold value expresses the minimal absolute value of lengthened syllables of each speaker in seconds: it means that syllables longer than this value were outlier data and therefore perceived as lengthened. Table 3 shows the calculation methods and also gives the values of our speaker Sp01, presented earlier.

| Denomination of calculated value | Average syllable lengths (M) (sec)        | Standard deviation (SD) (sec)            | Relative standard deviation (RSD) (%) | Deviation of each syllable length from the mean (%) | Threshold number (sec) |
|----------------------------------|---|--|---------------------------------------|---|------------------------|
| The method of calculation        | M = acoustic rate (without silent pauses) | $SD = \sqrt{\frac{\sum (x_i - M)^2}{N}}$ | $\frac{SD}{M}$                        | $\frac{(x - \text{mean})}{\text{mean}}$             | mean · (1 + RSD)       |
| Example values of speaker Sp01   | 0,19 sec                                  | 0,125 sec                                | 66%                                   | Greater than RSD+100 means an outlier data          | 0,31 sec               |

**Table 3.** Calculation methods and values of speaker *Sp01* as an example.

Illustrating like in the graph of Figure 4, the deviation of each syllable from the mean of example sentence Sp01-1-1 shows that if the first value –which is given 100% in the standardisation– is the mean itself, then we obtain data independent of the first syllable of the utterance (Figure 5). From the *Porc.* row we can get the rate of increase/decrease from the previous syllable (with the same values as in the previous model of Cantero), and from the *C.Est.* row we can get the percentage deviation from the mean. From the previous calculations, we see that the minimum value of outlier data, in this case, is 0,31s, when its deviation value is higher than 166%. We perceive two outlier data in this sentence, the syllable *por* ‘for’, thanks to a vowel lengthening before Anglicism, and *ehm* ‘er’ as a filled pause of hesitation after the Anglicism. *Por* is around 2 times the multiplication of the Mean value (M=0,19s), and *ehm* is measured to be around 4 times higher than M. Apparently, the prolongation *por* is half the length of the filled pause *ehm*.



**Figure 5.** Standardized data for the utterance coded Sp01-1-1 on a diagram using the deviation from mean.

The values obtained were then compared as follows: according to the hypothesis, we first examined whether a hesitation phenomenon could be found in the presence of Anglicisms. Then we segmented, annotated, and standardised the utterances, and the comparative analysis was performed based on the deviation from the previous syllable (cf. Cantero, 2019) and using the data received from the deviation measured from the average syllable length of the speaker. Finally, we measured and compared the absolute and the relative syllable lengths of Anglicisms. Results were plotted on frequency tables and boxplots. The reduced sample made it almost expected, that the distribution was not normal, yet, a nonparametric test was made for statistical



evaluation of the data. The distribution of prolonged syllables did not follow the normal distribution according to Shapiro–Wilk test. Using the R statistical program, more precisely, the Mann-Whitney U test, we decided the significance of the dialectal difference in phenomena. The following section will present the most important results of the investigation.

## 6. Results

### 6.1. The presence of hesitation phenomena in the environment of Anglicism

According to the observations, the 27 utterances from Mexico and 27 from Spain included the following phenomena: In 75% of the sentences containing Anglicism, at least one hesitation phenomenon was detected, and there were only 2 sentences in both corpora where the presence of the foreign word was not indicated in any further way. In addition to hesitation, there were silent pauses, explanations following the used Anglicism, or filler words, such as *pero bueno* ‘okay then’, *o sea* ‘I mean’ or *no sé* ‘I don’t know’. Using the threshold value of lengthened syllables, perceived and mathematically measured cases coincided.

In our analysis, we detail the position of prolonged syllables in Figure 6. “Before” means lengthening or filled pause is situated words before the Anglicism and “directly” means that the hesitation phenomenon occurs immediately before the Anglicism. The distinction between “before Anglicism” and “directly before Anglicism” was necessary because, as can be seen from the figure, the prolongation often fell on a content word before the Anglicism rather than an unstressed function word directly before the Anglicism (e.g. determinant, preposition, filler words). “On” means that the lengthening experienced was on the Anglicism itself (mostly on its last or penultimate syllable). “After” shows the position of hesitation phenomenon right after the Anglicism, and “later” means not directly after, but after it, and yet in the same utterance.

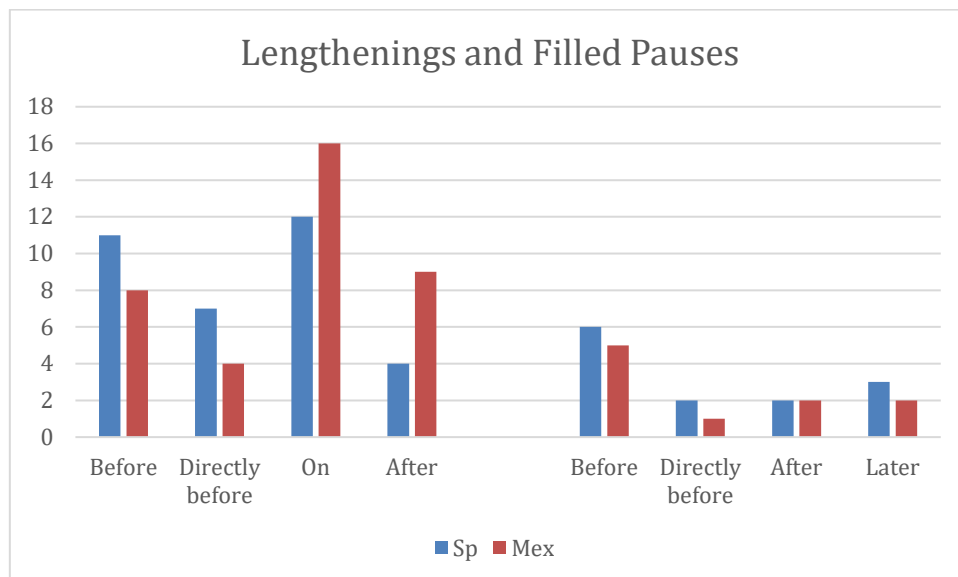


Figure 6. Frequency of lengthening and filled pauses in both corpora.

As shown in Figure 6, speakers from both language variants seemed to prefer the use of prolongations to filled pauses (34 lengthening and 13 filled pauses in the Spanish corpus, 36 lengthening and 10 filled pauses in the Mexican corpus), but comparing the two regions, Spanish speakers lengthened the syllable before or directly before the Anglicism more frequently than

Mexican speakers, where the lengthening on the Anglicism itself or somewhere later in the utterance was more usual. This is a relevant difference (18 lengthening before the Anglicisms in Spanish corpus compared to 12 lengthening of the Mexican corpus, and 16 lengthening compared to 25 lengthening on or after the Anglicism, respectively), which would be worth observing in the speech product of a larger number of informants, as this low number of cases does not allow statistical conclusion.

Furthermore, we observed silent pauses before Anglicisms (3 times from Spanish and 3 times from Mexican speakers) and after (7 times from Spanish and 9 times from Mexican informants), but the high number of the latter ones largely coincides with the pause at the end of the utterances. In 6-6 cases, respectively, the speakers also explained the meaning of the used Anglicism.

## 6.2. The degree of lengthening in the two language variants

### 6.2.1. Mean values, standard deviation from mean and threshold values

The threshold number obtained by the standardisation procedure per speaker was as follows:

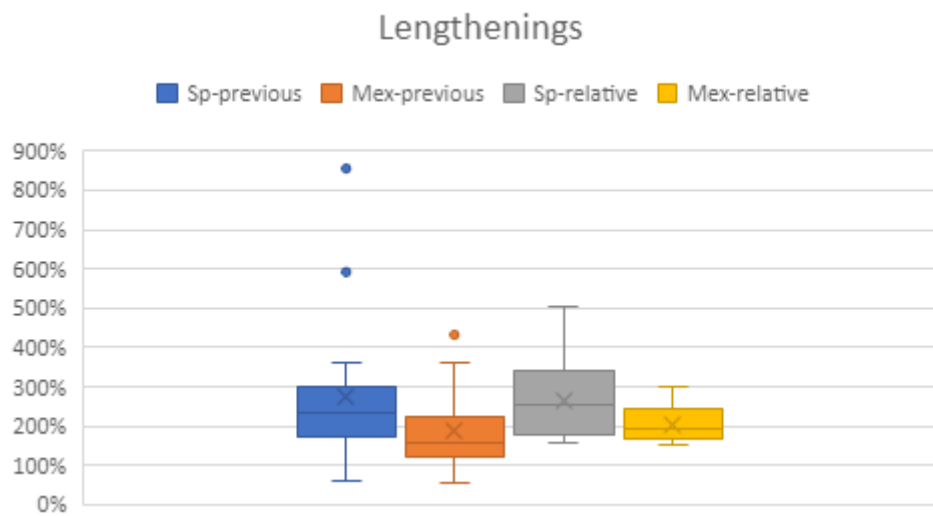
|                         | Average syllable lengths (s) (median) | Standard deviation (s) | Relative standard deviation (%) | Threshold number (s) |
|-------------------------|---------------------------------------|------------------------|---------------------------------|----------------------|
| <b>Spanish speakers</b> |                                       |                        |                                 |                      |
| Sp01.1-5                | 0,19s (0,16s)                         | 0,12s                  | 66%                             | 0,31s                |
| Sp02.6-12               | 0,21s (0,18s)                         | 0,12s                  | 56%                             | 0,33s                |
| Sp03.13-18              | 0,22s (0,17s)                         | 0,15s                  | 69%                             | 0,37s                |
| Sp04.19-22              | 0,21s (0,18s)                         | 0,13s                  | 61%                             | 0,34s                |
| Sp05.23-27              | 0,21s (0,17s)                         | 0,13s                  | 63%                             | 0,35s                |
| <b>Spanish average</b>  | <b>0,21s</b>                          |                        |                                 | <b>0,34s</b>         |
| <b>Mexican speakers</b> |                                       |                        |                                 |                      |
| Mex01.1-2               | 0,17s (0,16s)                         | 0,06s                  | 38%                             | 0,23s                |
| Mex02.3-6               | 0,22s (0,19s)                         | 0,14s                  | 62%                             | 0,36s                |
| Mex03.7-11              | 0,24s (0,20s)                         | 0,12s                  | 50%                             | 0,36s                |
| Mex04.12-20             | 0,24s(0,20s)                          | 0,14s                  | 60%                             | 0,38s                |
| Mex05.21-27             | 0,21s (0,20s)                         | 0,09s                  | 41%                             | 0,30s                |
| <b>Mexican average</b>  | <b>0,22s</b>                          |                        |                                 | <b>0,33s</b>         |

**Table 4.** Mean values, standard deviation, RSD and threshold values by speakers.

As Table 4 shows, the average Spanish and Mexican speech rate based on this corpus does not differ, and neither does the absolute threshold number which determines the value to perceive a syllable lengthened. The average syllable length of utterances that also contain hesitation phenomena presumably distorted the real average syllable length characteristic of each speaker. Using the median values of syllable lengths instead of the mean value would have resulted in an average syllable length closer to the typical length according to literature data, based on what 0,2 sec can be considered the minimum duration of a filled pause (Goldman-Eisler & Guaitella, cited in Blondet 2001, 8) and therefore, can mark a hesitation phenomenon.

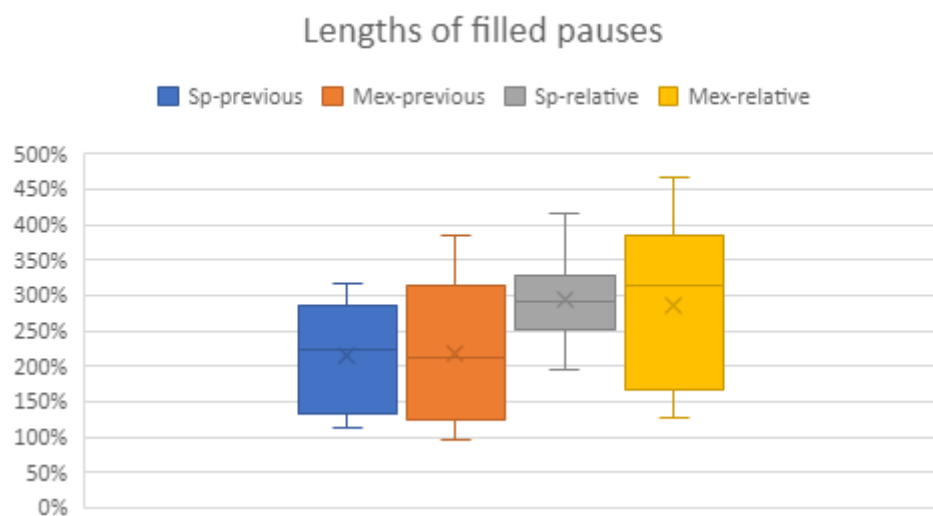
### 6.2.2. Absolute and relative lengths of syllables containing hesitation phenomenon

We have compared the relative lengths of syllables containing hesitation phenomena around Anglicisms (lengthening in Figure 7 and filled pauses in Figure 8) of the two language variants, compared to the previous syllable and to the mean value of each speaker. The distribution of our sample is shown in the boxplots below.



**Figure 7.** Relative lengths of lengthened syllables compared to the previous syllable lengths (*Sp-previous* and *Mex-previous*, respectively) and compared to the mean value of each speaker (*Sp-relative*, *Mex-relative*, respectively).

As Figure 8 shows, for prolongations, the mean and median of the relative deviation from both the previous and mean syllable lengths were higher for Spanish speakers than for Mexican speakers. Furthermore, Spanish values move to a larger extent, as it is indicated by larger boxes. The Wilcoxon rank test comparing the median of the two groups also indicates that the populations are not equal ( $p$  value = 0,022), we can talk about a significant difference.

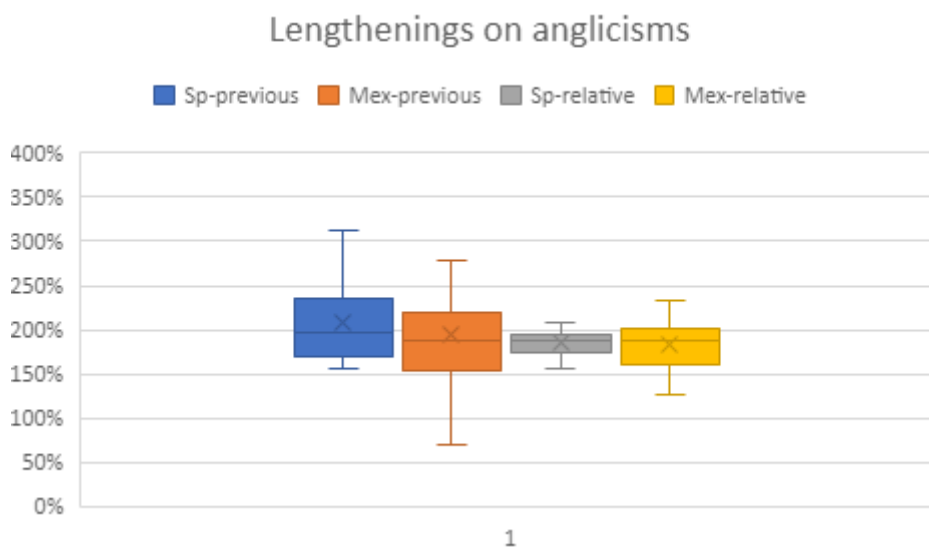


**Figure 8.** Relative lengths of filled pauses compared to the previous syllable lengths (*Sp-previous* and *Mex-previous*, respectively) and compared to the mean value of each speaker (*Sp-relative*, *Mex-relative*, respectively).

As mentioned earlier, the presence of filled pauses is not as frequent around Anglicisms as syllable prolongation. The length of filled pauses compared to the previous and to the mean syllable length does not show much difference between the two language variants. Our corpus had a relatively small amount of filled pauses, and most of these were situated at the beginning of the utterance, which means that their use is not obviously linked to the presence of Anglicism. In their case, it is possible that these filled pauses were used to plan the whole sentence, which could explain their prominent elongation.

### 6.2.3. Lengthening on Anglicisms

We have compared the relative lengths of lengthened syllables on Anglicisms (in Figure 9) in both language variants, to its relative length to the previous syllable and to the mean value of each speaker. The distribution of our sample is shown in the boxplot below.

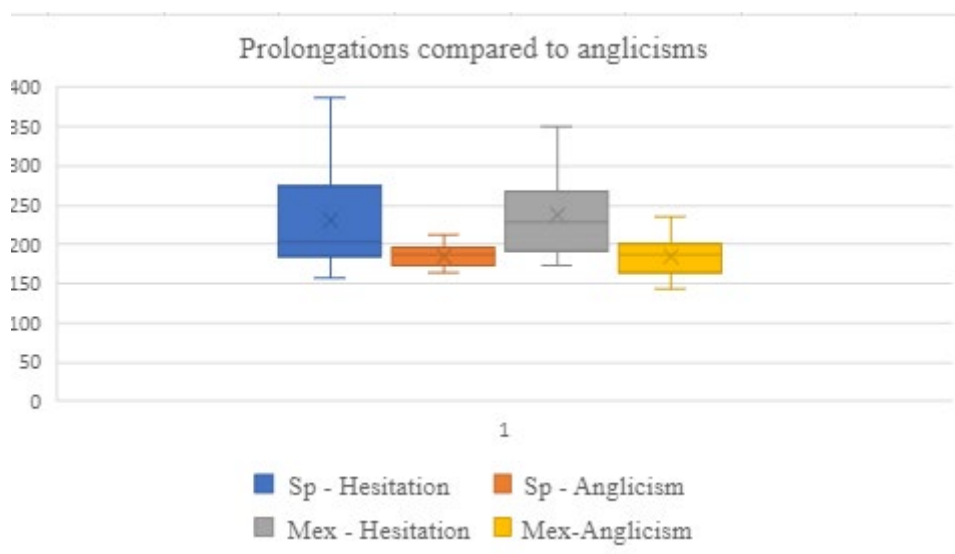


**Figure 9.** Relative lengths of the relatively long syllables on Anglicisms, according to the previous syllable lengths and to the mean value of each speaker.

As for Anglicisms, the lengthened syllables show 185% of deviation from the mean value in both language versions. It is a remarkably shorter prolongation than that experienced due to hesitation phenomena, the possible causes will be discussed later. In any case, the long syllables experienced on Anglicisms differ from the relative values experienced during the hesitation phenomenon.

### 6.3. Long syllables on Anglicisms

Figure 10 shows the difference between the relative lengthening of the syllable which contains hesitation phenomena and the long syllables observed when Anglicisms were pronounced.



**Figure 10.** Relative lengths of hesitations and of the relatively long syllables on Anglicisms, according to the previous syllable lengths and to the mean value of each speaker.

Long English consonant clusters (to mention some examples: *offline*, *influencer*, *gadgets*, *streaming*), unusual in the Spanish language, require longer pronunciation time, which may explain the length of pronunciation of Anglicisms. Whether we can actually talk about a slowdown in the pace of pronouncing Anglicisms is based on a small number of example words—including repetitive word usage—for a total of about 34 English words, not all of which occur in both regions. Thus, we can only formulate it rather cautiously as a statement that the speech rate may decrease while pronouncing an Anglicism. A more accurate description of this observation can be obtained by following the exact method of Cantero: *Análisis rítmico* ('Rhythm analyses'). By standardizing the distances between the intensity peaks (instead of the duration of syllables), we can obtain a rhythm formula for utterances containing an Anglicism, and it can be seen whether the graphical representation follows decreasing trend in tempo (Cantero, 2019, p.493).

## 7. Discussion

Although the aim of the present preliminary study was to make a comparative analysis of the hesitation phenomena accompanying Anglicisms intruding into the spontaneous Spanish speech environment, a few additional observations were made among these Spanish and Mexican speakers that may be of interest for later analysis. An increase in melody was observed in some of the Anglicisms, but it could also be an increase at the end of the sentence to sustain the speech. We have also indicated changes in intensity of the speech signal in some of the observations and evaluating this is a necessary task to understand better the prosodic phenomena around Anglicisms. By comparing the filler words and the hesitation phenomena studied so far, we could find out whether they trigger each other or possibly reinforce each other's presence.

The difficulty in analysing the spontaneous corpus was that the same contexts did not appear around the Anglicisms examined by different speakers. To eliminate this, the prosodic characteristics of Anglicisms and the hesitation phenomena in their environment should be examined while reading texts. In this way, it would be possible to control the Anglicisms and their contexts. By reading the anglicisms embedded in the sentences, the difference between the metrical structure of the host and target languages could be revealed in a complementary study.

The metrical structure of the host and target languages is different, as Spanish is a syllable-timed language, and English is a stressed-timed language. This means that in Spanish, the duration of syllables, independent of stress, is more or less constant, whereas in English the duration of intervals between stressed syllables, independent of the number of unstressed syllables in between, is more or less constant (Álvarez et al, 2020). It can lead to the creation of prosodic peaks and edges, where we would not expect them: for example, under the influence of the actual English accent while pronouncing the English loanword, at the place corresponding to the English phonological boundary. It means that new prosodic boundaries can be created by the insertion of English words (simply because of vowel reduction, for instance), which can change the original phonological phrases and the rhythm of the utterance, highlighting the presence of the foreign word prosodically.

## 8. Conclusion

Our first hypothesis was that a short filled pause or syllable lengthening as hesitation—these being the two most common hesitation patterns—is usually around Anglicisms in Spanish and Mexican native spontaneous speech. Based on our corpus, in 75% of the sentences containing Anglicism, at least one hesitation phenomenon was detected, and there were only 2 sentences in both corpus where the presence of the foreign word was not indicated in any further way (silent pauses, explanations following the used Anglicism, or filler words). Speakers from both language variants

seemed to prefer the use of prolongations to filled pauses, but comparing the two regions, Spanish speakers lengthened the syllable before or directly before the Anglicism more frequently than Mexican speakers, where the lengthening of the Anglicism itself or somewhere later in the utterance was more usual. Examination of a corpus with a larger number of elements may provide an opportunity to determine dysfluencies more accurately.

As a second hypothesis, we supposed that the absolute length of hesitation or the degree of lengthening compared to the preceding syllable or the average syllable of the speaker may differ in the examined language variants. In the case of Spanish speakers, the use of Anglicisms preceded by a relatively prominent hesitation phenomenon was expected, but in the case of Mexican speakers, it was not. Although we did not find a significant difference either in the absolute length of the lengthened syllables provided among speakers in the two different regions or in the relative lengths of filled pauses, based on our observations, the relative syllable lengths of Spanish speakers on a lengthened syllable differ more from both the previous syllable length and the average syllable length of the speaker than in the case of slower Mexican speakers, where it is not always an obviously detectable phenomenon. This result suggests that, upon hearing Spanish speakers, hesitation prolongation at the perceptual level is clearly distinct from average syllables, but for this, it would be worthwhile to conduct a questionnaire perception test with native speakers.

Finally, I assumed that speech rate may decrease in one or both variants while pronouncing the Anglicism, and so, lengthening may affect the Anglicism itself. The results showed that although longer syllables were observed in Anglicisms, the extent of this prolongation differed from the degree of syllables containing hesitation phenomenon. Although speech rate may also decrease, the reason for the longer articulation of Anglicisms is to be found mostly in the slower articulation of consonant clusters characteristic of Anglicisms. An accurate description of this observation can be obtained by following the exact method of Cantero: *Análisis rítmico* ('Rhythm analysis'). On the other hand, vowel reduction –which is believed to be present in the speech of Mexican speakers while producing loanwords with the actual (target) pronunciation of American English– can also affect our results, and shift them towards a more fluent speech of Mexican speakers'.

Thus, several significant prosodic phenomena are believed to occur in the context of Anglicism for both Spanish and Mexican speakers. Taking into account the preliminary results and observations of this present approach, a comparative analysis carried out on a larger corpus could shed light on true dialectological-prosodic differences between the two language variants.

## References

- Álvarez, I., Fuertes-Gutierrez, M. and Bárkányi, Z. (2020). Supporting the teaching of pronunciation in the language curriculum. In G. Ubachs (Ed.), *The Envisioning Report for Empowering Universities* (pp. 12-14). European Association of Distance Teaching Universities.
- Baditzné Pálvölgyi, K. (2014). La pronunciación de los préstamos procedentes del inglés en el castellano. In Zs. Fábíán (Ed.), *GPS 60: Köszöntő kötet Giampaolo Salvi 60. születésnapjára. Saggi di linguistica neolatina per i 60 anni di Giampaolo Salvi* (pp. 13-20). ELTE BTK.
- Baditzné Pálvölgyi, K. (2019). Hesitation patterns in the Spanish spontaneous speech of Hungarian learners of Spanish. In R. L. Rose & R. Eklund (Eds.), *Proceedings of DiSS 2019* (pp.35-38). <https://doi.org/10.21862/diss-09-010-badi>
- Baditzné Pálvölgyi, K. (2020). The Duration of Filled Pauses and Prolongations in Northern and Southern Dialects of Spanish. *Linguística: Revista de Estudos Linguísticos da Universidade do Porto*, 15, 71–94.

- Baditzné Pálvölgyi, K. (2021). Tonal peaks in the spontaneous speech of vantage level Hungarian learners of Spanish. *Acta Linguistica Academica*, 69 (1), 59–73. <https://doi.org/10.1556/2062.2021.00436>
- Benet, A., Gabriel, C., Kireva, E., Pešková, A. (2012). Prosodic transfer from Italian to Spanish: Rhythmic Properties of L2 Speech and Argentinean Porteño. *Proceedings of the 6th International Conference on Speech Prosody 2012* (pp. 438-441).
- Boersma, P., Weenink, D. (2019). *Praat: Doing phonetics by computer* (version 6.0.49). [www.praat.org](http://www.praat.org)
- Blondet, M. A. (2001). Las pausas llenas: marcas de duda e identidad lingüística. *Lingua Americana*, 5(8). 5-15.
- Bóna, J. (2016). Temporális sajátosságok a beszédben. In J. Bóna (Ed.), *Fonetikai olvasókönyv*. 159-173, ELTE Fonetikai Tanszék.
- Campione, E., Véronis, J. (2005). Pauses and Hesitations in French Spontaneous speech. *DiSS 2005*, 43-46. Aix-en-Provence, France.
- Cantero, F. J., De Arriba, C. (1996). El cambio de código: contextos, tipos y funciones. In J. L. Ota; I. Fortanet & V. Codina (Eds.), *Estudios de Lingüística Aplicada*. (pp. 587-596). Publicacions de la Universitat Jaume I.
- Cantero Serena, F. J. (2019). Análisis prosódico del habla: más allá de la melodía. In M. R. Álvarez Silva, A. Muñoz Alvarado, L. Ruiz Miyares (Eds.), *Comunicación Social: Lingüística, Medios Masivos, Arte, Etnología, Folclor y otras ciencias afines*. II, (pp. 485-498). Ediciones Centro de Lingüística Aplicada.
- Colón Domènech, G., Gimeno Betí, Ll. (Eds.) (2006). *Els noms i els conceptes: noves tendències en l'estudi del lèxic*. Publicacions de la Universitat Jaume I.
- Dabkowski, M. F. (2018). *Variable Vowel Reduction in Mexico City Spanish*. [PhD Dissertation. Ohio State University]. [http://rave.ohiolink.edu/etdc/view?acc\\_num=osu15319948931432033](http://rave.ohiolink.edu/etdc/view?acc_num=osu15319948931432033)
- Deme, A., Markó, A. (2013). Lengthenings and Filled Pauses in Hungarian Adults' and Children's Speech. In R. Eklund (Ed.), *Proceedings of DiSS 2013, The 6th Workshop on Disfluency in Spontaneous Speech KTH Royal Institute of Technology* (pp 21-23).
- Francis, N., Ryan P. M., (1998). English as an International Language of Prestige: Conflicting Cultural Perspectives and Shifting Ethnolinguistic Loyalties. *Anthropology & Education Quarterly*, 29, 25-43. <https://doi.org/10.1525/aeq.1998.29.1.25>
- Franco Trujillo, E. D., Lara, L. F. (2016). *El anglicismo en el español nacional de México*. [PhD dissertation, El Colegio de México].
- Fundéu (2013). *Cursiva y redonda. Guía de estilo* (Versión 1.4. 22-3-2017).
- Gallardo-Paúls, B. (1996). *Análisis conversacional y pragmática del receptor*. Ediciones Episteme, Colección Sinapsis.
- Gómez Capuz, J. (2000). *Anglicismos léxicos en el español coloquial: análisis semántico de los anglicismos y sus equivalentes españoles en un corpus de lengua hablada*. Servicio de Publicaciones, Universidad de Cádiz.
- Gómez Capuz, J. (2004). *Los préstamos del español, lengua y sociedad*. Arco Libros.
- Gósy, M. (2003). A spontán beszédben előforduló megakadásjelenségek gyakorisága és összefüggései. *Magyar Nyelvőr*, 127, 257–277.
- Gósy, M. (2004). *Fonetika, a beszéd tudománya*, Osiris Kiadó, Budapest.



- Gósy M., Krepesz V. (2018). Phrase-final Lengthening of Phonemically Short and Long Vowels in Hungarian Speech across Ages. In M. Gósy M. & T. E. Grácz (Eds.), *Challenges in analysis and processing of spontaneous speech* (pp. 99-126). Research Institute for Linguistics, Hungarian Academy of Sciences.
- Goto, M., Itou, K., Hayamizu, S. (1999). A Real-time Filled Pause Detection System for Spontaneous Speech Recognition. *Proceedings of the 6th European Conference on Speech Communication and Technology* (Eurospeech '99). Budapest, 227-230. <https://doi.org/10.21437/Eurospeech.1999-60>
- Graddol, D. (2006). *English Next*, British Council, Plymouth.
- Grosjean, F. (1982). *Life With Two Languages. An Introduction to Bilingualism*. Harvard University Press.
- Grosjean, F., Li P. (2013). *The Psycholinguistics of Bilingualism*. Wiley-Blackwell, Hoboken, New Jersey.
- Guerrero Ramos, G. (2010). *Neologismos en el español actual*. Cuadernos de lengua española. Arco Libros.
- Haensch, G. (2005). *Anglicismos en el español de América*. ELUA. Estudios de Lingüística. N. 19. Universidad de Alicante. <https://doi.org/10.14198/ELUA2005.19.12>
- Hegedűs, L. (1957). Beszédtempó-elemzések, *Magyar nyelvőr*, 81, 1, 223-227,
- Hualde, J. I. (2014). *Los sonidos del español*. NY Cambridge University Press. <https://doi.org/10.1017/CBO9780511719943>
- Hualde, J. I., Olarrea, A., Escobar, A. M., Travis, C. (Eds.) (2010). *Introducción a la lingüística hispánica*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511808821>
- Instituto Cervantes (2020). *El español: una lengua viva. Informe 2020*. Anuario del Instituto Cervantes. Informe 2020.
- Iribar Ibabe, A., Túrrez Aguirrezábal, I. (2010). Datos para la caracterización acústica de las oclusivas sordas en al ámbito vasco-románico. In S. Gómez Seibane, J. L. Ramírez Luengo (Eds.), *Maestra en mucho. Estudios filológicos en homenaje a Carmen Isasi Martínez* (pp. 149-158). Voces del Sur.
- Johnson, S., Milani T. M. (Eds.) (2010). *Language Ideologies and Media Discourse: Texts, Practices, Politics*. Series Editor Sally Johnson. New York and London.
- Kiss J. (2002). *Társadalom és nyelvhasználat. Szociolingvisztikai alapfogalmak*. Nemzeti Tankönyvkiadó.
- Kovács, D. (2019). *La velocidad de habla de los húngaroparlantes al hablar español espontáneo*, [OTDK dolgozat, Budapest, ELTE]
- Lanstyák I. (2002). A Magyar értelmező kéziszótár új kiadása és a magyar nyelv szlovákiai változatainak szókinése. *Fórum Társadalomtudományi Szemle. IV. 2002/3*.
- Machuca, M. J., Llisterri, J., Ríos, A. (2015). Las pausas sonoras y los alargamientos en español: un estudio preliminar. *Normas. Revista de Estudios Lingüísticos Hispánicos*, (2015)5, 81-96. <https://doi.org/10.7203/Normas.5.6823>
- Machuca Ayuso, M. J., Ríos Mestre, A. (2016). Estructura formántica de las pausas sonoras en español. In A. M. Fernández Planas (Ed.), *53 reflexiones sobre aspectos de la fonética y otros temas de lingüística* (pp. 67-76).
- Madrid Servín, E. A. (2008). Hacia el establecimiento de unidades para la medición de la velocidad de habla. El caso del español. In P. M. Butragueño, E. Herrera Z. (Eds.), *Fonología instrumental: patrones fónicos y variación* (pp. 257-274).



- Moreno-Fernández, F. (2018). *Geografía léxica del español estadounidense. A propósito del anglicismo*. Informes del Observatorio / Observatorio Reports. Instituto Cervantes at FAS - Harvard University. <https://doi.org/10.15427/OR034-10/2017SP>
- Navracsics, J. (2010). *Egyéni kétnyelvűség*. Szegedi Egyetemi Kiadó, Juhász Gyula Felsőoktatási Kiadó, Szeged.
- Navracsics, J. (2014). *A kétnyelvű mentális lexikon és működése. Kísérletes nyelvészeti megközelítés* [Academic Thesis. Pannon Egyetem.]
- Pratt, C. (1980). *El anglicismo en el español peninsular contemporáneo*. Biblioteca románica hispánica 308. Gredos.
- Rebollo Couto, L. (1997). Pausas y ritmo en la lengua oral. Didáctica de la pronunciación. *ASELE Actas VIII* (pp. 667-676).
- Rodríguez González, F. (1996). Functions of Anglicisms in Contemporary Spanish. *Cahiers de lexicologie*, 68 (1), 107-128.
- Rodríguez González, F. (1999). Anglicisms in contemporary Spanish, an overview. *Atlantis Vol XXI*, 1-2, 103-139. University of Alicante.
- Rodríguez González, F. (2017). *Gran diccionario de anglicismos*. Arco Libros.
- Rodríguez-Fuentes, L. J., Inés T., M., Varona, A. (2001). Annotation and Analysis of Disfluencies in a Spontaneous Speech Corpus in Spanish. *ITRW on Diss '01* (pp. 1-4).
- Rodríguez Medina, M. J. (2000). El anglicismo en español: revisión crítica del estado de la cuestión. *Philologia Hispalensis*, 14 (1), 99-112. <https://doi.org/10.12795/PH.2000.v14.i01.08>
- Santiago, F., Mairano, P. (2017). Do Spaniards Speak Faster than Mexicans? Studying Spanish Rhythm in Natural Speech. *Phonetics and Phonology in Europe*, Cologne, Germany.
- Serrano, J. (2006). En torno a las vocales caedizas del español mexicano: una aproximación sociolingüística. In P. Martín Butragueño (Ed.). *Líderes lingüísticos. El Colegio de México*. (pp.37-60). <https://doi.org/10.2307/j.ctv47w546.5>
- Shantz, K. (2012). *Pronouncing Anglicisms: On the difficulty experienced by English-dominant learners of German*. Edmonton, Alberta.
- Valdés, G., González, S. V., López G., D., Márquez, P. (2003). Language Ideology: The Case of Spanish in Departments of Foreign Languages. *Anthropology & Education Quarterly*, 34(1), 3-26. <https://doi.org/10.1525/aeq.2003.34.1.3>
- Vázquez Amador, M. (2018). El tratamiento de un corpus de anglicismos de la prensa mexicana del siglo XX en los diccionarios de la RAE. *Anuario de Letras Lingüística y Filología* 3(3), 273-311. <https://doi.org/10.19130/iifl.adel.1337>
- Vinagre Larangeira, M. (2005). *El cambio de código en la conversación bilingüe: la alternancia de lenguas*. Arco Libros.
- Walt, S. (2011). The myth of American exceptionalism. *Foreign Policy*, 189, 72.