

Filozofická Fakulta
Univerzity Karlovy

BAKALÁŘSKÁ PRÁCE

Filozofická Fakulta
Univerzity Karlovy
Ústav anglického jazyka a didaktiky

Bakalářská práce

Kristýna Melišová

Linking in French Speakers of English

Vázání u francouzských mluvčích angličtiny



Praha, 2020

doc. Mgr. Radek Skarnitzl, Ph.D

Acknowledgements

I wish to express my sincere gratitude to doc. Mgr. Radek Skarnitzl, Ph.D. for his support and guidance throughout the writing of my thesis. I am also thankful to all the French speakers who willingly participated on the recording and without whom this research could not have been realized.

Declaration of Authorship

Hereby I declare that this BA thesis is my own original work and that all sources and literature were properly cited. This thesis was not used for acquisition of any other university degree.

Prague, August 7, 2020

.....

Abstract

This bachelor thesis aims to analyse linking phenomena in spontaneous and read speech of French native speakers. The theoretical part includes a detailed description of the linking phenomena in English and French, as well as the role of glottalization in both languages. Finally, we also include an overview of studies that explore the specific phenomena of linking in French speakers in English, especially the deletion of the consonant [h] and its insertion at the onset of vowel-initial words. The experimental part focuses on the analysis of 19 recordings of French speakers of English. All recordings consist of three parts: a spontaneous conversation, prepared and read text, and twelve phrases. The research shows that French native speakers tend to link words in English more frequently than to glottalize. Initial [h] deletion is a relatively common phenomenon, by contrast, [h] epenthesis is rather characteristic for individual speakers and cannot be generalised.

Key words: French, English, linking, glottalization, L2 phonology acquisition.

Abstrakt

Cílem této bakalářské práce je analyzovat, jakým způsobem francouzští rodilí mluvčí dosahují plynulosti pomocí vázání v anglické spontánní a připravené řeči. Teoretická část práce se zabývá osvojováním fonologie cizího jazyka a faktory, které jej ovlivňují. Dále obsahuje podrobný popis typů vázání a role glotalizace v angličtině a francouzštině. Na závěr teoretické části uvádíme přehled dosavadních výzkumů, které se zabývaly analýzou fenoménu vázání v angličtině francouzských rodilých mluvčích, především tedy vkládáním konsonantu [h] na vokalické začátky slov, nebo naopak jeho vynechávání. Praktická část se věnuje analýze 19 nahrávek francouzských mluvčích, které se skládají ze tří částí: improvizované konverzace, četby připraveného textu a četby 12 jednotlivých vět. Experiment dokazuje, že francouzští rodilí mluvčí v angličtině častěji váží než glotalizují. Vynechávání počátečního konsonantu [h] a následné vázání nově vzniklých slov s vokalickým počátkem je poměrně častým jevem, kdežto vkládání konsonantu [h] na vokalické počátky slov je spíše charakteristikou daného mluvčího a nemůže být tedy zobecněno na všechny mluvčí francouzštiny.

Klíčová slova: francouzština, angličtina, vázání, glotalizace, akvizice fonologie cizího jazyka.

Table of contents

1	Introduction	9
2	Theoretical background.....	10
2.1	Acquisition of L2 phonology	10
2.2	Connected speech	12
2.3	Linking in English.....	13
2.3.1	Pseudo-resyllabification	13
2.3.2	Transient [j]	13
2.3.3	Transient [w]	14
2.3.4	[r] sandhi	14
2.3.5	[l] sandhi.....	15
2.4	Linking in French	17
2.4.1	Enchaînement	18
2.4.2	Liaison.....	18
2.4.3	Denasalization	19
2.4.4	Elision.....	20
2.4.5	Final e-deletion.....	20
2.4.6	Suppletion.....	20
2.4.7	H-aspiré words	21
2.5	Glottalization.....	22
2.5.1	Glottalization in English.....	22
2.5.2	Glottalization in French.....	23
2.6	Linking in French speakers of English.....	24
2.7	Hypotheses and research questions	25
3	Material and method.....	27
3.1	Material	27
3.2	Data preparation and coding	27
4	Results and discussion.....	30
4.1	Linking and glottalization	30
4.1.1	[h] epenthesis.....	32
4.1.2	[h] deletion	33
4.1.3	Sociolinguistic factors	35
4.1.3.1	Gender	35
4.1.3.2	Age	36
4.1.3.3	Individual differences.....	36
4.2	General discussion.....	39

5	Conclusion.....	42
	References	43
	Shrnutí	45
	Appendix	50

1 Introduction

Phonology acquisition of a language is an integral part of the learning process. The processes of the first language (L1) and second language (L2) phonology acquisition, however, differ significantly. When children learn their mother tongue, they can distinguish between any sounds of any language. Due to the constant exposition to only one language, children soon lose this ability in favour of the distinction of the limited set of phonemes found in their native language. This happens when children are 10-12 months old and the reason behind it is to enhance the learning process of the native language.

As a consequence, L2 learners inevitably perceive the foreign language through the perspective of their native language, and they cannot distinguish between sounds that are not to be found in their L1, and thus they cannot even produce them correctly. L2 learners have to learn to make a distinction between the foreign sounds at first. In this thesis, we will focus on the production of English as a second language of French native speakers, namely on the linking strategies they use in connected speech.

In the theoretical part, we will provide a theoretical background for the L2 phonology acquisition with the focus on decisive factors in the process of the acquisition of L2 pronunciation. In the next section, we will describe the means of linking in both English and French, as well as the role of glottalization in both languages. The final chapter will provide an overview of existing studies on linking in French speakers of English, mainly on the [h] deletion and [h] epenthesis that is characteristic for French speakers of English.

The empirical part will focus on the analysis of 19 recordings of French speakers of English. Those recordings will be analysed with regard to segmental, semantic and prosodic factors. We will compare individual results with the tendencies in our whole sample, as well as with general tendencies of linking in English and French.

2 Theoretical background

2.1 Acquisition of L2 phonology

The acquisition of foreign language phonology is one of the most difficult tasks that a learner of a foreign language has to master. In English, this is hindered especially by the lack of correspondence between sound and spelling due to extensive sound changes in the history of the English language, that are not reflected in the spelling. But the issue is not only the pronunciation of consonants and vowels, but also the acquisition of the prosodic system of a foreign language whose inappropriate usage can lead to great misunderstandings on the pragmatic level (Cenoz & Lecumberri, 1999: 4), for example the incorrect division of intonational units or the (non-)usage of liaison in French can fundamentally change the meaning (see 2.4.2).

Second language phonology acquisition is a very complex process that is influenced by many factors. Kralová (2005: 21) distinguishes between two major categories: **structural** factors and **non-structural** factors.

Structural (linguistic) factors comprise differences between the native language and the foreign language. Weinreich (1957: 1–11) further distinguishes differences on four levels of language: **phonic factors** – including the perception and reproduction of sounds, **extra phonic** or lexical factors, **extra-linguistic factors** comprising the motivation for acquiring a native-like pronunciation, and **erratic cases of interference**.

Phonic or sound interference, which is also the subject of this thesis, includes four instances of interference:

1. **Under-differentiation** refers to the interference when a speaker confuses two distinctive sounds in L2 – e.g. Czech speakers who do not distinguish between [ð] and [d] in English.
2. **Over-differentiation** – a speaker makes additive differentiation where it is not required – French speakers inserting [h] to the vocalic onsets.
3. **Reinterpretation of features** – a distinctive feature of speaker's L1 is transferred to L2 where it is redundant – e.g. Italian speakers prolonging double consonants in English.
4. **Phone substitution** “applies to phonemes that are identically defined in two languages but whose normal pronunciation differs” – e.g. [ɛ] in Romansh and [æ] in Schwyzertütsch that are both defined as front vowels of maximum openness, yet the [æ] is pronounced more open (Weinreich, 1953: 19).

Non-structural (extralingual) factors take into consideration the specificity of each individual speaker and their biological and psychological ability to learn foreign languages. Non-structural factors include motivation, age, languages known and aptitude.

Age is an important factor for the perception ability, to which is connected the difficulty in producing new sounds. When a speaker is unable to differentiate non-native sounds, they cannot pronounce them correctly. The crucial age is between 10–12 months of age (Ohala, 2008: 24), when children develop their perception and production abilities in their native language, but at the same time they lose the ability to distinguish between non-native sounds and this ability must be trained again when learning a foreign language. However, Mack, Bott and Boronat (1995) showed, that even bilinguals that are exposed to two languages from birth do not necessarily acquire a native-like pronunciation in the non-dominant language (paraphrased in Ioup, 2003: 47). Early onset learners have then a higher probability to acquire a native-like pronunciation. As early onset learners we usually consider speakers that started to learn the foreign language before 8 years of age. Late onset learners start the second language acquisition after they are 16 years old and their L2 pronunciation is then distinctly marked by their native language. According to Lennenberg's (1967) critical period hypothesis, the decline in the ability to acquire a native-like pronunciation is caused by "the end of neural plasticity and thus the completion of hemispheric lateralization in the human brain" (Ioup, 2003: 48).

Speaker's **motivation** to learn a foreign language is now believed to play even a more important role in the language acquisition than the age (Cenoz & Lecumberri 1999: 5; Kralová, 2005: 29) The internal motivation (authentic desire to learn a language) is a more significant factor than the external motivation (acquiring a higher professional or social status). Speaker's positive relationship to the language and to their teacher also encourages the imitation of another person's pronunciation.

Behaviourists assume that the more **languages** we speak, the easier it is for us to learn new languages because we can use the knowledge and skills acquired during the previous learning process. However, the languages we know can influence a new language acquisition both in a positive or a negative way – known as positive transfer or facilitation, and negative transfer or interference, respectively. Facilitation refers to situations where previously acquired knowledge facilitates the learning of new language – e.g. correlations between French and English lexis: *certain – certain; evident – evident*. Interference refers to incorrect usage of

previous experience in new contexts – for example the lexical interference between English and French: *actually* – *actuellement* ‘currently’ (Gass & Selinker, 2008, 92–94).

Higher **intelligence** and **aptitude** also favour the acquisition of a foreign language. Aptitude refers the general ability to learn languages and includes also the ability to distinguish phonemes, whereas intelligence is a factor that influences the speaker’s performance at language classes at school.

2.2 Connected speech

The term *connected speech* is used to refer to speech as a continuous sequence of words. In contrary to the analysis of isolated units (phonemes, syllables, word), in the connected speech the linguistic units are subjected to great variation due to e.g. higher speech rate, or sentence stress (Crystal, 2008: 101). This variation is called generally *connected speech processes* and they comprise:

- a) **Coarticulation** is a modification of either a preceding or a following sound – progressive and regressive coarticulation respectively. This process is caused by the overlapping of articulations of individual sounds due to biological limitations (Skarnitzl, Šturm & Volín, 2016: 71). In the example of progressive coarticulation, *knot* /nɒt/, the soft palate is up for the articulation of nasal sound [n] but it cannot be down in time to articulate the oral vowel /ɒ/. Consequently, the vowel is pronounced while the soft palate is still in its upper position which results in nasalization of the vowel: [nɒ̃t]. Regressive coarticulation can be demonstrated on the pronunciation of the word *cool* /ku:l/. /u:/ is a close back rounded vowel and while pronouncing /k/ in the word *cool* we already anticipate the roundedness of the following vowel which results in the labialization of the consonant /k/ – [k^wu:l].
- b) **Assimilation** is a similar process to coarticulation but includes a change of place, manner of articulation or voicing of consonants. We distinguish again progressive assimilation (*what is it?* [wɒt ɪz ɪt], assimilated into [wɒts ɪt]) and regressive assimilation (*this year*, [ðɪs jɪə], assimilated into [ðɪʃ jɪə]).
- c) **Reduction** of a vowel in non-stressed words – e.g. *have* stressed [hæv] – unstressed [(h)əv].
- d) **Elision** – deletion of a sound – e.g. in consonant clusters *and* stressed [ænd] – unstressed [ən] [nd] [ŋ].

- e) **Linking** – which is the focus of this thesis and will therefore be introduced in more detail in the following section.

2.3 Linking in English

When we speak, we do not pronounce separate words that are divided by spaces as in writing, but we produce a connected speech. To achieve the connected speech, we link words by various means that are generally called linking.

Linking is a phenomenon that is carried out over a word boundary where the second word begins with a vowel (#V). Pronouncing vowel after a pause or voicing discontinuity requires a certain physiological effort, and thus linking serves as a means of ensuring the continuity of speech and avoiding the pause. Another means of avoiding the difficulty of pronouncing vowels after a pause is the word-initial vowel glottalization. “[G]lottalization and linking, in fact, represent opposite strategies – linking makes the production fluent while glottalization contributes to the emphatic discontinuity of speech” (Šimáčková, Kolářová & Podlipský, 2014 paraphrased in Klánová, 2016: 16–17).

In the following sections, we will focus on the particular types of linking in English and French, and the role of word-initial glottalization in both languages. As for English, we will mention pseudo-resyllabification, linking [r], intrusive [r], transient [w] and [j]. We will also mention a particular type of linking, that marginally occurs only in some accents in the North of the United States which is generally called [l]-sandhi.

As for the linking in French, we are going to mention elision, final e-deletion, suppletion, denasalization, enchaînement and liaison.

2.3.1 Pseudo-resyllabification

Pseudo-resyllabification is a phonological process that occurs at the word boundary where the first word terminates on a consonant, and the following word begins with a vowel (C#V). In the example *at eight* (separately pronounced as [æt] [eɪt]), the word-final consonant [t] is linked to the word-initial diphthong [eɪ] and form a new syllable at the beginning of the second word [æ.tɛɪt]. This process happens only on the phonological level for the sake of speech fluency, not on the morphological level.

2.3.2 Transient [j]

Transient [j] appears between two vowels over a word boundary. When the word-final vowel of the first word ends in a high front vowel [i:] [aɪ] [eɪ] [ɔɪ] we can hear a [j]-like sound

which is a mere transient between the high front vowel and the following vowel. “[I]t is an articulatory by-product without a phonemic status” (Volín, 2003: 66). Examples of transient [j]: *me and you* [mi:(j)ənju:], *stay in* [steɪ(j)ɪn].

For the transcription of transient [j] and [w], we use parentheses in subscript. In the intra-textual references in this thesis, we use square brackets to refer to transient [j] and [w], those are not to refer to the corresponding consonants here.

2.3.3 Transient [w]

Comparably to transient [j], transient [w] appears between two vowels over a word boundary. It is a transition from high back vowels [u:] [ʊ] [əʊ] [aʊ] to a following vowel; as in *you and me* [ju:(w)ənmi:].

2.3.4 [r] sandhi

Speakers of non-rhotic accents do not pronounce postvocalic syllable-final [r] if it is followed by a consonant or a pause: *lord* /lɔ:d/, *poor* /pɔ:/. In other words, [r] is in non-rhotic accents pronounced only in prevocalic positions: *marry*, *dry*. Non-rhoticity can be found not only in the Received Pronunciation, but also in the accents of the East and North of England, Wales, New Zealand, Australia, South Africa, and the east coast of the United States. Rhoticity is characteristic for most of the American, Irish and Scottish accents (Wells, 1982: 220–221).

Similar rule applies also for word-final [r] in connected speech of non-rhotic accents. If it is followed by a consonant-initial word, [r] remain silent: *there were* [ðəwɜ:], *poor people* [pɔ:pi:pəl], *sore throat* [sɔ:θrəʊt]. If a vowel-initial word follows, the otherwise silent [s] is pronounced as a means of linking between the two vowels which is called linking r: *there are* [ðɛrɑ:], *poor infant* [pɔ:rɪnfənt], *sore eyes* [sɔ:raɪz].

The term **linking r** describes the occurrence of postvocalic *r* when the phoneme is inherent in the morphemic structure and spelling and is followed by a vowel-initial morpheme. On the contrary, the **intrusive r** is neither inherent in the spelling of the word, nor morphologically or etymologically justifiable. The consonant [r] can appear not only over the word boundary (*idea of* [aɪ'diəɔv], *India is* [ɪndiəɪz], *vanilla ice* [və'nɪləraɪs]) but also within one word (*Kafkaesque* [,kæfkə'resk], *sawing* [sɔ:riŋ]) (Balogné Bercés, 2011: 35). Intrusive [r] was connected to a social stigma in the past, and it was evaluated very negatively as they were pronouncing something which is not in the word nor in the writing. However, this negative

attitude changed, and intrusive r is now frequently used even by speakers of RP, and other British non-rhotic accents, as well as in New York and New England. (Wells, 1982: 227)

Both linking and intrusive r's are phonetically identical and appear in the same contexts – when preceded by non-high vowels [ə] [ɔ:] [ɑ:] [ɜ:] [ɪə] [eə] [ʊə]. That can be explained by the historical development of the language and its pronunciation. The English language was rhotic until the 17th century. In the 18th century, the speakers of south-eastern England started to drop the syllable-final [r] and pronounced it only prevocally and as a means of linking. This innovation spread throughout England and Wales; west-England, Scotland and Ireland remained rhotic. Subsequently, linking [r] was extended by analogy to all non-high vowels followed by another vowel. This is supported also by the fact, that speakers practising intrusive [r] in English, are triggered to insert [r] after non-high vowels even in foreign languages: “J'étais déjə/r/ ici (French), ich bin ja/r/auch fertig (German), viva/r/ España (Spanish), fe wela/r/ i rywbeth (welsh), gloria/r/ in excelsis (Latin)” (Wells, 1982: 226).

Both intrusive and linking [r] are optional, therefore *fear of* can be pronounced [fiəʀəv], [fiəʀəv] (Broadbent, 1991: 283) and [fiəv] for example in some dialects in the South of the United States where is no evidence for post-vocalic r in no environments (Gick, 2002: 171). Wells (1982) states that [r] sandhi is the most common of the three possibilities of linking.

Table 1. summarizes the difference between linking [r] and intrusive [r].

	law	lore	<i>spar</i>	<i>spa</i>	copula	copular
Pronounced separately	lɔ:	lɔ:	spɑ:	spɑ:	kɔpjələ	kɔpjələ
Before a consonant	law can [lɔ:kən]	lore can [lɔ:kən]	spar with [spɑ:wɪð]	spa with [spɑ:wɪð]	copula can [kɔpjələkən]	copular verb [kɔpjələvɜ:b]
Before a vowel	law is [lɔ:rɪz]	lore is [lɔ:rɪz]	spar and [spɑ:rən]	spa and [spɑ:rən]	copula or [kɔpjələɔ:]	copular or [kɔpjələɔ:]

Table 1. Difference between linking [r], and intrusive [r]

2.3.5 [l] sandhi

The term [l] sandhi is a superordinate term used to refer to both linking [l] and intrusive [l] that appear only in some accents of the United States. It is a very similar process to [r] sandhi, but the difference is that [l] sandhi is not yet fully developed and is not used consistently after all non-high vowels as [r] sandhi.

[l] sandhi is based first of all on the vocalization of word-final [l] if it is preceded by non-high vowels as in *drawl*, *crawl*, *cruel*. If the following word is vowel initial, [l] is used as linking [l] to avoid two adjacent vowels, also called *hiatus* (V#V). Consequently, [l] is inserted after schwa, and [a] that is a merger of [a] and [ɔ] in most relevant dialects for linking [l] where [l] is not etymologically justifiable: *paw*, *draw*, *saw* – *I saw[l] it*, *the paw[l] is*, or even within a word: *draw[l]ing* (Balogné Bercés, 2011: 40–41). However, “no dialect has yet completely phonologized the generalization of intrusive [l] to include the environments following /a/ and schwa” (Gick, 2002: 172). Only individual speakers show the tendency to use intrusive [l] in both environments.

Gick (2002) provides also the evidence for social stigmatisation of [l] sandhi. The speakers avoid [l] sandhi and use it mostly only in conversations with speakers of the same accent.

Intrusive [l] appears in the accents in the North of the United States, especially in Southern Pennsylvania, New Jersey, Southern Ohio, Philadelphia, Northern Texas, Southern and central Oklahoma and others. An overview of dialects with attested usage of [l] sandhi is presented in the Figure 1.

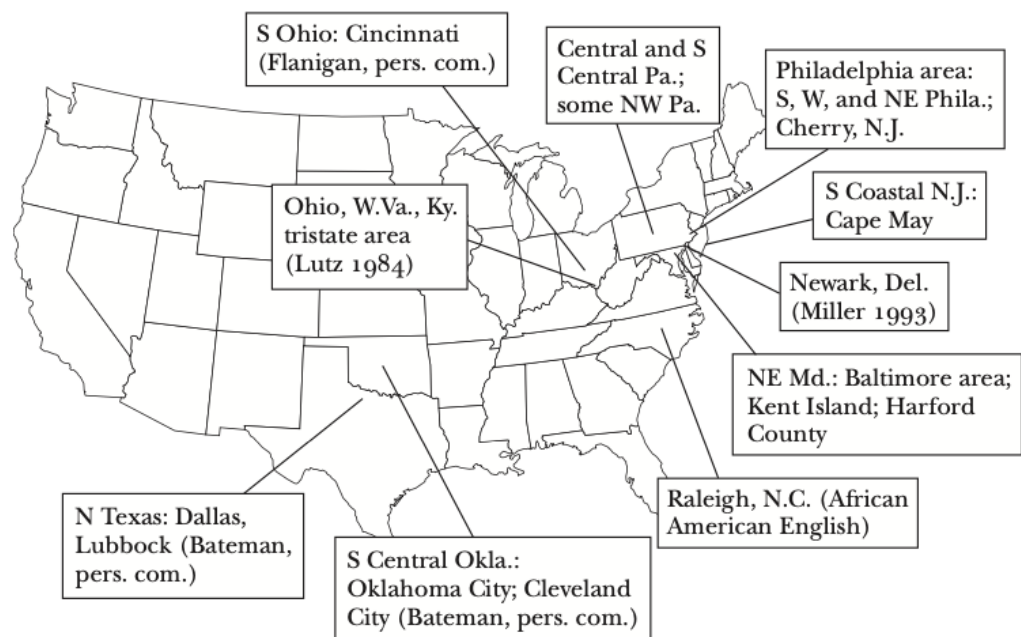


Figure 1. Map of dialects with attested usage of [l] sandhi (Gick, 2002: 176).

Finally, Table 2. summarizes the types of linking in English, including the accent-specific [l] sandhi and intrusive [r].

Linking type	Environment	Example	Transcription
Pseudo-resyllabification	Consonant-final word followed by vowel-initial word	At all	[æ.tə:l]
Transient [w]	After [əʊ aʊ u:]	Go on	[gəʊ(w)ɒn]
Transient [j]	After [i: ai ei ɔɪ]	See it	[si:(j)ɪt]
Linking [r]	Word-final <i>r</i> present but not pronounced before a pause or a consonant	There is	[ðe:rɪz]
Intrusive [r]	After [ə, ə:, iə, eə, oə, a:, ɔ:]; <i>r</i> is not morphologically justifiable in the word	Idea of	[aɪdɪərəv]
Linking [l]	Word-final <i>l</i> present but not pronounced before a pause or a consonant	Cruel emperor	[kru:ələmprə]
Intrusive [l]	After [ɔ(:)], sometimes after [ə] and [ɑ:]; <i>l</i> not morphologically present	Saw it	[sə:lɪt]

Table 2. An overview of types of linking in English.

2.4 Linking in French

French connected speech is divided into breath groups that most often correspond to semantic groups that are separated by logical pauses. Next smallest segment after a breath group is not a word nor morpheme, but a syllable. Words in French connected speech merge, and word boundaries are obliterated. Words in English connected speech are marked by stress, but in French “there simply can be no word stress, not even a predictable, non-distinctive one for it too would mark the boundaries” (Pulgram, 1965: 132). Words within the breath groups undergo pseudo-resyllabification and are divided into open syllables (consonant-vowel sequences), only breath group final syllables can end in a consonant.

In the following sections, we will describe the strategies of pseudo-resyllabification and the means of linking words in French, namely the six boundary adjustments – elision, suppletion, nasalization, final e-deletion, enchaînement and liaison.

2.4.1 Enchaînement

There are two types of enchaînement in French – consonantal and vocalic. In consonantal enchaînement (enchaînement consonantique), the final consonant is affixed to the vowel of the following word, and the existing syllables are pseudo-resyllabified forming a new syllable with one another, cf. *pour* [puʁ], *Olivia* [ɔ.li.v.ja], and *pour Olivia* [pu.ʁɔ.li.v.ja] ‘for Olivia’; *notre* [nɔʁ], *âne* [an] *notre âne est* [nɔʁ.ɑ.ne] ‘our donkey is’.

In the process of a vocalic enchaînement (enchaînement vocalique), French speakers produce a smooth transition between two vowels without a glottalization of the word-initial vowel or a pause in speech – *où est-tu?* [uɛty] ‘where are you?’. To the vocalic enchaînement that is employed by French speakers in English we will further refer to as a vowel-to-vowel transition in order to distinguish between the process in French and in English.

2.4.2 Liaison

The French syllabic system is based on the vowel-consonant pattern. Thus, if there is a hiatus between two words – the sequence of a word-final vowel and a word-initial vowel (as between *petit* [pəti] and *ami* [ami] ‘boyfriend’) – the French speakers tend to fill the hiatus (Spinelli, Meunier, 2005: 79). A possibility of avoiding a sequence of two vowels over a word boundary is pronouncing a latent consonant, which is etymologically present in the word but not articulated if the word is pronounced separately or if followed by a consonant, e.g. the consonant [t] in *petit* ‘little’ is pronounced as [pəti] in the noun phrase *petit chat* ‘little cat’, but as [pətiti] in the noun phrase *petit ami*. This phenomenon is called **liaison**.

Liaison includes two processes, the above-mentioned articulation of the word-final latent consonant, and pseudo-resyllabification. The final consonant is attached to the following vowel and forms a new syllable: *petit* [pə.ti] *ami* [a.mi] is pseudo-resyllabified as [pə.ti.ta.mi].

Only a few letters (or consonants) are involved in liaison;

- a) letters **s**, **z** and **x** are all pronounced as [z];
- b) **t** and **d** are pronounced as [t];
- c) **n** as [n]; **r** as [ʁ]; **p** as [p], and **g** as [k].

Fricatives are voiced in liaison (*les amis* [lezami] ‘the friends’), but plosives are devoiced. On the contrary, the voicing of consonants is not changed in enchaînement (i.e. [t] remains [t] in *sept enfants* [setɑ̃fɑ̃] ‘seven children’).

Liaison is **obligatory** between:

- a) A determiner and a noun, pronoun or adjective: *vos enfants* [vozɑ̃fɑ̃] ‘your children’, *deux autres* [døzotʁ] ‘two others’, *un ancien ami* [ɑ̃sɑ̃sjenami] ‘an old friend’.

- b) A personal pronoun and a verb or vice versa: *ils ont compris* [ilzɔ̃kɔ̃pʁi] ‘they understood’, *ont-ils compris ?* [ɔ̃tilkɔ̃pʁi] ‘did they understand?’
- c) Invariable monosyllabic words: *très intéressant* [tʁɛzɛ̃tɛʁɛsɑ̃] ‘very interesting’.
- d) In fixed expressions: *de temps en temps* [dətɑ̃zɑ̃tɑ̃] ‘sometimes’, *tout à coup* [tutaku] ‘suddenly’. (examples from Delattre, 1947: 152, my phonetic transcription and translation)

Liaison is **forbidden** after a noun in singular, after *et* and before words beginning with *h aspiré* (aspirated h) (*les haricots* [leɑʁiko] the green beans) and before *un*, *huit*, *onze* ‘one, eight, eleven’ and their derivatives (*huitième*, *onzième*, ‘eighth’, ‘eleventh’).

Application of liaison is in other cases optional. It is conditioned stylistically, syntactically, and semantically, as exemplified below.

The higher the discourse **stylistically** is, the more likely is the liaison. It is hardly ever employed in informal discussion, on the contrary, when reciting, liaison is used even between words, where it would be inappropriate even in a formal speech.

Informal discourse: *Des hommes / illustres / ont / attendu* [dezomilystʁɔ̃tatɑ̃dy] ‘the famous men waited’

Poetry reading: *Des hommes illustres ont attendu* [dezomzilystʁɔ̃tatɑ̃dy]

From the **syntactic** point of view, liaison between two phrases is unusual since they are two detached units and do not necessitate any linking. The sentence *Le petit attend sa maman* ‘the small boy is waiting for his mum’ consists of a noun phrase *le petit* and a verb phrase *attend sa maman* and thus there would normally be no liaison between the two phrases: [lə pøti atɑ̃]. The exception would be recitation as previously stated.

Liaison can also have a distinctive **semantic** role. The liaison makes a difference in pronunciation of utterances *une fabrique d’armes anglaises* ‘a factory of English weapons’ and *une fabrique d’armes anglaise* ‘an English factory of weapons’ (Delattre, 1947: 151, my translation). The adjective *anglaise(s)* is in both cases pronounced [ɑ̃glɛz] since *fabrique* and *armes* are both feminine nouns and since most of the adjectives in French are in post-position, it causes ambiguity in the speech and it is not clear to which noun the adjective belongs. Liaison [daʁmzɑ̃glɛz] links the adjective *anglais* ‘English’ to the noun *arme* ‘weapons’; without liaison [daʁmɑ̃glɛz] it means that the adjective belongs to the noun *fabrique* ‘factory’, in other words it is the factory that is English, not the weapons.

2.4.3 Denasalization

Denasalization can be seen as a specific case of liaison. Words ending in letter *n* contain a floating nasal segment [n] that is not pronounced if followed by a consonant or a pause, but

it leads to the nasalization of the preceding vowel, e.g. *ton* [tɔ̃] ‘your’, *bon* [bɔ̃] ‘good’, *son* [sɔ̃] ‘his’, *ancien* [ɑ̃sjɛ̃] ‘former’). If words with a final nasal vowel are followed by a vowel-initial word, the floating [n] is attached to the empty onset of the following word and the word boundaries are resyllabified as in liaison.

The difference is that some words retain the nasal quality of the vowel although they undergo liaison, but others do not. Prunet (1987) observes a structural dependency of this phenomenon. The important factor for retention of nasalization even in liaison is the syntactic function that the word occupies in a noun phrase: specifiers such as *mon* [mɔ̃] ‘my’, *ton* [tɔ̃] ‘your’, *son* [sɔ̃] ‘his’, *un* [œ̃] ‘a’, *aucun* [okœ̃] ‘none’ retain the nasalization – *son ami* [sɔ̃nami], ‘his friend’. Contrarily, modifiers *lointain* [lwɛ̃tɛ̃] ‘distant’, *vilain* [vilɛ̃] ‘ugly, naughty’, *certain* [sɛ̃ʁtɛ̃] ‘certain’ all lose the nasal quality in liaison, in other words, they are denasalized – *lointain objet* [lwɛ̃.tɛ̃.n.ɔb.ʒɛ].

2.4.4 Elision

Elision refers to the deletion of a word-final vowel before a vowel-initial word. Only word-final unaccented schwa and [a] in case of the feminine determiner *la* are subject to deletion, e.g.: *le* [lə] + *amour* [amur] – *l’amour* [lamur], ‘the love’, *la* [la] + *interdiction* [ɛ̃tɛ̃ʁdiksjɔ̃] – *l’interdiction* [lɛ̃tɛ̃ʁdiksjɔ̃], ‘the interdiction’. The group of words that undergo elision is very limited: namely only articles *le*, *la*, pronouns *me*, *je*, *te*, *se*, *ce*, particle *ne*, and conjunctions *de* and *que* (Klausenburger, 1978).

2.4.5 Final e-deletion

Final e-deletion is a similar process to elision with that difference, that the final schwa is deleted only before vowel-initial words and not before h-aspiré words. Words that are subjected to final e-deletion is much broader than those subjected to elision; it can be any adjective (*triste* ‘sad’), noun, or any other morpheme ending in -e (Klausenburger, 1978).

2.4.6 Suppletion

The masculine-feminine pair possessive pronouns *mon/ma* ‘my’, *son/sa* ‘his/her’, and certain pair adjectives e.g. *vieux/vieille/vieil*¹ [vjø] [vjɛj] [vjɛj] ‘old’, *fou/folle/fol* [fu] [fɔl] [fɔl] ‘crazy’, *mou/mole/mol* [mu] [mɔl] [mɔl] ‘soft’, and demonstrative pronoun *ce/cette/cet* [sə] [sɛt] [sɛt] are distributed on the grounds of gender of the noun they refer to, e.g. *beau garçon* ‘a handsome boy’, *belle fille* ‘beautiful girl’, and the gender distribution of possessive pronouns

¹ Presented here in the following order: masculine form / feminine form / suppletive form

is not based on the gender of the person or object who is in possession as in English – *my mother and her book, my father and his car*, but the pronoun is distributed with regard to the gender of the object or person that is being possessed – *ma mère et son livre, mon père et sa voiture* ‘my mother and her book, my father and his car’.

To avoid the hiatus while referring to vowel-initial feminine nouns with a feminine form of the possessive pronoun **ma orange*, we use the suppletive form of the masculine possessive: *mon orange* [mɔ̃.nɔ.ʁɑ̃ʒ] ‘my orange’. The final consonant [n] is subjected to liaison, it is pronounced and resyllabified – it creates a new syllable with the first vowel of the following word.

2.4.7 H-aspiré words

There is a group of words that begin with a consonant in writing (h) but in speech they begin with a vowel, e.g. *héro* [ɛʁo] ‘hero’, *haricot* [aʁiko] ‘bean’. This consonant is called h-aspiré and it occurs only word-initially and only before a vowel or glide, but never before schwa since schwa never occurs in word-initial positions in French (Tranel, 1992: 297). However, these vowel-initial words behave phonetically rather like consonant initial. Elision, suppletion and liaison occur only before vowels, and not before a consonant or h-aspiré.

Words beginning with h-aspiré are not eligible for suppletion, and their gender-marked adjective and pronoun forms are used instead – *ma hache* ‘my axe’ not **mon hache*, *ce haricot* ‘this bean’ not **cet haricot*. Table 3. illustrates examples of h-aspiré words that take part neither in liaison nor elision.

Word	Transcription		Translation
Le hibou	[ləibu] *[libu]	no elision	‘an owl’
Les hiboux	[leibu] *[lezibu]	no liaison	‘the owls’
Le haricot	[ləaʁiko] *[laʁiko]	no elision	‘a bean’
Les haricots	[leaʁiko] *[lezəʁiko]	no liaison	‘the beans’

Table 3. Examples of h-aspiré words, that are not subjected to liaison nor elision (based on Tranel, 1996).

It is necessary to note here, that not all h-aspiré words behave consistently: for example the word *hameçon* ‘hook’ entails elision, liaison and suppletion (Tranel, 1981: 299), and some words tend to behave like vowel-initial words and also take part in elision, liaison and

suppletion (e.g.: liaison *les haricots* [le.za.ʁi.ko] ‘beans’). Some word-initial [h]’s are unetymological in French and served only to break the hiatus between two vowels – for example *lo alt mur* developed through *lo halt mur* into today’s *le haut mur* (Klausenburger, 1978: 36). But the above-mentioned trend proves the evolution of the language that h-aspiré words are beginning to be perceived as vowel initial and not consonant initial words.

H-aspiré words can be glottalized, too, and especially if preceded by a consonant-final word (Dell 1973, and Freeman 1975 in Tranel, 1981: 310). Tranel (1981) supposes that its function can be different from the function of glottalization of regular vowel-initial words. Since h-aspiré words constitute rather an exception from the system (semi vowel-initial and semi consonant-initial words), the glottalization represents then a failure to apply any other linking and resyllabification strategy.

2.5 Glottalization

2.5.1 Glottalization in English

Glottal stops appear before vowel initial words in many languages but not under the same conditions. In languages like Arabic or Czech, the glottal stop is an obligatory marker of vowel-initial words. In other languages, like English, its employment is much more irregular, and in some languages a word-initial glottal stop can be even a phoneme as in the Tongan language “where words like /aa/ ‘heat sticks over fire’ and /ʔaa/ ‘awake’ contrast” (Garellek, 2012: 92).

In this thesis we are going to focus only on vowel glottalization since our main concern is linking of vowel-initial words, and we need to examine in what instances word-initial vowels are not linked to the preceding segment but detached by a glottal stop or cracked voice. Comparably to Redi & Shattuck-Hufnagel (2001, paraphrased in Garellek, 2012: 93), we will use the term word-initial glottalization to refer generally to the occurrence of full glottal stops, incomplete glottal stops and voicing irregularity before a vowel-initial word (laryngealization).

The factors determining word-initial glottalization can be segmental, lexical, prosodic, and sociolinguistic.

Segmental factors

Segmental factors include the preceding phoneme of the word-initial vowel. The results of Umeda’s research (1978: 91) show that the glottalization is more likely if the preceding phoneme is a vowel than if it is preceded by a consonant, and more likely preceded by a voiced

consonant then a voiceless one. The quality of the word-initial vowel plays its role as well: back vowels are more likely to be glottalized than high vowels.

Prosodic factors

Word-initial vowels preceded by a word-final vowel are more likely to be glottalized if the syllable receives a nuclear accent. Regarding the unaccented initial syllables, reduced vowels ([ə] in *adult*) are less frequently glottalized than unaccented full vowels ([ɛ] in *entertainment*). Word-initial vowels in both stressed and unstressed words are likely to be glottalized if they are at the beginning of an intonational phrase

Lexical factors

Lexical vowel-initial words preceded by function words are more likely to be glottalized than if preceded by lexical words. The reason for this is most probably the attempt to mark the prominence of the following lexical word and detach it from the preceding function word, e.g. *the only* – [ði_(j)əʊnlɪ] is usually likely to be linked by means of transient j; but if the two words are detached by glottalization the speaker is intending to mark the prominence of the word *only* (Garellek, 2012: 99). Lexical words are also generally more often glottalized than function words.

Sociolinguistic factors

The frequency of word-initial glottalization is also influenced by gender and regional dialect. Women tend to glottalize by 1/3 more often than men, which is a surprising fact since male voices are often creaky and “[g]lottal closure is often related to creakiness in the voice quality of the signal” (Byrd, 1994:48). Southern and Northern speakers also use glottal stops more often than speakers from North Midland (*ibid.*).

2.5.2 Glottalization in French

French speakers tend to link words together in connected speech, even the transition between two adjacent vowels over a word boundary is produced smoothly without a glottal stop (Szczeppek & Persson, 2016: 130). Therefore, the glottalization is rather a marginal phenomenon that is even mostly omitted in handbooks of French phonetics and phonology. In certain regions, especially in Alsace, word-initial glottalization is used more frequently than in the dominant French dialect (Ile de France), mainly because the influence of German language of neighbouring Germany that uses a glottal stop before every word-initial vowel (Carton, 1983, paraphrased in Skákal, 2013: 15).

Malécot (1975) shows that glottalization of word-initial vowels in French has predominantly an emphatic function, moreover, “when the utterance begins with an emphasized element whose first phoneme is a vowel, a glottal stop is always present, e.g. *Attention !* [ʔatãsjõ] ‘Caution!’, *Aucun n'est possible !* [ʔokœ] ‘None is possible!’ (Malécot, 1975: 53). In his study on glottalization in French speakers of the Ile de France dialect, speakers used in 2228 glottal stops and only 125 (0.2 %) were employed within one intonational phrase which means that word-initial glottalization in utterance-medial position is very rare.

Malécot (1975) observes also some sociolinguistic factors in the usage of word-initial vowel glottalization, namely speaker’s sex and age. Women glottalize more often than men, and as for the category of age, the rate of glottalization was much higher in the youngest and the oldest speakers in his experiment.

The emotional state of the speaker showed no influence on glottalization. But the style of articulation does have an impact on the phrase-initial glottalization. “[E]nergetic articulation causes an increase to 62 % glottalization, laxness causes a drop to 42 %, and hesitation causes a dramatic drop to a very low 14 %” (Malécot, 1975: 57).

2.6 Linking in French speakers of English

The accounts on linking in French speakers of English in the existing literature are unfortunately very scarce. To the best of our knowledge, any comprehensive research on this matter has not yet been carried out. We will thus present here the results of studies whose main concern is the [h] deletion and the subsequent [h] insertion ([h] epenthesis) at the beginning of vowel-initial words in the English connected speech of French native speakers.

There are various possible reasons behind this issue. Firstly, [h] is an inexistent sound in the French phonetic and phonemic system and thus it is difficult for the French to distinguish the [h] sound, all the more that they are not to distinguish between two sounds but between a sound (presence of [h]) and silence (absence of [h]).

Mah, Goad & Steinhauer (2016) carried out an experiment in which the perception of [h] of French speakers was tested in a non-linguistic, and linguistic environment. Their results show that French native speakers could detect the presence of [h] in a non-linguistic environment as good as English native speakers. However, the perception experiment with real-word stimuli confirms that the French speakers are unable to perceive [h] in continuous speech. “The fact that the French speakers (...) were able to perceive its presence in the non-linguistic

condition provides strong evidence against the hypothesis that the acoustic non-salience of [h] is the root of the problem” (Mah, Goad & Steinhauer, 2016: 11).

John (2006: 83) comes to the conclusion that [h] epenthesis is influenced by its environment and is applied with a greater frequency if it is preceded by a vowel or pause than by a consonant. The probability of [h] epenthesis is also increased by any other [h] sounds preceding the vowel-initial word in one intonational group. John (2006) finds out that the word category does not play any role in this process and that the French speakers insert [h] equally before content and function words. On the contrary, the [h] epenthesis is sensitive to register and [h] insertion is more likely to be found in a formal and read-aloud speech than in an informal speech.

Picard (1987: 67) mentions that unskilled French speakers of English tend to drop *h* at the beginning of words and replace it with other segments. Whereas speakers who master pronouncing word-initial *h* tend to randomly insert *h* at the beginning of vowel-initial words out of hypercorrection.

2.7 Hypotheses and research questions

In the experimental part of this thesis we will focus on the means of linking that French native speakers use in English. Our first hypothesis is based on the assumption that the French native speakers will link words in English in the same manner as they do in French:

H1: French speakers most extensively link words together and glottalization is used only for emphasis.

Our second hypothesis was formulated on the basis of previous studies on the linking of French speakers of English, namely on the usage of the consonant [h]:

H2: French speakers tend to omit the word-initial [h] but they tend to use [h] as the means of linking and insert it on the vocalic onset. Speakers who master word-initial [h] pronunciation are more likely to perform [h] epenthesis.

In the following sections, we will also respond to four research questions:

1. Is the [h] insertion triggered rather by a preceding consonant-final word (C#V), or by a vowel-final word (V#V)?

2. In which speaking style does glottalization occur most frequently: in spontaneous speech, text reading, or phrases reading?
3. How does the lexical or grammatical status of a word affect the word-initial vowel glottalization?
4. Is there a difference in the frequency of glottalization of male and female speakers?

3 Material and method

3.1 Material

For the purpose of this experiment, we recorded 20 native French speakers of English, 8 women, and 12 men. The criteria for the choice of speakers was at least intermediate level of English (B1), and most importantly One male speaker had to be discarded for his insufficient level of English, so the total number of recordings that were the subject of the analysis comprise 8 female speakers and 11 male speakers. Most of the material was gathered in Rheims, Paris, Brittany, and Prague.

The speakers were aged between 18 and 44 (mean age 28). Four of them were students, and four speakers were working either at the university or at school, 13 speakers were working for various companies. Their spoken English was on a good level since all of them were either using English every day at work or studying English at school. All speakers were naïve to the purpose of our study.

Each recording consists of three parts. The first part was based on a spontaneous conversation with the experimenter, during which they were asked casual questions concerning their hobbies and life. In the second part, they were asked to read the passage *The North Wind and The Sun*, that has been used for phonetic experiments for many years (Deterding, 2006: 188). In the third part, they were asked to read a list of twelve phrases which were assembled in order to cover all environments for all types of linking in English. The speakers were supposed to read the text and the list of phrases before the recording. We will further refer to the three speech styles as conversation, text and phrases respectively.

3.2 Data preparation and coding

For the analysis, we used the phonetic software *Praat* 6.1.16 (Boersma, Paul & Weenink, David, 2020). The recordings were separated into three parts based on the task – conversations, text and phrases. Conversations were transcribed and divided into shorter segments of approximate length 45–70 seconds in order to facilitate the segmentation. All recordings were then segmented by P2FA (Yuan & Liberman, 2008). For the analysis of conversations, we chose segments 2, 3 and 4, if the conversational part was shorter than four minutes, segments 1,2 and 3 were chosen, which was the case of speakers #8, #10 and #13.

Conversations, texts and phrases were analysed on the basis of attentive listening and they were manually labelled in a point tier using labels listed in Table 4. We used not only labels to describe the standard types of English linking, such as pseudo-resyllabification “res”, linking [r] “r”, transient [j] “j” and transient [w] “w”, but also labels to describe particular ways

how French speakers linked words in our sample. Label “e” refers to vowel-to-vowel transition other than [j] or [w] – for example when *the attempt* was pronounced as [ðəætempt]. In case of [h] deletion, we employ the label “h_” also adding the information which sort of linking was used instead, i.e. *I had* [aɪ(j)æd] was labelled as “h_j” meaning that the vowel after the deleted [h] was linked to the preceding vowel through transient [j], “h_r” was used to refer to [h] deletion and linking [r] in *more he* [mɔ:ri:] etc. The label “h” was used to mark [h] epenthesis, e.g. *at all* [æthɔ:l].

Label	Explanation
res	pseudo-resyllabification
j	transient [j]
w	transient [w]
?	vowel-initial glottalization
r	linking [r]
e	vowel-to-vowel transition
h	[h] insertion at the beginning of a vowel-initial word, where [h] is not etymologically justifiable
h_res	[h] deletion and linking by means of pseudo-resyllabification
h_?	[h] deletion and glottalization
h_r	[h] deletion and the use of a linking [r]
h_e	[h] deletion and vowel-to-vowel transition
h_j	[h] deletion and linking by means of transient [j]
h_w	[h] deletion and linking by means of transient [h]
t	[t] glottalization of the preceding segment
p	vowel initial glottalization after a pause

Table 4. Labels that were used for the analysis in *Praat*.

The total number of vowel-initial words in our sample was 3225. 1451 segments (44.99 %) were glottalized, and 1774 (55.01 %) were linked to the preceding word. We further

excluded 9 (0.28 %) vowels preceded by t-glottalization and 740 glottalizations preceded by a pause longer than 100 ms since these glottalizations are produced for physiological and not phonological reasons. 510 of those glottalizations (68.92 %) were used in conversations, 134 (18.11 %) in phrases, and 96 (12.97 %) in texts. The reason for the high rate of utterance-initial glottalization in conversations is the improvised nature of the speech. Speakers were unprepared; therefore, they were making frequent pauses, dividing their speech in more intonational groups, or repeating words in order to gain time to think what to say as next.

Using a *Praat* script, we extracted the necessary information from TextGrids into a text document. The extracted information included the labels from the point tier, the vowel-initial words as well as the word that preceded them, which were further analysed in Microsoft Excel.

In Microsoft Excel, we annotated every segment with the information about the speaker's gender and about the status of the word – whether it was a function or a content word whereas the different statuses of the verb *have* were taken into account. And in case of word-initial glottalization, we analysed if the preceding word ended in consonant, high front vowels, high back vowels, and non-high vowels in order to determine in which context word-initial glottalization occurs most frequently. Words with [h] epenthesis were annotated in a similar manner but including also a pause longer than 100 ms.

Linking and glottalization was then further analysed in relation to stress placement in words. In Excel, we annotated all vowel-initial polysyllabic words with labels based on their stress position. It is necessary to note here that the stress-placement evaluation is not based on the actual position of the stress as it was produced by the speakers but on its canonical placement in the English language. Evaluating the stress placements of individual words would be beyond the scope of this thesis. For this analysis we chose only data from *phrases* and *texts*, since in *conversations* it would be difficult to find enough polysyllabic vowel-initial words used by all speakers.

For evaluation of linking based on speakers' age, we established three age categories. The first category includes 6 speakers in the range of 18–25 years old's, the second based on the range 26–31 years of age contains 7 speakers, and the third includes 6 speakers in the age of 32–44.

4 Results and discussion

In the following chapters we will present the results of our study. We will analyse the types of linking, and the usage of glottalization in the whole sample, as well as the [h] epenthesis and [h] deletion. We will also examine the sociolinguistic factors in linking, glottalization and [h] deletion and [h] epenthesis. Finally, we will compare the speakers' individual tendencies. Our results will be visualised with tables and figures.

4.1 Linking and glottalization

The number of analysed linking environments was 2476, in conversations we analysed 1182 vowel-initial words, 875 in phrases, and 419 in texts. The ratio of linking and glottalization in the whole sample was 1774 (71.65 %) to 702 (28.35 %) respectively. The tendency of glottalization and linking is in all three speech styles very similar. The ratio of linking and glottalization in conversations is 73.69 % to 26.31 %, in phrases 70.06 % to 29.94 %, and in texts 69.21 % to 30.79 % respectively. Figure 2. displays the ratio of glottalizations and linking in the three individual parts that we analysed in relation to the whole unit.

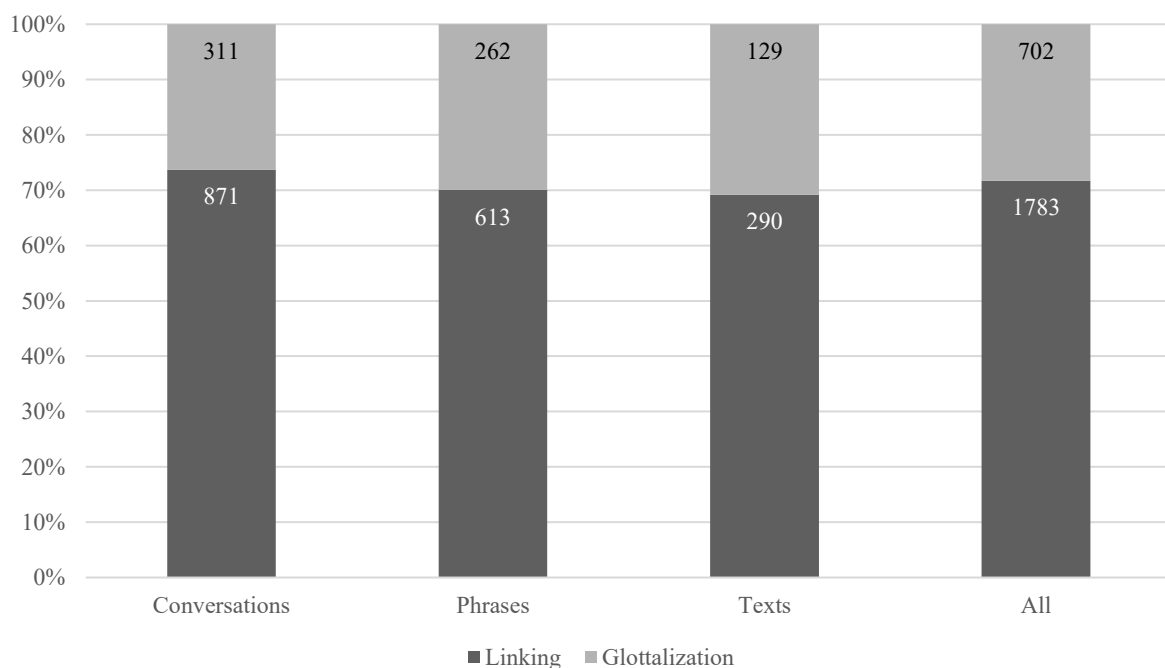


Figure 2. Glottalization and linking ratio in conversations, phrases, texts and in the whole sample.

We further analysed in which environment the glottalization is most likely to occur: if preceded by a consonant, or a vowel. 523 (74.50 %) of word-initial glottalization occurred after a word-final consonant, and only 179 (25.50 %) after a vowel.

We further distinguished the preceding segments, namely consonants that would engage in pseudo-resyllabification, and consonant [r] that would act as linking [r] in non-rhotic accents of English. Concerning vowels, we distinguished high front vowels that would be followed by transient [j], high back vowels that would normally be followed by transient [w], or non-high vowels that would trigger the occurrence of intrusive [r] in certain non-rhotic accents. 442 (62.96 %) instances of glottalization occurred after a consonant. The second highest frequency of glottalization was after high front vowels, in a total of 99 cases (14.10 %). Words preceded by a word-final [r] were glottalized 89 times (12.68 %), and words following high back vowels 51 (7.26 %) times, and 21 words (2.99 %) were preceded by non-high vowels.

1774 of all vowel-initial words were linked to the receding segment. This number includes also 24 words (1,35 %) with inserted consonant [h] on the vocalic onset, and 68 words with initial [h] deletion (3.83 %) that generated new vowel-initial words.

The type of linking that speakers use is dependent on the preceding segment. If a vowel is preceded by a word-final consonant there are always only two possibilities: either pseudo-resyllabification, or glottalization. Therefore, it is not meaningful to compare the frequency of the types of linking with one another, but it is more important to compare the frequencies of linking and glottalization in particular segmental contexts, e.g. the ratio of linking and glottalization after a word-final consonant. Table 5. provides a comparison in how many cases the particular type of linking was replaced by a word-initial glottalization. Table 5. Includes neither intrusive [r] because there was not a single record of it in our material, nor [h] epenthesis because we cannot compare this phenomenon with glottalization.

Linking	No.	Glottalization in the same context	%	Glottalization %
Consonant	1217	442	73.36 %	26.64 %
Linking [r]	131	89	59.55 %	40.45 %
Transient [j]	177	99	64.13 %	35.87 %
Transient [w]	103	51	66.88 %	33.12 %
Vowel-to-vowel transition	121	21	85.21 %	14.79 %

Table 5. Linking and glottalization ratio in different segmental contexts.

However, word-final [r] sometimes remained latent and was not pronounced, therefore speakers used also vowel-to-vowel transition – 49 times (17.29 %), [h] epenthesis only once (0.38 %), linking [r] was then employed 131 times (49.25 %) and glottalization 89 times (33.46

%). As for linking, the consonant [r] in non-rhotic English has a similar position as word-final latent consonants in French. They are not pronounced before a pause or a consonant, but they are pronounced if they are followed by a vowel. It could be expected, that the French speakers would either pronounce the consonant and pseudo-resyllabify the word boundaries as in liaison or produce a smooth vowel-to-vowel transition. Therefore, the higher glottalization rate in this environment was not expected.

Glottalization was further analysed in relation to the stress placement. For this reason, we analysed 327 polysyllabic vowel-initial words in texts and phrases. There were 161 words with the primary stress on the first syllable, and 166 words with the primary stress on the second syllable. Vowel-initial words with stress on the second syllable show similar tendency in linking as our whole sample – the majority of those words, 71.69 %, were linked to the preceding word, and 28.31 % were glottalized. However, the ratio of glottalization and linking in words with stress on the first syllable shows a very high deviation from our standard: 51.55 % of those words were linked and 48.45 % of them were glottalized as is displays in Figure 3.

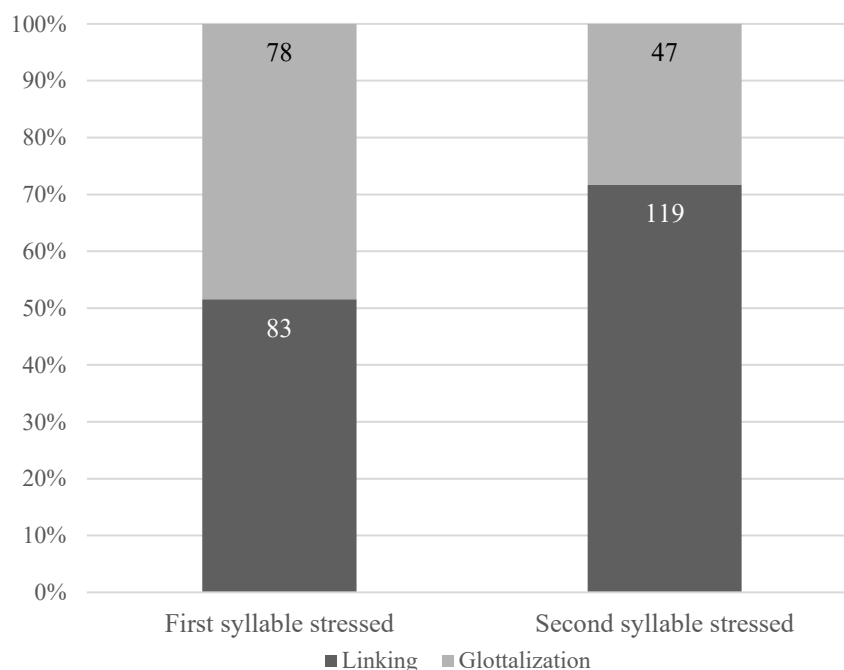


Figure 3. Glottalization and linking ratio in polysyllabic words.

4.1.1 [h] epenthesis

Surprisingly, [h] was inserted on the vocalic onset only 24 times, forming only 1,35 % of all linked segments. Moreover, [h] epenthesis was employed only by 5 out of 19 speakers (26.32 %). The mean value of [h] epenthesis by individual speakers is 4,8. Only speaker #11 employed it more than the average, namely 16 times (66.67 %) and in conversation, text, as

well as in phrases. For its low occurrence and speakers' inconsistency in its usage, [h] epenthesis cannot be regarded as a universal means of linking employed by all French native speakers, but rather as a characteristic of an individual's idiolect. Figure 4. shows the percentual distribution of [h] epenthesis by speakers.

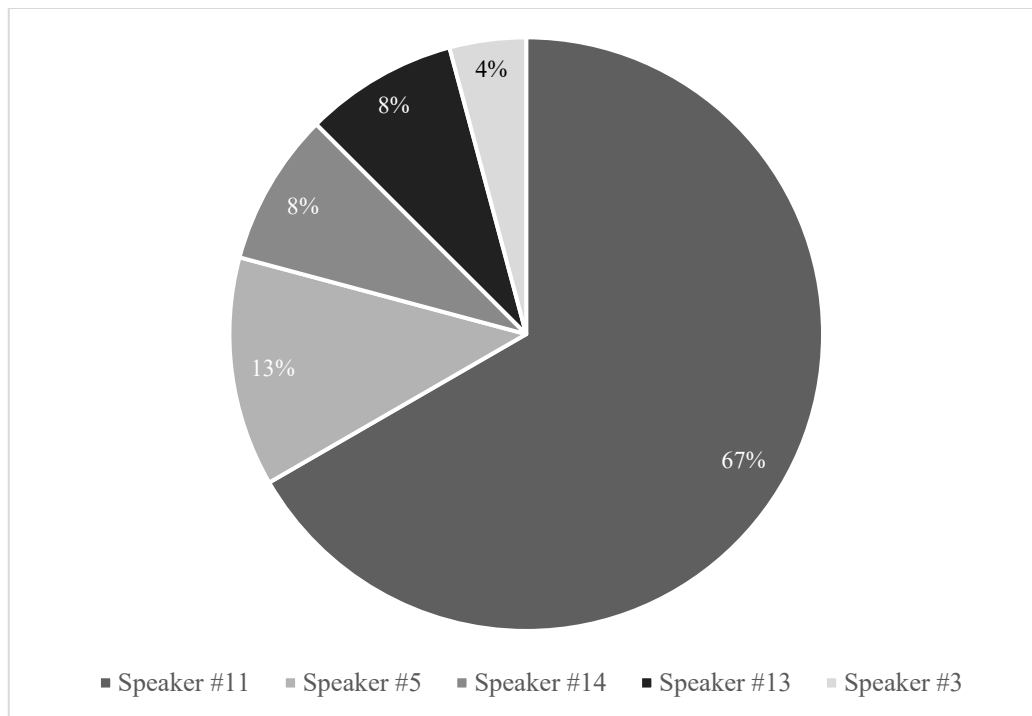


Figure 4. Distribution of [h] epenthesis by speakers.

The [h] insertion occurred 10 times (41.67 %) if the vowel-initial word was preceded by a consonant-final word, namely of which one was the latent consonant [r]. [h] epenthesis was preceded by a vowel 11 times (45.83 %), most significantly by a high front vowel – 6 times (25.00 %), 3 times (12.50 %) by a high back vowel, 2 times (8.33 %) by a non-high vowel, and 3 times (12.50 %) by a pause.

Content words were subject to [h] epenthesis 13 times (54.17 %), and lexical words 11 times (45.83 %) which is not a significant difference.

4.1.2 [h] deletion

Speakers omitted word-initial [h] 106 times in our sample. These normally consonant-initial words were turned into vowel-initial words, with the only exception of the word *huge* that starts with a consonant after the [h] deletion – [ju:dʒ]. Therefore, we further analysed which linking strategy French native speakers apply for those words. Word-initial [h] was deleted by 14 out of 19 speakers. [h] was omitted most often by speaker #10, in a total of 16 times, and the least by the speaker #14, namely 2 times.

The [h] deletion is possible also in English in the weak forms of pronouns *he, her, him*, and verbs *have, has, had*. We analysed those function words, too, based on the assumption that French speakers are unaware of this fact and that their omission of [h] is influenced rather by the salience of this consonant in French.

The vast majority of [h] deletion was, however, performed on pronouns *he, him, his*, and verbs *have, has, had* in total of 91 times (85.85 %). That can be explained by their high frequency in the language rather than as a connection to the omission of [h] by English natives because the French speakers omit [h] not only in the weak forms but also in the strong forms.

For further analysis of linking and glottalization in words with h-deletion we will exclude 9 glottalized words that were preceded by a pause that was longer than 100 ms and we will work with the total number of 97 [h] deletions.

The linking-glottalization ratio of vowel-initial words whose word-initial consonant [h] was deleted is very similar to the tendency in our whole sample, these words were linked to the preceding word in 69.07 % of cases, 30.93 % of segments were glottalized. For a comparison, the ratio in the whole sample was 71.65 % to 28.35 %. Exact numbers are listed in Table 6.

	No.	%
Linking	67	69.07 %
Glottalization	30	30.93 %

Table 6. Linking and glottalization ratio in words with word-initial consonant [h] omission.

Glottalization of words with initial [h] deletion is much higher if preceded by a consonant than by a vowel. Out of 30 word-initial glottalizations, 26 (86.67 %) were preceded by a consonant and only 4 (13.33 %) were preceded by a vowel. This ratio is even higher than in the whole sample, as displayed in Figure 5.

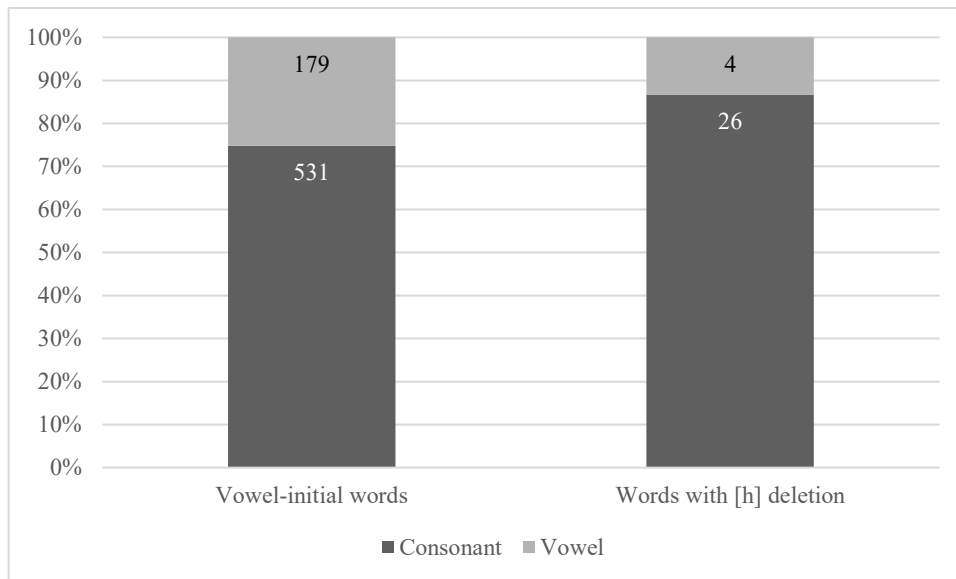


Figure 5. Percentage of glottalization after a word-final consonant, or a vowel in vowel-initial words and words with word-initial [h] omission.

4.1.3 Sociolinguistic factors

4.1.3.1 Gender

Women produced a slightly higher rate of word-initial glottalization than men. Women glottalized 32.13 % of vowel-initial words and men 25.39 % of words as is displayed in Figure 6. On the contrary, women omitted less word-initial consonants [h].

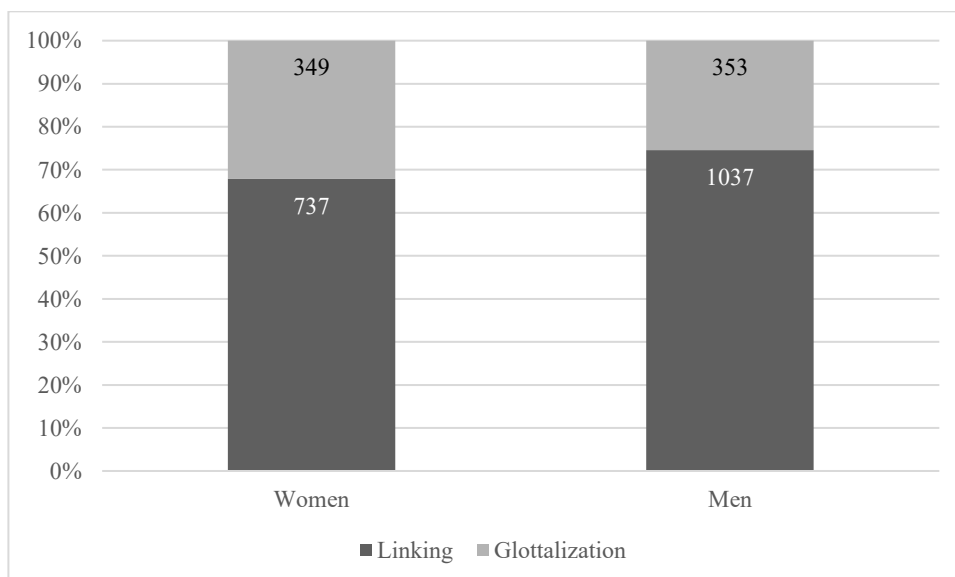


Figure 6. Rate of linking and glottalization in female and male speakers.

4.1.3.2 Age

The frequency of glottalization increases with age. The lowest evidence of glottalization was demonstrated by speakers between 18–25 years of age, on the contrary, the highest evidence was shown by speakers between the age of 32–44. The linking-glottalization ratio is provided in the Figure 7.

Younger speakers also omitted the least number of word-initial consonants [h]. Speakers at the age of 18–25 omitted [h] 26 times (26.53 %), speakers at the age of 26–31 omitted [h] 38 times (38.78 %) and speakers in the age category 32–44 dropped [h] 34 times (34.69 %).

Insertion of [h] on the vocalic onset was significantly the highest in the age group 32–44 years of age with 19 occurrences (79.17 %) but 16 of them were produced by one speaker – speaker #11 and therefore this result cannot be generally for the whole age group.

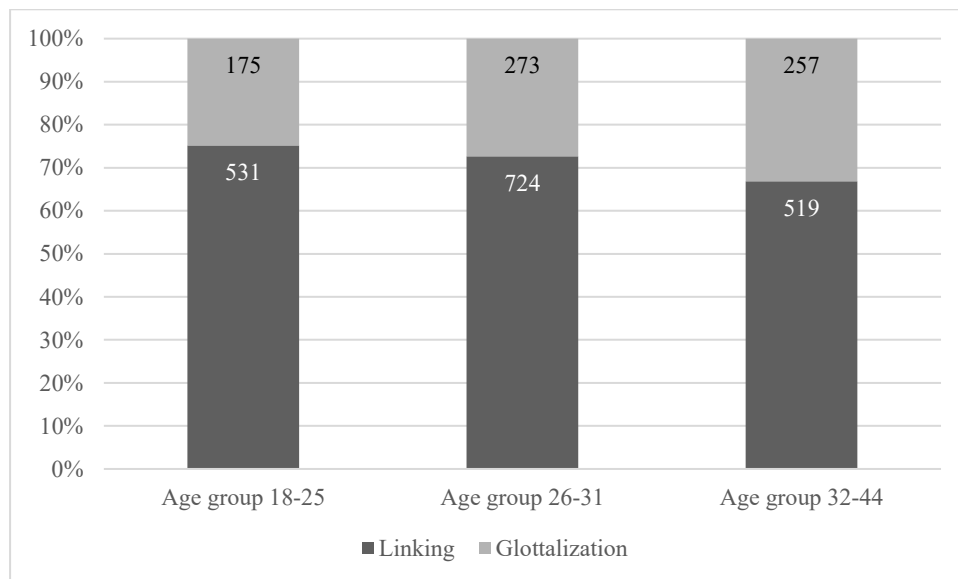


Figure 7. Glottalization and linking ratio in relation to the age of the speakers.

4.1.3.3 Individual differences

There were relatively great differences between individual speakers in our research. The individual differences among female speakers are displayed in Figure 8. and among male speakers in Figure 9.

The highest number of word-initial glottalization was produced by speaker number #14 who was significantly nervous and insecure during the recording which led the speaker to uncertain and fragmented speech and therefore she was not linking individual words to one

another but was dividing them by glottalizations, namely in 73.33 %. However, this speaker did not insert [h] to any vocalic onset nor omitted any word-initial consonant [h].

Speaker #5 was more glottalizing than linking, too – this speaker glottalized 56.35 % of vocalic onsets. He also tends to both [h] epenthesis and [h] deletion. Whereas if he deleted a word-initial [h] that was preceded by a consonant, the word was always glottalized – eg. *more he* [mɔ:ʔi:]. However, if preceded by a high front vowel, it was always transitioned through [j] – eg. *I have* [aɪ(j)æv].

Only four speakers glottalized more than 80 % of vowel-initial words: speakers #1, #11, #15 and #18; whereas two of them linked even more than 90 % of the vowel-initial words to the preceding segment: speaker #1 linked 92 % of segments, and #15 in total 90.16 %.

For speaker #11 is characteristic not only high rate of linking but also an extensive usage of [h] epenthesis that constitutes 19.75 % of all his linking.

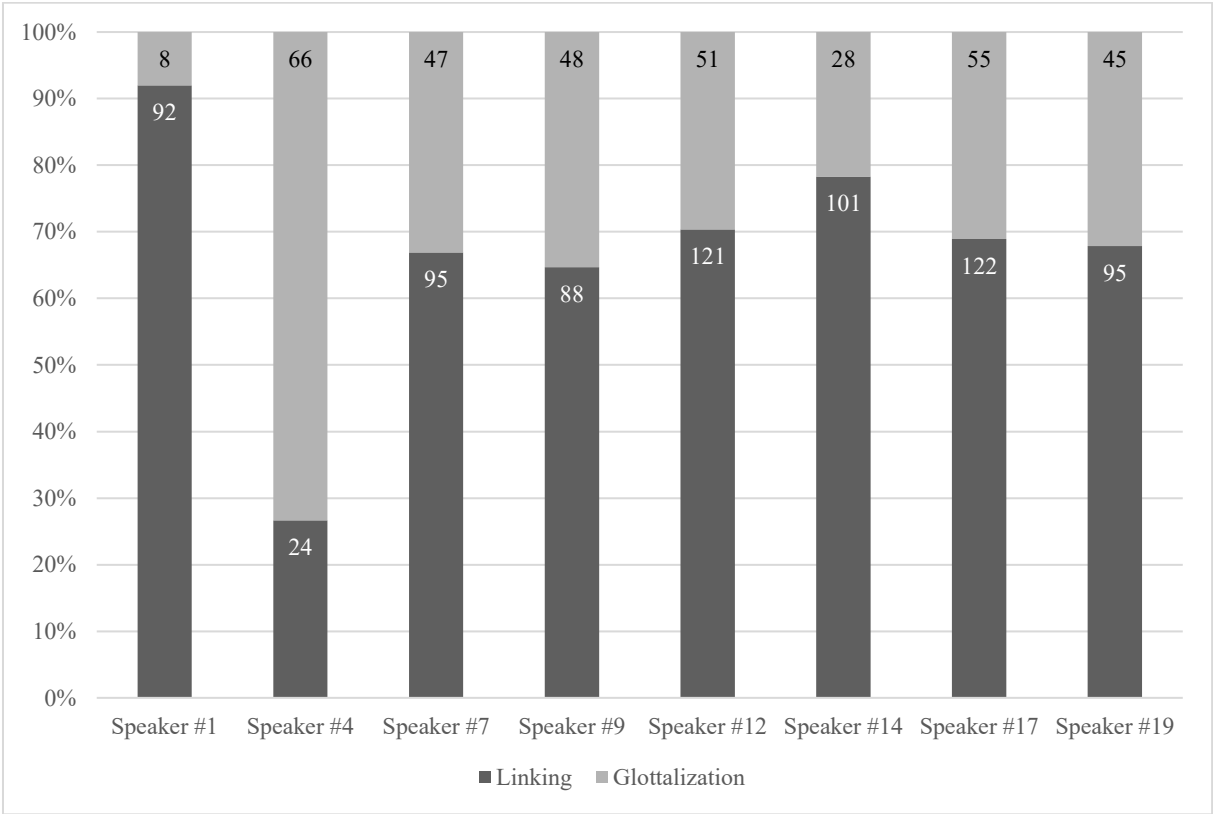


Figure 8. Ratio of linking and glottalization in female speakers.

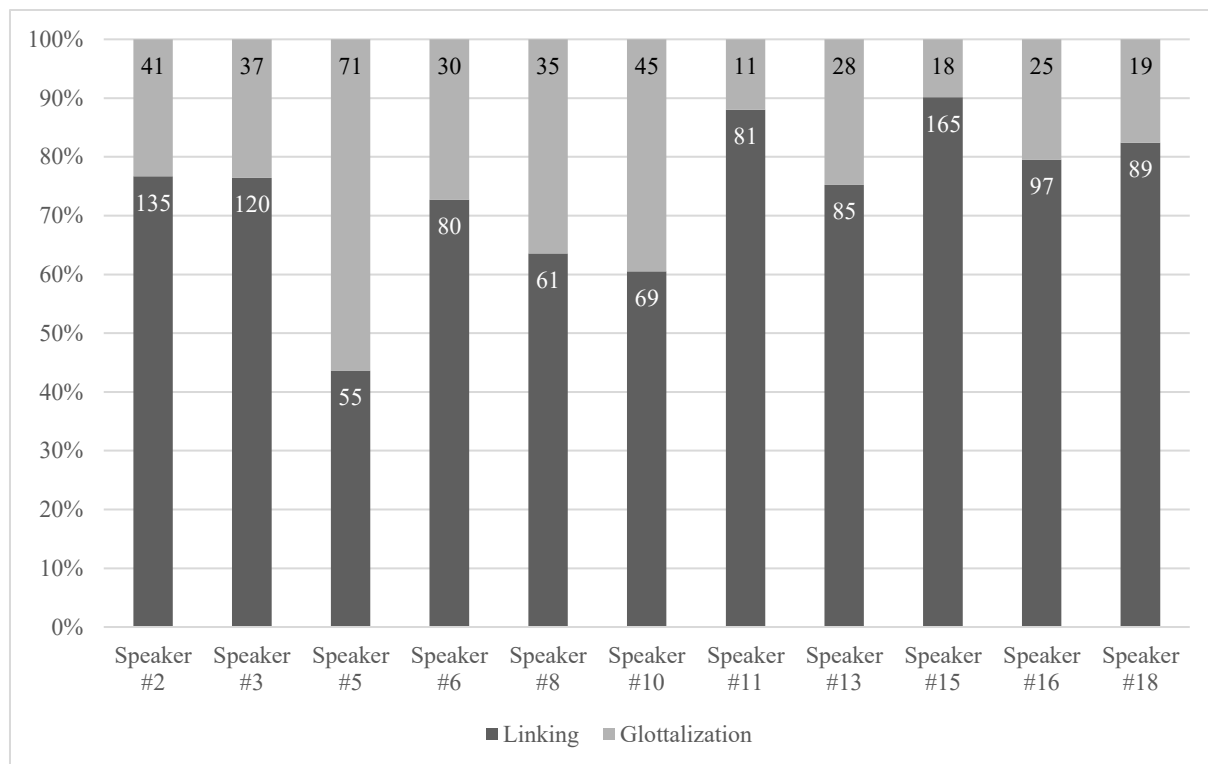


Figure 9. Ratio of linking and glottalization in male speakers.

Figure 10. provides an overview of [h] epenthesis and [h] deletion by individual speakers; this figure includes also instances of [h] deletion after a pause longer than 100 ms, forming a total of 106 [h] deletions and 24 instances of [h] epenthesis. Speakers #1, #4, #6, #7, and #18 were omitted from the figure because they did not show any evidence of either of the phenomena. It shows that [h] deletion is much more frequent than [h] insertion. Interestingly, all speakers who insert [h] at the vocalic onset of words also do drop the word-initial [h]. However, only 35.71 % of speakers who delete word-initial [h] insert [h] onto other vowel-initial words.

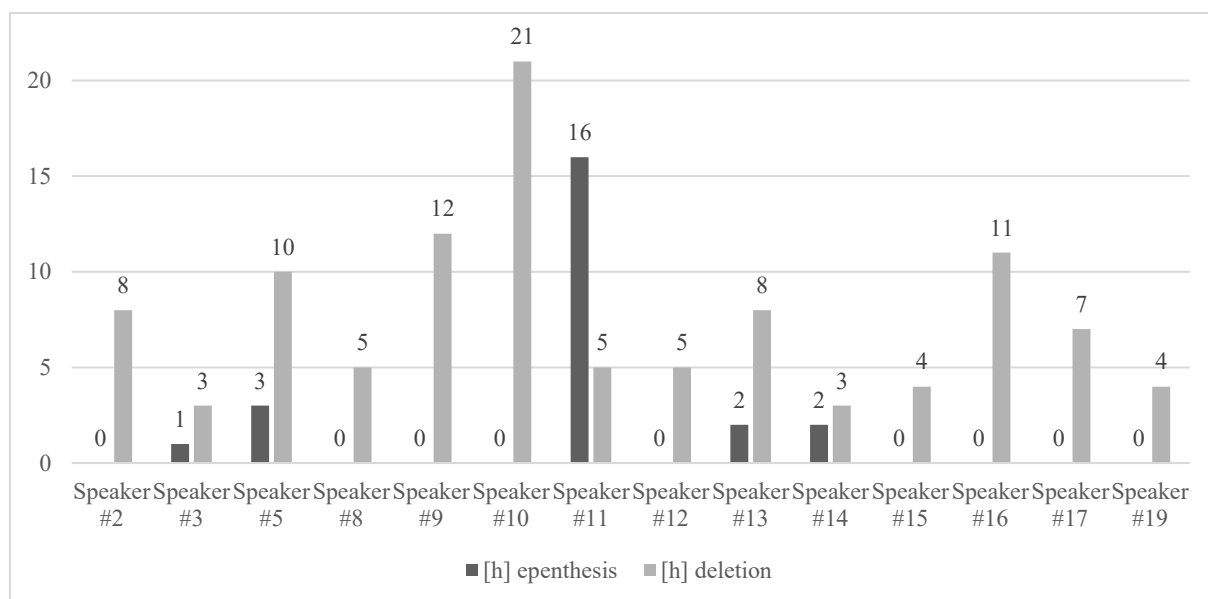


Figure 10. [h] epenthesis and [h] deletion in individual speakers.

Level of English or the degree of language exposure did not prove to have any significant impact on general tendencies in linking and in the correct usage of [h]. Speaker #9 was bilingual in English and French with French as her dominant language. Yet she showed the second highest rate of [h] deletion, her glottalization was higher than the average, and although her English accent was non-rhotic, she did not employ any intrusive [r].

Speaker #14 and #3 were students of English linguistics who took also theoretical courses in English phonetics, nevertheless, they both omitted [h] and inserted [h] on the vocalic onsets and didn't use intrusive [r] although they were familiar with it.

Proficiency in another language can, however, help the speaker to be more aware of the phonetic differences between languages. Speakers #1 and #7 were proficient in Spanish, and speaker #6 in Arabic but neither of them inserted [h] on any vocalic onset, nor omitted any word-initial [h].

That implies that mastering the native-like means of linking necessitates an extensive training in perception and production, and it cannot be acquired merely by common learning of English and language exposure.

4.2 General discussion

Before the analysis of the recordings, we decided on two hypotheses that were based on the existing studies on French linking and linking of French speakers in English.

Our first hypothesis was that French speakers will most extensively link words together and glottalization will be used only for emphasis. Our results show that 71.65 % of vowel-initial

words were linked to the preceding word, and only 28.35 % were glottalized which confirms the hypothesis. The glottalization rate in French is still much lower, for example in Malécot's experiment (1975) on a corpus of connected speech of 68000 words, he recorded 2899 preconsonantal and prevocalic glottal stops, whereas only 108 of them were in utterance-internal positions and before vowels (Skákal, 2013: 15).

Women produced more glottalizations than men which is also characteristic for French female speakers (Malécot, 1975) and for female English speakers (Byrd, 1994) in their native languages.

The most significant factor for prediction of glottalization proved to be stress placement since half of the polysyllabic words with primary stress on the first syllable were glottalized, but only a quarter of words with the primary stress on the second syllable were glottalized.

Our second hypothesis was based on John's (2006) and Picard's (1987) researches showing that French speakers tend to omit the word-initial [h] but they tend to use [h] as the means of linking and insert it on the vocalic onset. Speakers who master word-initial [h] pronunciation should be more likely to perform [h] epenthesis.

John's (2006) research showed, that speakers tend to insert [h] to the onset of words more often if the word is preceded by a vowel or a pause than if preceded by a consonant. Our results showed that [h] is inserted equally after vowels and consonants, and less after a pause. Speakers inserted [h] after a vowel in 45.83 %, after a consonant in 41.67 %, and after a pause in 12.50 %.

The grammatical or lexical status of the word did not influence the occurrence of [h] epenthesis – speakers inserted [h] insignificantly more often before lexical words, namely in 54.17 % of cases, and before grammatical words in 45.83 %

According to Picard (1987), word-initial [h] is deleted rather by unskilled French speakers of English, and, contrarily, [h] is then randomly introduced to vowel-initial words by speakers who already master its pronunciation in the word-initial position. However, this statement proved incorrect in our research because [h] insertion was practised only by speakers who tend to delete word-initial [h] as well. Speakers who master word-initial [h] pronunciation did not show any evidence of [h] epenthesis. Insertion and omission of [h] can be explained by speakers' insecurity about the presence and absence of this consonant and not being sure where to pronounce it and where not. Skilled speakers are then certain in [h] pronunciation and do not evince either of the phenomena.

There was not a single occurrence of intrusive [r] in our sample although among the recorded speakers there was also a bilingual speaker of non-rhotic English whose dominant

language was French, two speakers who lived for several years in London, and also students of English linguistics who also took theoretical courses in English phonetics. The fact that none of them produced [r] in the context of non-high vowels where confirms the theory that without training in perception and production of the phonetic difference that does not exist in speaker's native language, the speaker is not able to produce them.

5 Conclusion

This BA thesis aimed to analyse linking tendencies in English connected speech of French native speakers.

In the theoretical part, we introduced the factors that influence the second language phonology acquisition, such as age, motivation, or language interference. Afterwards, we described the processes of sound change in connected speech, and in the following sections, we focused on the means of linking in English and French. Finally, we presented an overview of the existing studies on linking and on word-boundary adjustments in the connected speech of French speakers in English, namely [h] epenthesis and [h] deletion.

In the research part, we analysed recordings of 19 French speakers, each consisting of three parts: improvised conversation with the experimenter, reading of the text *The North Wind and the Sun* and reading of twelve phrases that were chosen to cover all linking environments in English. The results were then further evaluated in relation to speakers' gender, to the lexical and grammatical status of the words, and finally, to the three different speech styles – informal conversations, reading of the text and reading of phrases.

Our research shows that the main tendency of French native speakers in English is rather linking than glottalization. Most of the speakers also tend to omit the word-initial [h] whereas the [h] insertion on vocalic onsets of words is characteristic only of a few individual speakers.

References

- Balogné Bercés, K. (2011) Filling the Hiatus: A Changing Face of English, *Faces of English. Pazmány Papers in English and American Studies 5*. Piliscaba: Pázmány Péter Catholic University.
- Boersma, Paul & Weenink, David (2020). Praat: doing phonetics by computer [Computer program]. Version 6.1.16. <http://www.praat.org/>
- Broadbent, J. (1991) Linking and intrusive *r* in English. *UCL Working papers in Linguistics 3*: 281–302. London: University College London. Available online from:
- Byrd, D. (1994) Relations of sex and dialect to reduction. *Speech Communication, 15*, 39-54. [https://doi.org/10.1016/0167-6393\(94\)90039-6](https://doi.org/10.1016/0167-6393(94)90039-6)
- Cenoz J. & Lecumberri L. G. (1999) The acquisition of English pronunciation: learner's views. *International Journal of Applied Linguistics, 9* (1). 3–15. <https://doi.org/10.1111/j.1473-4192.1999.tb00157.x>
- Crystal, David. (2008) Connected Speech. In *A Dictionary of Linguistics and Phonetics*. Wiley-Blackwell.
- Delattre, P. (1947) La Liaison En Français, Tendances Et Classification. *The French Review. 21* (2). 148–157. www.jstor.org/stable/380528
- Garellek, M. (2012) Word-initial glottalization and voice quality strengthening. *UCLA Working Papers in Phonetics, 111*. 92–122. UCLA: Los Angeles. <https://escholarship.org/uc/item/6j56m1xz>
- Gick, B. (2002). The American Intrusive L. *American Speech, 77*(2). 167–183. doi:10.1215/00031283-77-2-167
- Ioup, G. (2003) Exploring the role of age in L2 phonology. In J. Hansen Edwards, M. Zampini (Eds.), *Phonology and Second Language Acquisition*. 19–39. Philadelphia, PA: John Benjamin's Publishing Company.
- John, P. (2006) *Variable h-epenthesis in the language of francophone ESL learners*. Concordia University: Montreal. MA thesis. <https://spectrum.library.concordia.ca/8780/>
- Klánová, A. (2016) Sociophonetic study of substitutional glottalization in native English speakers. Charles University: Prague. BA thesis. <http://hdl.handle.net/20.500.11956/77351>
- Klausenburger, J. (1978) French Linking Phenomena: A Natural Generative Analysis. *Language, 54* (1), 21–40.
- Mah, J., Goad, H. & Steinhauer, K. (2016) Using Event-Related Brain Potentials to Assess Perceptibility: The Case of French Speakers and English [h]. *Front. Psychol. 7*:1469. Accessible from: doi:10.3389/fpsyg.2016.01469.
- Malécot, A. (1975) The Glottal Stop in French. *Phonetica. 29*, 51–63. <https://www.karger.com/Article/Abstract/259649>
- Ohala, D. (2008). Phonological acquisition in a first language. In J. Hansen Edwards, M. Zampini (Eds.), *Phonology and Second Language Acquisition*. 19–39. Philadelphia, PA: John Benjamin's Publishing Company.
- Picard, M. (1987) *An Introduction to Comparative Phonetics of English and French in North America*. John Benjamins Publishing Company: Amsterdam/Philadelphia.
- Prunet, J. (1987). "Liaison and Nasalization in French". In *Studies in Romance Languages*. Berlin, Boston: De Gruyter Mouton. doi: <https://doi.org/10.1515/9783110846300.225>
- Pulgram, E. (1965) Prosodic Systems: French. *Lingua 13*. 125–144. North-Holland Publishing Co.: Amsterdam. [https://doi.org/10.1016/0024-3841\(64\)90013-0](https://doi.org/10.1016/0024-3841(64)90013-0)
- Skákal, L. (2013) *Užívání hlasivkového rázu u rodilých a nerodilých mluvčích francouzštiny*. Charles University: Prague. BA thesis <http://hdl.handle.net/20.500.11956/55387>

- Skarnitzl, R., Šturm, P. & Volín, J. (2016). *Zvuková báze řečové komunikace*. Praha: Karolinum.
- Spinelli, E. & Meunier, F. (2005). Le traitement cognitif de la liaison dans la reconnaissance de la parole enchaînée. *Langages*, 158 (2), 79–88. DOI: doi:10.3917/lang.158.0079.
- Szcepek Reed, B. & Persson R. (2016) How Speakers of Different Languages Extend Their Turns: Word Linking and Glottalization in French and German. *Research on Language and Social Interaction*, 49(2), 128–147. DOI: 10.1080/08351813.2016.1164405
- Tranel, B. (1981) *Concreteness in Generative Phonology*. Los Angeles, Berkeley, London: University of California Press.
- Tranel, B., (1992) On suppletion and French liaison. *Romance Languages and Modern Linguistic Theory*.
- Tranel, B. (1996). French liaison and elision revisited: A unified account within Optimality Theory. *Aspects of Romance linguistics*, 433–455.
<https://roa.rutgers.edu/files/15-0594/15-0594-TRANEL-0-0.PDF>
- Umeda, N. (1978). Occurrence of glottal stops in fluent speech. *Journal of the Acoustical Society of America*, 64, 88–94. <https://doi.org/10.1121/1.381959>
- Volín, J. (2003). *IPA-Based Transcription for Czech Students of English*. Praha: Carolinum.
- Weinreich, U. (1953) *Languages in Contact*. The Hague, Paris, New York: Mouton Publishers.
- Weinreich, U. (1957) On the Description of Phonic Interference. *WORD*, 13:1, 1–11. DOI: 10.1080/00437956.1957.11659624
- Wells, J.C. (1982) *Accents of English*. Cambridge: Cambridge University Press.
- Yuan, J. & Liberman, M. (2008). Speaker identification on the SCOTUS corpus. *Journal of the Acoustical Society of America*, 123, 3878.

Shrnutí

Cílem této bakalářské práce je analýza způsobů vázání slov v anglické spojitě řeči francouzských rodilých mluvčích. Teoretická část práce zahrnuje úvod do problematiky osvojování fonologie cizího jazyka, popis způsobů vázání slov rodilých mluvčích angličtiny a francouzštiny v jejich mateřských jazycích, a na závěr představujeme přehled dosavadních studií, které se věnují právě vázání francouzských rodilých mluvčích v angličtině. Praktická část se zabývá analýzou 19 nahrávek.

Ve spojitě řeči dochází k různým fonetickým změnám, např. v důsledku interakce jednotlivých sousedících hlásek (koartikulace, asimilace, vázání) nebo např. vlivem pozice větného přízvuku a tempa řeči (redukce, elize).

Koartikulace je vliv výslovnosti jedné hlásky buď na hlásku předchozí – regresivní asimilace, nebo na hlásku následující – progresivní asimilace. Toto je dáno především fyziologickými charakteristikami artikulačních orgánů, jejichž pozice nejsme schopni měnit dostatečně rychle. K regresivní koartikulaci dochází např. ve slově *cool* /ku:l/. Při vyslovování konsonantu /k/ již zaokrouhlujeme rty pro vyslovení následujícího vokálu /u:/ a proto dochází k labializaci konsonantu [k], který je ve výsledku vysloven následujícím způsobem: [k^w].

Asimilace zahrnuje změny místa a způsobu artikulace nebo spodobu znělosti konsonantů. Opět rozlišujeme progresivní a regresivní asimilaci – jako příklad progresivní asimilace uvedeme spodobu znělosti znělého konsonantu [z] vlivem předcházejícího neznělého konsonantu [t] ve *what is it?* [wɒt ɪz ɪt] ‘co je to?’, [wɒt s ɪt]). Příkladem regresivní asimilace může být např. asimilace místa artikulace vlivem následujícího konsonantu [j] ze [s] v příkladu *this year* [ðɪs jɪə] na [ʃ] [ðɪʃ jɪə] ‘tento rok’).

Ve spojitě řeči dále dochází k redukci vokálů v nepřízvučných pozicích – např. sloveso *have* ‘mít’ má v přízvukných pozicích výslovnostní formu [hæv], v nepřízvučných formu [(h)əv].

K elizi, tedy vypuštění hlásky, dochází také vlivem pozice přízvuku nebo vlivem nedůsledné a rychlé artikulace – *and* ‚a‘ je v přízvukných pozicích vyslovováno jako [ænd] – v nepřízvučných jako [ən] [nd] [ŋ].

Vázání je dalším jevem spojitě řeči. K vázání dochází na hranici dvou slov, kdy druhé slovo začíná vokálem. Ve spojitě řeči existují dva protichůdné principy: vázání a glotalizace. Vázáním připojíme slovo s počátečním vokálem ke slovu předchozímu, což je typické právě pro angličtinu a francouzštinu. Glotalizací naopak oddělíme slova od sebe pomocí rázu – neznělé glotální plozivy. Glotalizace je charakteristická pro češtinu nebo němčinu, je však používána i v angličtině a francouzštině, ale je podmíněna různými segmentálními, lexikálními, prozodickými a sociolingvistickými faktory.

Nejprve detailněji popíšeme způsoby vázání slov v angličtině. Pokud slovu s počátečním vokálem předchází slovo s koncovým konsonantem, dojde k pseudo-resylabifikaci, tedy k posunutí slabikových hranic na fonologické úrovni, a to tak, že koncový konsonant prvního slova je připojen k počátečnímu vokálu následujícího slova, a zformují novou slabiku – *ten* [ten] *apples* [æ.p|z] – *ten apples* [te.næ.p|z] ,deset jablek‘.

Pokud předcházející slovo končí na vokál, dochází k jemnému přechodu mezi vokály. Po vysokých předních vokálech [i:] [ɪ] a diftonzích [aɪ] [eɪ] [ɔɪ] dochází k přechodu pomocí [j] (*transient* [j]) – *my apple* [maɪ(j)æ.p|] ,mé jablko‘. Po vysokých zadních vokálech [u:] [ʊ] a diftonzích [əʊ] [aʊ] nastává přechod pomocí [w] (*transient* [w]) – *two apples* [tu:(w)æ.p|z] ,dvě jablka‘. Nejedná se však vložení konsonantů [j] a [w], nýbrž o změnu polohy jazyky, který se během této přeměny vyskytne v poloze [j] a [w] a tak dojde k jejich vyslovení.

Následující dva typy vázání jsou charakteristické pouze pro nerotické akcenty angličtiny. V těchto akcentech je [r] vyslovováno pouze před vokály – *dry* [draɪ] ,suchý‘, *tree* [tri:] ,strom‘, a před konsonanty nebo před pauzou zůstává [r] nevyslovené – *party* [pa:ti] ,večírek‘, *poor* [pɔ:] ,chudý‘. Podobná pravidla platí i pro [r] na konci slov. Pokud po něm následuje pauza nebo slovo začínající konsonantem, zůstává nevyslovené. Je-li však koncové [r] následováno slovem s počátečním vokálem, je vysloveno jako prostředek vázání – *poor infant* [pɔ:rɪnfənt] ,chudé dítě‘, *sore eyes* [sɔ:raɪz] ,bolavé oči‘.

Další typ anglického vázání, vkladné [r] (*intrusive* [r]), vznikl pravděpodobně analogickým rozšířením vázacího [r]. Konsonant [r] se v angličtině vyskytuje po vokálech [ə] [ɔ:] [ɑ:] [ɜ:] a diftonzích [ɪə] [eə] [ʊə]. Následně pak začali mluvčí některých akcentů nerotické angličtiny používat konsonant [r] jako prostředek vázání po všech zmíněných vokálech a diftonzích, a to právě v případech, kdy se koncové [r] ve slovech nevyskytuje a není nijak etymologicky odůvodnitelné jako např. v *India is* [ɪn.dɪə.rɪz] ,Indie je‘, *vanilla ice* [və.'nɪ.lə.raɪs] ,vanilková zmrzlina‘.

V určitých dialektech americké angličtiny dochází k vázání pomocí konsonantu [l] (*linking* [l]) anebo k vkládání neetymologického konsonantu [r] (*intrusive* [l]), které se vkládá mezi slova končící na vokály [ɔ] [ɑ] [ə] a následující slova začínající na vokál – např. *paw is*. Jedná se však pouze o okrajový fenomén charakteristický pro dialekty na severu Spojených států, např. v Pensylvánii, Filadelfii, Ohiu a dalších.

Ve francouzštině, stejně jako v angličtině převažuje vázání nad glotalizací. *Enchaînement* neboli pseudo-resylabifikace je taktéž založeno na připojení koncového konsonantu prvního slova k počátečnímu vokálu druhého slova, kteří spolu zformují novou slabiku. Ve slovech *pour*

[puʁ] a *Olivia* [ɔ.liv.ja] tak koncové [ʁ] s následujícím [ɔ] vytvoří novou slabiku: *pour Olivia* [pu.ʁɔ.liv.ja] ‚pro Olivii‘.

Ve francouzštině však většina koncových konsonantů existuje jako latentní konsonanty a vyslovují se pouze v případě, že po nich následuje slovo s počátečním vokálem, ale ani tehdy to není nezbytné. Tento způsob vázání se nazývá *liaison* a oproti *enchaînement* tedy zahrnuje dva procesy: vyslovení latentního konsonantu a pseudo-resylabifikaci.

Pokud však *liaison* zahrnuje i vyslovení latentního konsonantu [n], který ve výslovnosti izolovaných slov ústí v nazalizaci předchozího vokálu, dojde k jeho *denazalizaci*, pokud se jedná o modifikátor, pokud se však jedná o determinátor, např. *mon* ‚můj‘, *ton* ‚tvůj‘ k *denazalizaci* nedochází.

V případě určitých členů *le*, *la*, zájmen *me*, *je*, *te*, *se*, *ce*, částice *ne* a spojek *que* a *de* dochází k *elizi* vokálu před vokalickým počátkem slov. Tento proces je reflektován i v písmu a to staženým tvarem: např. *le* [lə] + *amour* [amuʁ] – *l'amour* [lamuʁ] ‚láška‘.

Dalším způsobem, jak zabránit výskytu dvou sousedících vokálů, jsou supletivní tvary některých adjektiv a zájmen. Ta mají kromě mužského a ženského tvaru i supletivní tvar, který se používá právě před slovy s vokalickým začátkem. V případě substantiv ženského rodu s vokalickým začátkem se tak používá supletivní tvar, který má tvar mužského přivlastňovacího zájmena: *mon orange* [mɔ̃.nɔ̃.ʁɑ̃ʒ] ‚můj pomeranč‘.

Předmětem této práce jsou způsoby vázání francouzských rodilých mluvčích v angličtině. Studie na toto téma nejsou rozsáhlé a z velké části se zaměřují pouze na vynechávání počátečního [h] v angličtině, které je ve francouzštině němé, a naopak jeho vkládání na vokalické začátky slov. Z dosavadních studií vyplývá, že vkládání [h] je ovlivněno předcházejícím segmentem. Pokud slovu s počátečním vokálem předchází vokál nebo pauza, je mnohem pravděpodobnější, že francouzský rodilý mluvčí na začátek slova vloží [h], než kdyby slovu předcházel koncový konsonant. Dalším faktorem je i formálnost diskurzu: [h] je častěji vkládáno ve formálních nebo čtených projevech na rozdíl od neformálních projevů (John, 2006: 23). Podle Picarda (1987:67) je vkládání [h] na počátky slov potom spíše charakteristické pro mluvčí, kteří již ovládli správnou výslovnost počátečního [h] a před další slova jej vkládají tedy z hyperkorekčních důvodů.

Na základě poznatků o francouzském vázání a o tendencích vázání Francouzů v angličtině jsme formulovali dvě hypotézy:

H1: U francouzských rodilých mluvčích bude v angličtině převažovat vázání nad glotalizací, stejně jak tomu je ve francouzštině.

H2: Francouzští rodilí mluvčí budou v angličtině vynechávat konsonant [h] na počátcích slov, a naopak jej budou vkládat na vokální počátky slov jako prostředek vázání.

V experimentální části práce jsme analyzovali 19 anglických projevů rodilých mluvčích francouzštiny, z toho 8 žen a 11 mužů. Každá nahrávka sestávala ze tří částí, a to improvizované konverzace, čtení předem připraveného textu *The North Wind and the Sun* a dvanácti jednotlivých vět. Následně jsme nahrávky analyzovali pomocí softwaru Praat. Celkový počet analyzovaných slov s vokálním začátkem byl 2476, z toho 1182 z konverzací, 875 z frází a 419 z textů.

Poměr vázání a glotalizace v celkovém vzorku tvoří 1783 (71,65 %) případů svázání s předchozím slovem a 702 (28,35 %) glotalizací vokálního začátku slov, přičemž procentuální tendence vázání byla ve všech třech jednotlivých částech srovnatelná.

Věk a pohlaví hrálo v poměru vázání a glotalizace jen malou roli. Ženy glotalizovaly o 6,43 % více než muži, ženy tedy v 32,20 % případů a muži v 25,77 %. Z věkových kategorií byl největší podíl glotalizace u mluvčích mezi 32 a 44 roky, a to 33,12 % u mluvčích mezi lety 26–31 byl podíl glotalizace 27,74 %, a nejnižší byl u mluvčích ve věku 18–25 let, a to 24,79 %.

Přesto se však mezi jednotlivými mluvčími objevily velké individuální rozdíly.

Vynechávání počátečního [h] bylo relativně častým jevem, prokázalo se u 14 mluvčích z 19, a to celkem 106krát. V 85,85 % došlo k vynechání počátečního [h] u zájmen *he, him, his* a sloves *have, has, had*. Naopak vkládání [h] na vokální počátky slov bylo spíše jevem okrajovým, vyskytl se pouze 24krát, z čehož bylo 16 výskytů jen u jednoho mluvčího. Tento fenomén tedy nelze označit za charakteristiku angličtiny francouzských rodilých mluvčích, ale spíše za specifikum idiolektu daného mluvčího.

Výsledky našeho výzkumu tedy potvrdily první hypotézu, že Francouzští rodilí mluvčí budou mít spíše tendenci slova s vokálním počátkem vázat než glotalizovat. Druhá hypotéza byla částečně vyvrácena. Potvrdilo se, že francouzští mluvčí často nevyslovují počáteční [h], které je ve francouzštině němé. Bylo však vyvráceno tvrzení, že následně [h] vkládají na vokální počátky slov, kde není morfologicky ani etymologicky doložitelné. Tento jev se vyskytl pouze u jedné čtvrtiny mluvčích, a to pouze ve velmi malé míře.

V praktické části jsme také zodpověděli čtyři výzkumné otázky. Prokázalo se, že předcházející segment nemá vliv na vkládání [h] na vokální počátky slov a vyskytuje se jak za koncovým konsonantem předchozího slova, tak i za vokálem. Dále jsme zjistili, že nejčastější výskyt glotalizace byl ve čteném textu, rozdíly mezi jednotlivými částmi byly však velmi nízké. Postavení přízvuku ve víceslabičných slovech má však vysoký vliv na glotalizaci. Ze slov s hlavním přízvukem na první slabice bylo glotalizováno 48,85 %, u slov s hlavním

přízvukem na druhé slabice se glotalizace vyskytla pouze v 28,31 % případů. Pohlaví mělo na poměr vázání a glotalizace již menší vliv. Ženy glotalizovaly jen o 6,43 % více než muži. Úroveň angličtiny ani délka pobytu v anglofonní zemi neprokázala žádný vliv na vázání v angličtině. Mluvčí, kteří měli však pokročilou znalost dalšího jazyka, neměli sklon k vynechávání počátečního [h] nebo naopak jeho vkládání na počátky slov.

Appendix

Text

The North Wind and the Sun

The North Wind and the Sun were disputing which was the stronger when a traveller came along wrapped in a warm cloak they agreed that the one who first succeeded in making the traveller take his cloak off should be considered stronger than the other then the North Wind blew as hard as he could but the more he blew the more closely did the traveller fold his cloak around him and at last the North Wind gave up the attempt Then the Sun shone out warmly and immediately the traveller took off his cloak and so the North Wind was obliged to confess that the Sun was the stronger of the two.

Phrases

- 1) As far as I am concerned
- 2) May I ask you for a favour?
- 3) I live in an old apartment.
- 4) Law and Order is an American television series.
- 5) How does a car engine work?
- 6) There are a lot of animals.
- 7) Impressionism was an art movement in France at the end of the 19th century.
- 8) What are you up to on Friday?
- 9) What is as big as an elephant, but weighs nothing at all?
- 10) What is always coming but never arrives?
- 11) Better an oops than what if.
- 12) Is there a reason behind the ordering of letters in the English alphabet?