Filozofická fakulta Univerzity Palackého

The impact of speech tempo on assimilation of place in non-native English

(bakalářská práce)

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V Olomouci dne 5.5. 2016 **Markéta Levá**

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Abstract

The assimilation of place in Czech and in English has different distribution. Whereas in English it is common phenomenon which occurs both in standard and colloquial speech, in Czech the place assimilation is in standard speech restricted to only some cases.

The present experiment examines the influence of speech tempo on assimilation of place in speech of Czech high proficiency learners of English. Further on, this experiment aims towards showing that non-native high-proficiency learners are able to produce assimilation of place even if the phenomenon does not exist in their native language. The experiment was carried out in two groups. The first group of native speakers was recorded for existence of place assimilation in their speech. The second group of high proficiency learners was recorded to confirm the hypotheses that high-proficiency learners are able to produce correctly assimilated speech. It was observed that the speech tempo has a significant impact on production of place assimilation. Further on, the results have shown that non-native speakers of English are able to produce correctly assimilated speech.

Key words

Phonetics, Assimilation of Place, Non-native speakers, Speech production, English, Czech

Anotace

Distribuce asimilace místa v češtině a v angličtině se značně liší. Zatímco v angličtině je tento jev poměrně běžný, jak v spisovné mluvě tak v kolokviální, ve spisovné češtině je omezen pouze na omezený počet případů.

Tento experiment se zabývá vlivem řečového tempa na asimilaci místa v řeči studentů angličtiny na vysoké úrovní jazyka. Dále se také v tomto experimentu snažíme dokázat, že nerodilí mluvčí jsou schopni produkovat asimilovanou řeč i přesto, že se tento jev v jejich rodném jazyce příliš nevyskytuje. Tento experiment byl rozdělen na dvě skupiny. První skupina obsahovala rodilé mluvčí angličtiny, jejichž řeč byla nahrána za účelem zjištění, zdali produkují asimilaci místa. Druhá skupina se skládala ze studentů angličtiny a cílem bylo zjistit, zdali jsou schopni produkce asimilace místa v daných podmínkách. Bylo zpozorováno, že řečové tempo má významný vliv na produkci asimilace místa. Dále pak výsledky ukázaly, že nerodilí mluvčí jsou schopni produkovat asimilaci místa.

Klíčová slova

Fonetika, asimilace místa, nerodilí mluvčí, produkce řeči, angličtina, čeština

Obsah

1 Introduction

This thesis focuses on the assimilation of place in the speech of high proficiency Czech learners of English. The main aim is to analyse their English speech production in order to discover whether the Czech learners are able to produce correctly assimilated speech.

Assimilation is a process when 'one segment becomes more like (or identical to) another (or two become more like each other) ' (Las 1984, 171). According to Ladefoged' the most common cause of the assimilations in English is the anticipatory co-articulation' (2010, 111). Using the assimilation can save the speaker time in the way that it enables the speaker to communicate the same idea using less effort and thus being more efficient (Ladefoged 2010). Assimilation is a regular phenomenon emerging in the speech of both British and American speakers (Ladefoged 2010). Thus if the non-native speakers of English do not want to sound unnatural and stilted, they should learn to use the assimilation.

Although the assimilation is commonly used in English, in Czech it is not as frequent. According to Krčmová there are only a few cases of assimilation of place in standard Czech and they are realized within just a few words. The most common words where the assimilation of place occurs in Czech are words such as *maminka* 'mommy' or *tango* 'tango' where there is the alveolar /n/ before the velar /k/ or /g/, in such words the sound /n/ changes its articulation from an alveolar /n/ to the velar /ŋ/ because of the influence of the neighbouring sound /k/ or /g/ which are both velars (Krčmová 2005).

The aim of this thesis will also be to test whether Czech learners are able to learn a phonological rule such as as assimilation of place when they do not have the same feature in their native language or whether they use place assimilations only in a restricted number of words.

Firstly, some general assumptions and findings about the assimilation of place in English and in Czech will be reviewed. Secondly, the methodology of data collection will be described, further we will provide a discussion on given results. Eight high proficiency Czech learners of English will be chosen. The subjects will be people who either study English in the bachelor or the master program or they spent at least 1 month in English-speaking country and actively used the language. Their task will be to produce the sentences they will be presented. The sentences,

created with respect to place assimilation, will be first recorded by 2 native speakers of English in order to test the occurrence of the place assimilation in native speech. Next, the analysis of subjects' speech will be described and results will be discussed.

2 Theory

2.1 Assimilation in English

Assimilation is said to be ‘an optional process consisting of one segment exercising a modifying influence on the articulatory or phonatory characteristics of another segment across a word-boundary, or across the boundary between the components of a compound word’ (Laver 1994, 382). For example, in colloquial speech assimilation is when /t/ becomes /k/ in *fat cat* because the articulation of the first velar /k/ in *cat* influences the articulation of the final alveolar /t/ in *fat*, thus it becomes assimilated. The place assimilation is connected with simplification of speech as Hayes states in his *Phonetically based Phonology* : ‘(the assimilation) appears to be triggered by demands of articulatory simplification’ (2004, 5). This argument is also mentioned by Clark who states that ‘assimilation often appears to be motivated by ease of articulation, but what seems easy and natural in one language often turns out to be less so in another’ (1995, 91). However, whether it is easier or not ‘has to be assessed within the constraints of differing languages, each with its own system and structure (Clark 1995, 91). Giegerich even argues that assimilation illustrates ‘even the breakdown of the phonological structure found in citation form’ (1992, 289). Thus sometimes assimilation simplifies the pronunciation but it is not necessarily because of the laziness of the speaker and it also depends on the given language.

The assimilation of place is mostly optional, not an obligatory phonological process. However, ‘assimilations which are internal to compound words tend over time to become fixed patterns, and lose their optionality’ (Laver 1995, 384). Laver gives an example of the compound *orchad* which is now assimilated but it did not used to be; it has ‘lost the signs of its historical origin as *ort* + *yard*, with the earlier sequence /-t/ + /j-/ coalescing to the modern /-tʃ-/, in the RP pronunciation [ɔtʃəd]’ (1994, 384).

Whether the assimilation is realized or not depends on several factors. One of the factors is the identity of the assimilating sound, about which Roach mentions that assimilation ‘is most clearly observable in some cases where final consonant with alveolar place of articulation is followed by an initial consonant with a place of articulation that is not alveolar’ (1991, 124).

The other factors would be non-linguistic such as speech rate or style and Giegerich claims that an 'informal speech displays assimilation to a far greater extent than slow and careful speech does' (1992, 214-215). Despite the fact that assimilation occurs frequently, native speakers are unaware of producing it and they even do not notice hearing assimilations.

2.1.1 Types of assimilation

There are several types of assimilation. It may be partial or total. For example, in the phrase *clean bed* the pronunciation of the whole phrase would be /klim bed/ because the alveolar /n/ in *clean* was influenced by the following bilabial /b/ in *bed*, and thus it became also bilabial /m/. In this case the assimilation would be partial.

The total or complete assimilation would be audible in the phrase *in the* or *on the* which would be pronounced as / in nə/ and /on nə/ thus the alveolar /n/ would change to be identical with the labiodental /ð/. However, according to Gimson 'electropalatographic research shows that phonemic assimilations of place are rarely complete' (2001, 285). Thus we are more likely to come across with the partial assimilation rather than complete assimilation.

Another classification is 'according to whether the segments involved are in contact or separated by others' (Lass 1984, 171). It can be either contiguous which is also called contact assimilation or non-contiguous which can be also called distance assimilation. Contiguous assimilation is when the articulation of one sound is influenced by the articulation of the preceding sound or the following sound like above in the example *clean mat*.

The distance assimilation can be seen in the example given by Crystal; '*turn up trumps*, where the /-n/ of *turn* may be articulated as /-m/ under the influence of later sounds' (2008, 40) which means that the alveolar /-n/ in *turn* is influenced by the bilabial /p/ in *up*. Distance assimilation may also occur in 'languages displaying vowel harmony, where a vowel in one part of a word may influence other vowels to be articulated similarly, even though there may be other sounds between them' (Crystal 2008, 40).

Next classification would be on the basis of the direction of the assimilation. It can be regressive, progressive or reciprocal. The regressive assimilation is for example in the phrase *clean bed* where the articulation of /n/ is influenced by the following sound /b/ and thus it changes into /m/. According to Crystal, 'this is particularly the most common in English in alveolar consonants in word- final position' (2008, 40) and according to Gimson the alveolars such as /t, d, n, s, z/ 'assimilate to the place of the following word-initial consonant whilst retaining the original voicing' (2001, 285). Thus if /t, d, n/ stand before the bilabial consonants they assimilate to the bilabial place of articulation and if they they stand before the velar consonants they change into velars as we can see in the example (1). If they stand before velar consonants they change into velars (2) and '/s, z/ are replaced by palato-alveolars before consonants containing a palatal feature' (Gimson 2001, 285).

(1)

/t/ changes into /p/ before /p,b,m/ : *that pen, that beauty, that* man [ðæp pʰen, ðæp ˈbjuːtɪ, ðæp mæn]

/t/ changes into /k/ before /k,g/ : *fat cat, fat guy* [fæk kʰæt, fæk gaɪ]

/d/ changes into /b/ before /p,b,m/ : *red pen, red bird, red man* [reb 'pʰen, reb bɜːd, reb mæn]

(2)

/d/ changes into /g/ before /k,g/ : *sad car, sad guy* [sæg kʰɑː, sæg gaɪ]

/n/ changes into /m/ before /p,b,m/: *thin priest, thin bird, thin man* [θɪm priːst, θɪm bɜːd, θɪm mæn]

/n/ changes into /ŋ/ before /k,g/: *clean car, clean guy* [kliŋ kʰɑː , kliŋ gaɪ]

However according to Gimson 'assimilations between alveolars and between labials and velars are generally felt to be substandard in RP, although they might sometimes be heard in fast speech e.g. *same night* /seɪn naɪt/ or *King Charles* /kɪn tʃɑːlz/' (2001, 285). Also the assimilations 'involving fricatives are generally felt to be substandard in RP although /θ, ð/ may assimilate to /s,z/ in fast speech, e.g. *I*

loathe singing /aɪ ləʊz sɪŋɪŋ/, *What's the time?* /wɒts zə ˈtaɪm/' (Gimson 2001, 286). As we can note, many assimilations are connected with the speech tempo.
Assimilation can be also progressive where one sound is changed by the influence of the sound which precedes it. Nonetheless according to both Crystal and Gimson this type of assimilation is not much common. However, Gimson argues that 'it may occur when a plosive is followed by a syllabic nasal and the nasal undergoes assimilation to the same place of articulation as the preceding plosive' (3) (2001, 286)

(3)

/n/ changes to /m/ after /p,b/: happen , urban /hæpm, ˈɜːbm/;
/n/ changes to /ŋ/ after /k,g/ : second chance, organ as /sekŋ tʃɑːns, ˈɔːgŋ/

(Gimson 2001, 286)

Reciprocal assimilation which is also called coalescence is 'the case when both segments change their characteristics, under their mutual influence across the word boundary' (Laver 1994, 383). This is when 'in an earlier form of English, words such as *nation, station* contained [s], so that they were pronounced /ˈnasion/ and /ˈstasion/' (Ladefoged 2010, 284). Furthermore, Gimson mentions that 'in very careful speech, some RP speakers may use somewhat artificial, un-coalesced, forms within words in words like *nature, question, unfortunate, soldier* /ˈneɪtjə, ˈkwestjən, ʌnˈfɔːtjʊnət, ˈsəʊldjə/' (2001, 286).
Nowadays it may 'operate in contemporary colloquial speech at word boundaries' (Gimson 2001, 236) as we can see in example (4). This type of assimilation is most common in the phrases containing an auxiliary and a personal pronoun and they can be found also in very formal conversations (Gimson 2001). Furthermore, we can come across the coalescence also in the phrase *this year* which would be pronounced as [ðɪʃ ɪə] where the 'normal voiced palatal approximant [j] in *year* would be replaces by a voiceless alveolar fricative [s] in *this* being replaced by a voiceless palate-alveolar fricative [ʃ]' (Laver 1994, 384).

(4)

/t/ and /j/ - *What you want* /wɒtʃuː ˈwɒnt/

/d/ and /j/ - *Would you?* /ˈwʊdʒuː/

/s/ and /j/ - *In case you need it* /iŋ keɪʃuː niːd ɪt/

/z/ and /j/ - *Has your letter come?* /hæʒɔ ˈletə kʌm/

(Gimson 2001,286)

Assimilation may also pose some problems. It may cause neutralization in connected speech, which means that under the influence of assimilation some words or phrases may become ambiguous like in '/ræŋ ˈkwɪklɪ/ (*ran* or *rang quickly*), /raɪp ˈpeəs/ (*right* or *ripe pears* or *pairs*)' (Gimson 2001, 281). Such neutralizations could cause problem form many non-native speakers and listeners.

2.1.2 The occurrence of place assimilation in English

According to Gimson 'unassimilated forms occur more often than assimilated forms which tend to increase in frequency in the more casual style of speech, regardless of pace' (2001, 294). He also states that the assimilation of place does not occur more often in fast speech but it occurs more often in more colloquial speech in English. Gimson even provides several examples to prove that 'the fact that rate of utterance has no direct effect on the use of assimilation may be illustrated by examples taken from conversation of a single speaker who has /dʒʌʃ ˈʃʌtɪŋ/ for *just shutting* (also exhibition of alision of /t/) when speaking at medium pace in comparatively formal situation, but /ˈhɔːs ʃəʊ/ for *horse show* when speaking very rapidly in casual situation' (2001, 294). As far as the type of place assimilation and their occurrence is concerned, the palato-alveolar assimilations and bilabial assimilations are not as common as the velar assimilations which is the most common one.

2.1.3 Assimilation and the foreign learner

We can assume that a high proficiency learner will be able to produce in most cases correctly assimilated speech some of them being caused by the two sounds being articulated together (Gimson 2001). Thus it is quite important for the foreign learner to learn the place of assimilation. However, the learner should not shift the assimilatory habits from his own language system while aiming to acquire English because the two systems could be different and thus applying another assimilatory habits into English would result in sounding unnatural (Gimson 2001), in other words, the foreign learner should not impose his own assimilatory habits into spoken English. It is even more important for the non-native learner of English to be able to decode and understand the speech of an English native speaker than producing it (Gimson 2001). Nevertheless, the native speaker does not know that he is doing such alternations or reduction as assimilation, the non-native learner 'must spend a considerable amount of time listening to normal colloquial English in order to acquire skill in identifying information points in utterance' (Gimson 2001, 306).

2.2 Place Assimilation in Czech

The most common type of assimilation in Czech is voice assimilation. The assimilation of place is less regular and it exists in standard speech only in a restricted number of cases. As well as in English, assimilation in the speech of Czech native speakers is unconscious.

2.2.1 Place Assimilation Across the word boundaries

Unlike in English the place assimilation in standard Czech occurs only inside of the word. In standard speech it does not occur across the word boundaries and neither it occurs between the prepositions and nouns nor it occurs between the prefix and the word stem (Krčmová 2005, 5). Nevertheless, we can find some examples of assimilation across the word boundaries in non-standard speech. Šimáčková mentions that 'across the word boundary the assimilation of place is optional, e.g. *ten kout* [tɛŋ kout] ~ [tɛn kout] 'the corner' (Šimáčková 2012, 227).

The fact that assimilation of place in Czech can occur across the word boundaries further mentions Romportl who states that it occurs especially in dialectal speech when the labiodental /f/ or /v/ is preceded by alveolar /n/. The alveolar /n/ changes into velar / ŋ / such as in *pan farář* 'the pastor' which is then pronounced as /paŋ farář/ (1954). However as far as the standard speech is concerned, according to Krčmová (2007) assimilation of place across the word boundaries as in the phrase *Pan Král* [paŋ kra:l] ' Mister King' is in Czech unacceptable. Thus we can assume that it can occur in the non-standard speech but in standard speech it would be considered inappropriate.

2.2.2 Place Assimilation in Standard and Non-standard Czech

Krčmová (2005,6) states that the place assimilation can be also found in limited amount of words which are standard and not colloquial. Most commonly the place of assimilation in Czech is caused by the co-occurrence of the alveolar /n/ and velar /g/, /k/ as we can see in example (5).
This particular type of place assimilation does not pose any problems for the native speakers of Czech (Krčmová 2005, 6).

(5)

/n/ changes into /ŋ/ before /k/ and /g/ as in / mamiŋka/ 'mother' or in /taŋgo/ 'tango'

Romportl further mentions that another type of assimilation which occurs both in standard and in non-standard speech is when the alveolar /n/ is followed by bilabial /b/ or /p/ where the alveolar /n/ changes into bilabial /m/. This type of assimilation appears in standard Czech only exceptionally and especially in loan words such as in Norimberk or Rožumberk where the assimilation of place is present even in the spelling (Romportl 1954) and can be found also in the pronunciation of the word Šternberk which is frequently pronounced as /štemberk/. Furthermore according to Krčmová (2007), in some words the assimilated pronunciation is established as in the words *bonbón* 'candy 'and *hanba* 'shame' which are pronounced as /boɱbón, haɱba/. However the assimilation in the words *klenba* 'vault', *honba* 'chase' which can be pronounced

as /klemba, homba/ can occur in some dialects but the change here is not standard in Czech and it does not belong to the cultivated speech (Krčmová 2007, 169). Though exceptional in standard speech, in the dialect of central Bohemia it is rather frequent in phrases such as *von byl* 'he was' which is pronounced as /vom bil/ or in *ten by nekoupil* 'he wouldn't buy it' pronounced as /vom bi nekoupil/ or in the western Bohemian dialect *ten byl* 'this one was' /tem bil/ (Romportl 1954) further on we can note that in the dialectal speech the place assimilation occurs also across the word boundaries as already mentioned above. As far as the assimilation in the context of /n/ and /p/ is concerned, it can be found in non-standard Czech, especially in Královehradecký dialect in words such as *ten podzemek* 'the flat in the basement' which is pronounced as /tem podzemek/ (Romport 1954).

Another assimilation occurs when the alveolar /n/ is followed by labiodental consonats /v/ or /f/. This assimilation of alveolar /n/ to velar /ŋ/ is frequent both in standard Czech and also in some dialects (especially in the dialect of Haná) and it occurs not only within the word boundaries but also across the word boundaries such as in *invalida* 'disabled person' *konve* 'watering cans' *pan farář* 'the priest' *konfekce* 'ready-to-wear clothes' which are pronounced as /iŋvalida, koŋve, paŋ farář, koŋfekce/ (Romportl, 1954).

As far as the assimilation of the bilabial /m/ is concerned, it is not as frequent as the assimilation of the alveolar /n/. The assimilation of bilabial /m/ which changes into labiodental /ɱ/ when followed by labiodental /f/ or /v/ like in the words *tramvaj* 'tram' or *nymfa* 'nymph' /traɱvaj/, /niɱfa/ occurs very rarely in standard Czech (Krčmová 2007, 169).

Further on the assimilation of /m/ which changes into /ŋ/ occurs in non-standard speech such as in Haná dialect where for example the word *semka* 'here' would be pronounced as /seŋka/ (Romportl 1954).

Another assimilation which is present in the non-standart speech is when the bilabial /m/ changes into alveolar /n/ under the influence of the following alveolar /t/ or /d/, this type occurs particularly in the dialect of Haná in phrases such as *mám to* 'I have it' or *já jsem tam chodil* 'I used to go there' pronounced as /mán to/ and / já sen tam chodil/ (Romportl 1954).

Next assimilation mentioned by Romportl, is in the numeral *sedm* 'seven' where the assimilation is progressive and the bilabial /m/ which is influenced by the

preceding alveolar /d/ is pronounced as alveolar /n/ /sedn/. He further states that this assimilation is frequent in the dialect of Haná and it is parallel to the the change of /m/ to /n/ when preceded by /s/ in the numeral *osm* 'eight' which is pronounced as /osn/ (Romportl 1954).

As Krčmová further mentions, the place assimilation causes softening or palatalization and which occurs within the alveolars /d,t,n/ when they precede /ď,ť,ň/ in the word such as in *anděl* 'angel', which can be pronounced also as /aňďel/ and /anděl/ or *jednička* 'number one' and /jeďňička/ or /jednička/ (Krčmová 2005, 6). This type of palatalization happens in standard language in the part between boundaries and it is facultative; it occurs more often in the Czech pronunciation rather than in Moravian (Krčmová 2007, 169). If there is a boundary between consonants it is necessary to pronounce them with no assimilation to distinguish the pre alveolar consonant and the palatal as we can see in /před ňimi/ 'in front of them' /podněcovat/ 'instigate' or /od dětí/ 'from the children' (Krčmová 2007, 169). According to Krčmová (2005, 6) assimilation of place across the word boundaries is considered as a mistake . Thus we can note that the distribution of place assimilation in Czech and in English differs a lot and it is crucial for the Czech learner of English to learn the assimilation of place across the word boundaries.

In dialectal speech we also come across the change of the palatal to the alveolar consonant and the palatal disappears from the pronunciation of the words *viďte* 'right', *odpusťte* 'forgive me' which are pronounced as /vite/ and /odpuste/, however this phenomenon is non-orthoepic (Krčmová 2007, 169).

There is also an assimilation of manner which is in many cases followed by the place assimilation however, most of these assimilations are beyond the boundaries of standard pronunciation (Krčmová 2007, 169). This type of assimilation is most likely to emerge in standard speech between closing and narrow alveolar consonants and as the result these consonants are pronounced with affricate such as in *dětský* 'children's' /ďecký/ or in *světský* 'secular' /svjecký/ or in *kratší* 'shorter' /kračí/. In some unique cases the change causes also change in the spelling such as in *děcko* 'kid' or *knížectví* 'principality' (Krčmová 2007, 169).

To sum it up, assimilation of place in Czech has different distribution than in English because it is not that common in Czech language as in English. In

dialectal speech it occurs in many words but in standard speech there are only limited number of cases where the assimilation of place is correct.

2.3 Assimilation as a Result of a Gestural Overlap

The fact whether the perceptual place assimilation is a result of gestural overlap or rather a gestural reduction has been part of many studies. As Son, Kochetov, & Pouplier mention 'gradient overlap, reduction, and blending of articulatory gestures – were hypothesized to obscure place of articulation information available in the acoustic signal and to cause listeners to perceive one of the consonants (C1) as having the same place of articulation as the following (C2) in C1C2 cluster' (2007). These authors investigated whether the place assimilation in Korean is a result of the gestural overlap or gestural reduction. According to them the gestural overlap plays a significant role in perceptual place assimilation (Son et al., 2007) this argument was supported by Chen (2003) and also Suprenant and Goldstein (1998). However, Jun (1996) claims that the place assimilation in Korean is a result only of the reduction of labials and not the gestural overlap.

Son et al concludes that 'place assimilation as a lexical process might, therefore, be potentially more likely to develop in languages with relatively higher degrees of overlap' (2007, 23). Thus in such language the place assimilation will most likely take place in 'clusters with relatively higher degrees of overlap, with greater perceptual consequences for some places of articulation than for others' (Son et al. 2007, 23).

Nevertheless, Chen (2003) claims that place assimilation is not caused by the speaker's attempt to make the pronouncing easier nor by her attempt to make the speech less difficult to perceive. It is more likely due to the fact that 'speakers try to imitate the gestural patterns of the members of their speech communities' (Chen 2003, 2821). She further mentions that speakers often 'engage in reduction when they hear others produce such reduction, but often this imitation target is in fact overlap, that sounds like reduction due to the acoustical interaction of the overlapping gesture' (Chen 2003, 2821). She also claims that these assimilations change diachronically – that over time such changes become extreme and they are further 'lexicalized of phonologized by speakers, resulting in changes in phonological representation' (Chen 2003, 2821). Thus we can propose that

subjects in our study who will be able to produce correctly assimilated sentences could be under the influence of the native speaker's stimuli and that they could only imitate it.

2.4 The Role of Compensation for Co-articulation in Perceiving the Place Assimilation

As we stated above, the assimilatory processes may pose some problems in word recognition especially when you are a foreign learner. In the minds of the native speakers of a language 'the word recognition system copes easily with the great variability in the spoken language' (Darcy, Peperkamp, & Dupoux, 2007, 2) however, there are some processes such as assimilation of place and assimilation of voicing that may make the process more difficult. Thus 'in order to recover from the change and active the right word representation, assimilation processes have to be compensated for by the word recognition system' (Darcy et al. 2007, 2).

Darcy et. al. (2007) deals in their paper with the compensation for an assimilation rule that is not present in the native language of her subjects. They tested British and American English learners of French and French learners of English whether they compensate more for the assimilation rule that is not present in their native language which is the place assimilation in French and the assimilation of voicing in English. They also tested whether the process of compensation depends on how long the subjects have been learning a given language. Whereas English has place assimilation across the word boundaries as stated in previous chapter, French has voicing assimilation which works also across the word boundaries, so it is different than in English. Thus these assimilations pose a problem for the learner of French or English as the second language and they 'have to be learned specifically for each language' (Darcy et al. 2007,3). The same situation applies to Czech and English because, as stated in the previous chapter, Czech has a different distribution of place assimilation than English thus we can assume that the Czech learners of English will also have problems with producing and decoding assimilated speech.

Using a word-detection task, Darcy et al. found that ‘when hearing their native language, listeners compensated more for the native process than for the non-native one’ (2007, 4). Thus the French native subjects compensated more for voicing assimilation than for the place assimilation and the same thing happened with the American English listeners. They also posed an important question and that is, whether and ‘to what extend are the adult learners able, when they are faced with a second language and a different phonological competence for purposes of processing L2, and in case they do learn, to what extend does this learning influence their L1- phonological knowledge’ (Darcy et al. 2007, 4).

In this paper I would like to examine whether Czech learners of English are able to process and produce a phonological phenomenon, which is not present in their native language. As Darcy suggests the phonological processes such as assimilation are very hard to acquire even if the learners ‘were exposed to the new phonological system early in life’ (2007, 4).

Darcy et al. also tested their subjects’ L2 proficiency and found out that the beginners applied their native language phonology in processing the second language but more advanced learners of French behaved ‘like the French native listeners who hear French’ (Darcy et al. 2007, 14). Thus they compensated more for the voicing assimilation which is not native for them and less for the place assimilation which exists in their native language. Darcy et al. stated that ‘compensation is adaptable to L2 processes, and this adaptation seems to be correlated to proficiency in that second language’ (2007, 14). When decoding the speech the subjects ‘continued to apply the appropriate pattern of assimilation when they were hearing their own native language’ (Darcy 2007, 24) thus the fact that they have learned to process the assimilation that is different in their own language did not change the processing of the assimilation in their native language . They also suggest that ‘within a few years of exposure to a second language, learners can build a separate system for the processes of L2, without modifying the L1 system, and are able to switch from one to the other depending on the language they are hearing’ (Darcy 2007, 25). There were some asymmetries between French learners of English and American learners of French in the case that ‘the progressive differentiation of the L2 system for French was not as complete as for American advanced learners’ (Darcy et al. 2007, 27) they did not show the increased ‘compensation for place to the extent that native English

listeners did' (2007, 27). One of the reasons that Darcy et al. give is that it may be easier for learners to adapt a phonological process which is already represented in their L1 even if it occurs only in limited cases than a process which does not exist in our L1 at all.

Thus we can assume that advanced Czech learners of English will be able to process the place assimilation in English and correctly decode it because the phenomenon already exists in their native language even though it has its limitations and it is not as widely used as in English. Since the most common assimilations in standard Czech are when alveolar /n/ or bilabial /m/ precede velars /k/ and /g/ we can suppose that these assimilations concerning these sounds and functioning similarly in English would be the most natural to Czech speakers and thus they will be able to produce the assimilation correctly. Nevertheless, the fact that in English the place assimilation happens mostly across the word boundaries whereas in Czech it never does, could cause difficulties in processing and producing the assimilations. Furthermore, we can also assume that even though the assimilation of alveolar /t/ or /d/ followed by palatal /j/ does not exist in Czech, the high proficiency learners will be able to produce it correctly because of all the cases of assimilation of place mentioned above this is the one which is the most salient.

3 Methodology

This experiment was concerned with the speech production. The main aim was to ascertain whether the high proficiency learners of English are able to produce correctly assimilated speech under the given conditions. Further on we wanted to examine what is the impact of the speech tempo on assimilation of place in the speech of high-proficiency learners of English.

3.1 Participants

The participants in this experiment were divided into two groups. The first group consisted of two native speakers of American English, one female and one male aged from 20 to 25 years. Both currently living in the Czech Republic and both teaching English at a language school. Both did not have any experience with linguistics and phonetics. This group was used to test whether the native speakers of English produce assimilated speech in given conditions in the experiment.

In the second group, there were eight Czech high proficiency learners of English. The criterion for this group was that they had to be either students of English in bachelor program or master program or that they spent at least 1 year in an English speaking country and actively used the language.

There were four males and four females. None reported any speech impairment. All the participant in the second group were students of English philology at the Faculty of Arts at Palacký University and they ranged from the 1st year of bachelor program to the 1st year of the master program. They ranged in age from 20 to 25 years. As far as the language proficiency is concerned, they all participated in at least one class of phonetics and four of them have their English at the level of B2 confirmed by the B2 exam and four of them have C1 certificate. All the participants were naïve of the purpose of this experiment and they did not receive any payment for their participation.

3.2 Stimuli

The stimuli for the group of native speakers consisted of 60 test sentences presented to the subjects in a power point presentation. All the sentences ranged from 3 to 5 phrases and contained the target sequences at the end of the sentence. The first group participants' task was to read the sentence three times with normal voice and as fluently as possible. They were recorded separately in a quiet room by Handy 4next Zoom recorder. All the sounds were edited and cut in Praat (vers.6.0.15., Boersma and Weeenik, 2016). The stimuli contained two words (target sequences) placed at the end of the sentence having these contexts:

1. Voiceless alveolar stop /t/ or voiced alveolar stop /d/ followed by voiced bilabial stop /p/, /b/, /m/
2. Voiceless alveolar stop /t/ or voiced alveolar stop /d/ followed by voiced palatal approximant /j/
3. Voiceless alveolar stop /t/ or n or voiced alveolar stop /d/ followed by voiced velar stop /g/ or voiceless velar stop /k/
4. Voiced alveolar nasal /n/ followed by voiced bilabial stop /p/, /b/, /m/
5. Voiced alveolar nasal /n/ followed by voiced palatal approximant /j/
6. Voiced alveolar nasal /n/ followed by voiced velar stop /g/ or voiceless velar stop /k/
7. Voiced palatal approximant /j/ followed either by voiced alveolar fricative /z/ or voiceless alveolar fricative /s/

All the stimuli can be found in Appendix.

Since both subjects in the first group were American, we predicted that target sequences containing /t/ in word final position could result in pronouncing it either as assimilated or as a glottal stop because as Ladefoged mentions in 'American casual speech, the final [t] in words like *cat* and *bat* can be ''glottalized''- replaced by glottal stop, or more usually pronounced as glottal stop (2010, 38).

The stimuli for the second group consisted of 72 test sentences where 52 of them contained the stimuli and 20 were used as distractors. Apart from the 7th point above (voiced palatal approximant /j/ followed either by voiced alveolar fricative /z/ or voiceless alveolar fricative /s/) the context for the stimuli remained the same as for the first group. The context with the voiced palatal approximant /j/ followed either by voiced alveolar fricative /z/ or s was eliminated because the control group did not show the assimilation in any of the cases. The participants in the

second group were asked to read the sentences presented by Praat (vers.6.0.15., Boersma and Weeenik, 2016) three times fluently in normal speech tempo and then three times as quickly as they can.

3.3 Data collection

All the participants in the second group were given a paper containing all the stimuli including the distractors in order to familiarize with the sentences in order to minimize the amount of mispronounced sequences. Each participant was recorded alone in soundproof room by Handy 4next Zoom recorder.

3.4 Analysis methodology

The data acquired from the participants were analysed using the combination of impressionistic analysis and acoustic analysis via Praat (vers.6.0.15., Boersma and Weeenik, 2016).

The data obtained from the native speaker's group contained the target sentence read 3 times and the one which was the most fluent was chosen for further analysis.

Firstly, the intention was to use the data from the group of the native speakers as stimuli for the experiment but since the native speakers group did not prove to produce assimilated speech in most target sequences we were not able to use it. The group of high proficiency learners was thus asked to read the stimuli, instead of hearing it from the native speakers and later on producing it. By using the stimuli read by the native speakers we wanted to avoid the non-native speakers to be influenced by the spelling, however we were not able to use the data in order not to influence the second group of the participants by unassimilated target sequences from the first group.

The participants in the second group were asked to read the sentences which they were presented via Praat presenter (vers.6.0.15., Boersma and Weeenik, 2016) 3 times loudly in normal speech tempo and then 3 times in fast speech tempo. They were instructed not to focus on the pronunciation and not to hyper-articulate. The target sentences including the distractors were presented to the subjects in random order.

Then the sentences which did not contain the target sequences were removed. From the sentences containing the target sequences the second sentence read in normal speech tempo was taken and from the sentences read in fast speech tempo we took the first correctly read sentence which means that it did not contain any mispronounced words or that it did not contain any pause between the target words. After obtaining the data, they were cut and further annotated using the Praat (vers.6.0.15., Boersma and Weeenik, 2016).

4 Results

4.1 The group of native speakers

The realizations of the target sequences by the two native speakers are summarized in Table 1. As is obvious from the table, the native speakers produced most of the target sequences without assimilation. As expected, there were cases such as in sequences *that pen, flat cap, fat cat* etc. in which a final alveolar voiceless stop /t/ was replaced by a glottal stop.

We further observed that instead of assimilating to the following sound, the final /t/ in *don't yell* was deleted, however as visible from Table 1 this occurred only in one case. Having these changes in the speech of native speakers we expect that the high proficiency learner's group will also produce similar alternations such as deletion and glottal replacement.

The female participant assimilated more than the male one. She produced assimilated speech in 9 cases out of 60 thus she assimilated only in 15% of the cases. The male subject assimilated only in 5 cases out of 60 thus in 8.3%.

	Assimilated	Non-assimilated	Glottalized	Deleted
NS (f)	9	44	6	1
NS (m)	5	45	10	0

Table 1: The number of the target sequences produced with assimilation, without assimilation, deletion or replaced by a glottal stop by the native speakers

4.2 The group of high-proficiency learners

To illustrate the difference between each participant in this experiment we will provide graphs showing the production of assimilated target sequences in normal speech tempo and in the fast speech tempo for each speaker separately.

Since there were 4 males marked as (m) and 4 females marked as (f) participating in our experiment, we will first provide the results for male participant and then for female participants aiming at finding the difference between male and female production of assimilation.

Firstly, as visible from Figure 1, the speaker 1 proved to produce correctly assimilated speech in normal speech tempo in 6% however in the fast speech tempo, he produced 4% of given target sequences with assimilation.

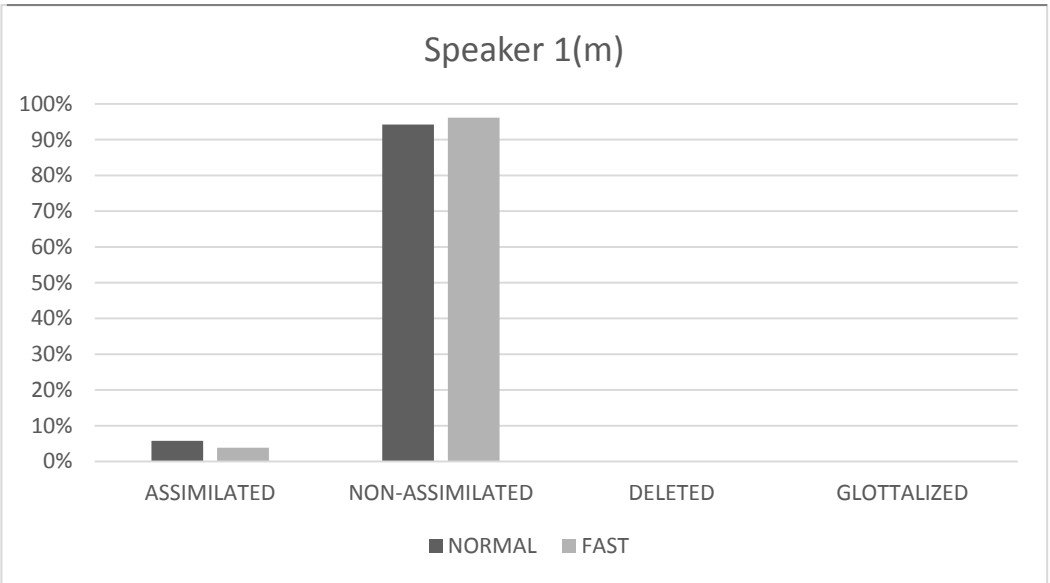

Figure 1: The percentage of assimilated, non-assimilated, deleted and glottalized target sequences produced by speaker 1(m) in normal speech tempo and fast speech tempo

The speaker 2 produced assimilation in the normal speech tempo in 4% of the target sequences and in the fast speech tempo in 21% as visible from Figure 2.

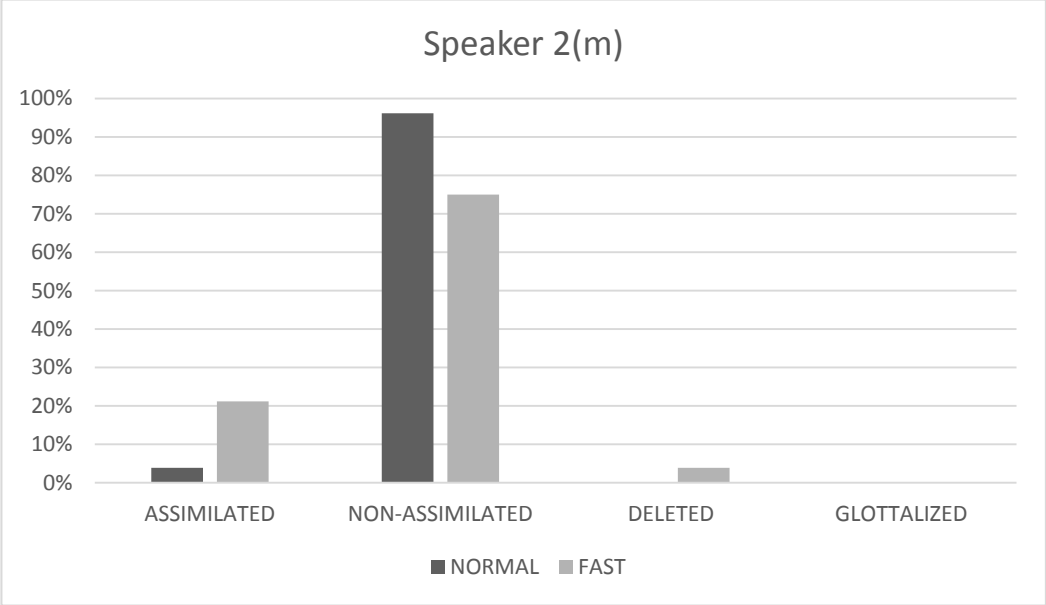

Figure 2: The percentage of assimilated, non-assimilated, deleted and glottalized target sequences produced by speaker 2(m) in normal speech tempo and fast speech tempo

Further on, the speaker 3 (m) produced correctly assimilated speech in 2% of the target sequences both in normal speech tempo and also in fast speech tempo and as visible from Figure 3 he also produced 4% of the target sequences with deletion in the slow speech tempo and 6% in the fast speech tempo.

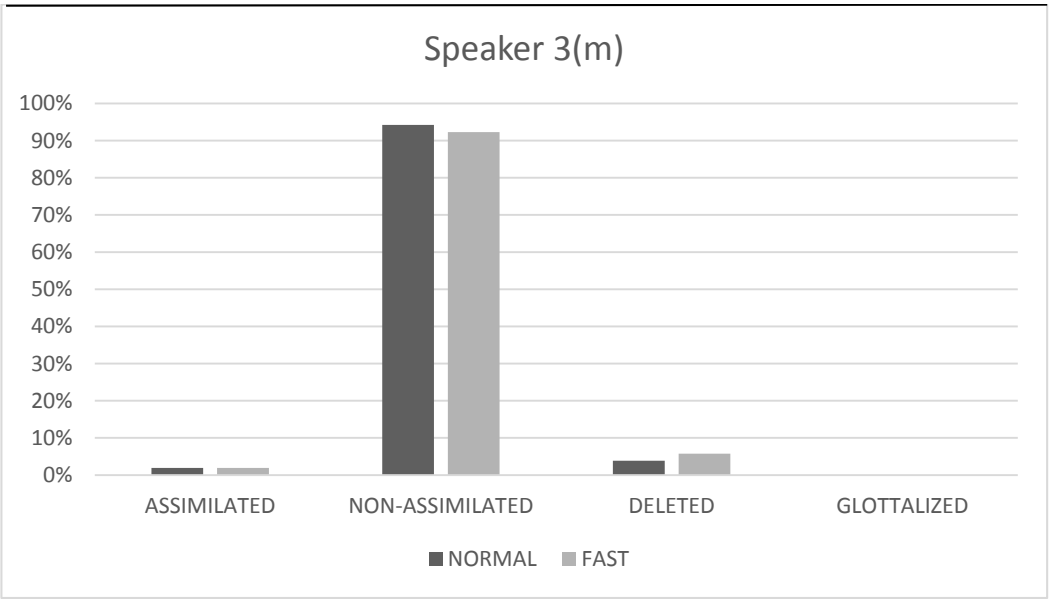

Figure 3: The percentage of assimilated, non-assimilated, deleted and glottalized target sequences produced by speaker 3(m) in normal speech tempo and fast speech tempo

The speaker 4 (m) produced 15% of the target sequences with assimilation in normal speech tempo and in fast speech tempo he produced 23% of target sequences as assimilated as visible in Figure 4. He also produced 10% of the target sequences with deletion in the normal speech tempo and 12% in the fast speech tempo.

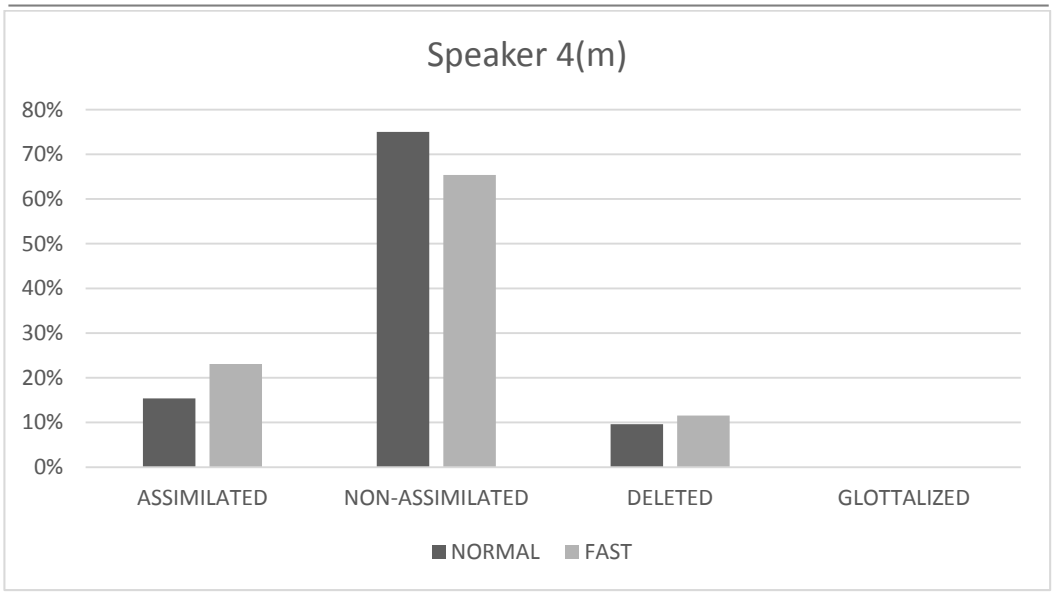

Figure 4: The percentage of assimilated, non-assimilated, deleted and glottalized target sequences produced by speaker 4(m) in normal speech tempo and fast speech tempo

The speaker 5(f) produced 8% of the target sequences with assimilation in normal speech tempo and 12% of the target sequences in the fast speech tempo (Figure 5) and she pronounced the target sequences with deletion in 2% both in slow speech tempo and fast speech tempo.

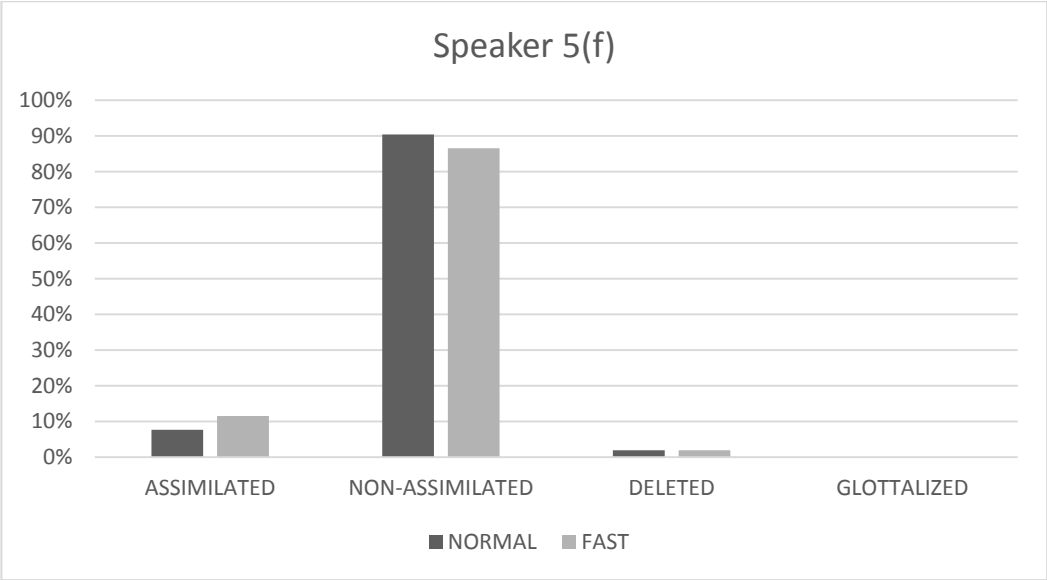

Figure 5: The percentage of assimilated, non-assimilated, deleted and glottalized target sequences produced by speaker 5(f) in normal speech tempo and fast speech tempo

As visible from Figure 6, the percentage of assimilation of target sequences produced by speaker 6(f) in fast speech tempo increased by 11% having pronounced 10% of the target sequences with assimilation in normal speech tempo. She proved to produce the target sequences with deletion in 4% in the fast speech tempo, whereas in the slow speech tempo she did not produce deletion at all.

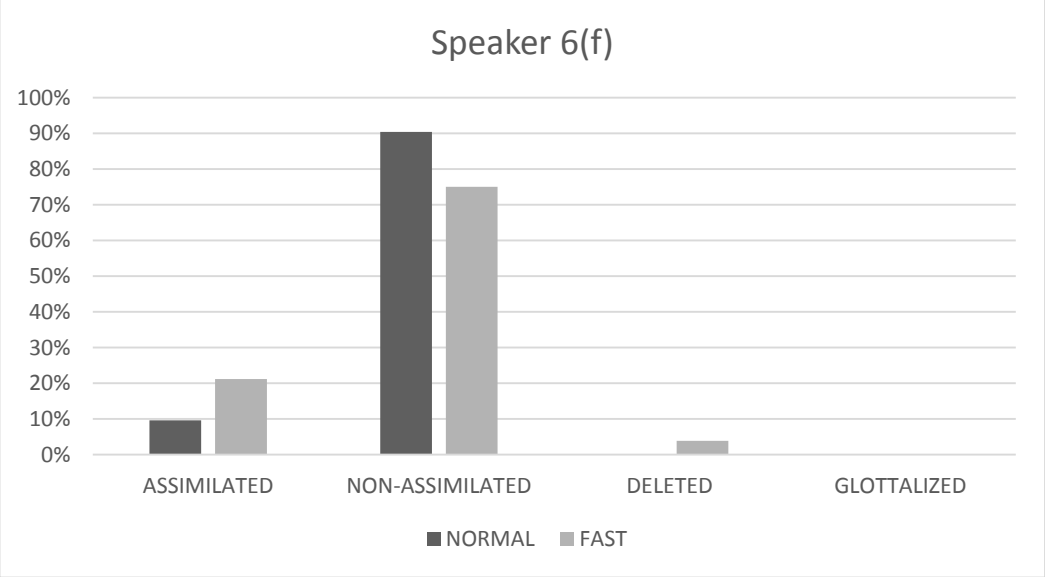

Figure 6: The percentage of assimilations produced by speaker 6(f) in normal speech tempo and fast speech tempo

We further observed that speaker 7(f) produced correctly assimilated speech in 27% cases in normal speech tempo and in 33% cases in fast speech tempo, producing the most assimilations from the whole group (Figure 7). She was also the only one participant in this experiment who produced some of the target sequences with glottal replacement, specifically in slow speech she produced 4% of the target sequences with a glottal stop in normal speech tempo and 2% in fast speech tempo. The production of deletion in the target sequences increased also in the fast speech tempo where she used the deletion in 13% whereas in slow speech tempo she used the deletion in 4%.

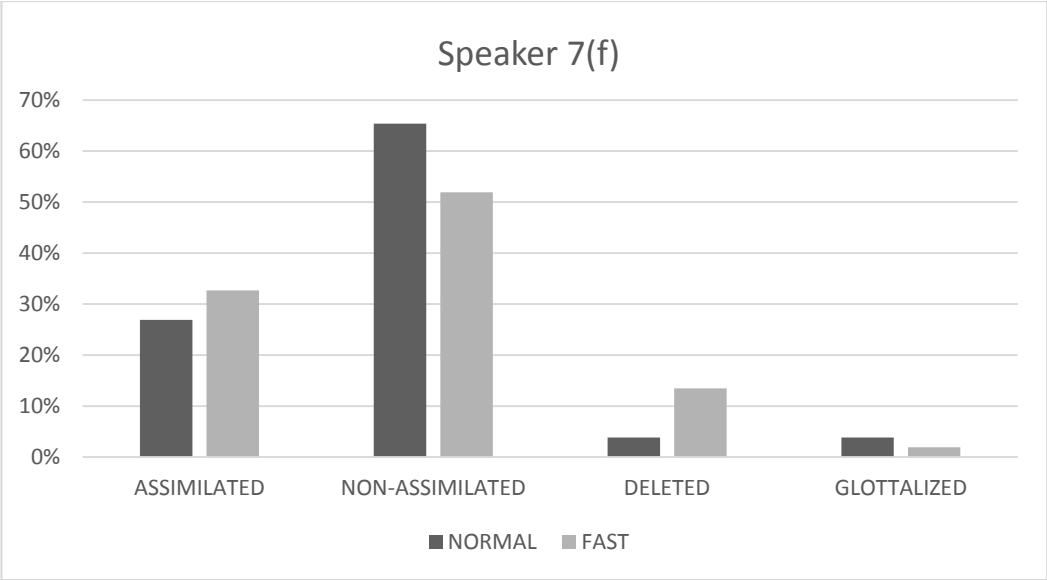

Figure 7: The percentage of assimilations produced by speaker 7(f) in normal speech tempo and fast speech tempo

The speaker 8(f) produced 4% of the target sequences with assimilation both in the normal speech tempo and in the fast speech tempo (Figure 8).

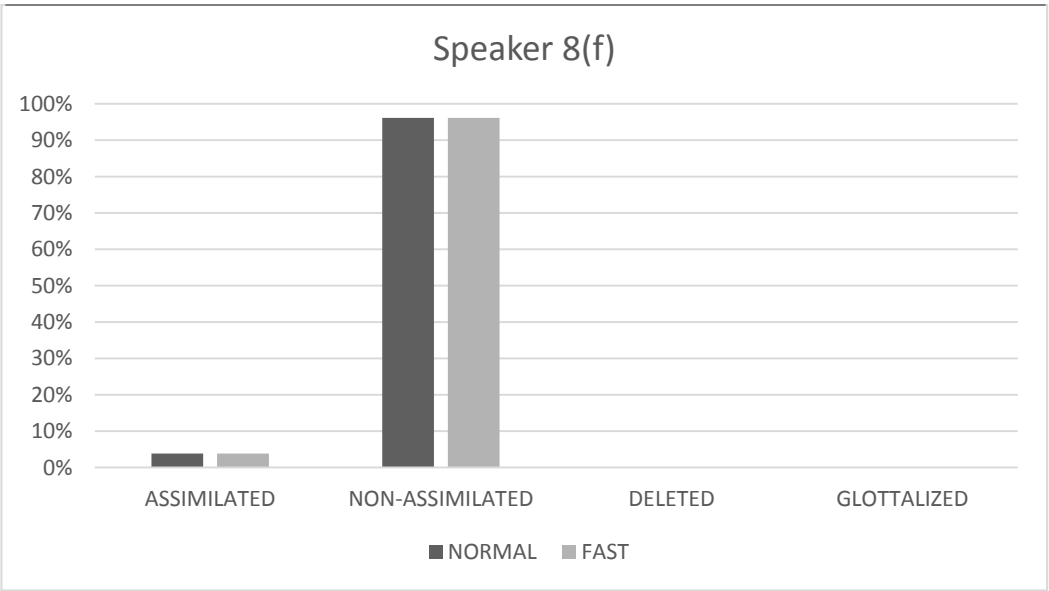

Figure 8: The percentage of assimilations produced by speaker 8(f) in normal speech tempo and fast speech tempo

As far as the difference between male and female is concerned, the female proved to use the assimilation more often (48%) than male (27%) in normal speech tempo whereas in the fast speech the difference was not that distinct (50% male and 69

% female) as seen in Figure 9. The chi-square test (χ^2 (1; n = 832) = 4.97, $p < 0.05$) revealed a significant difference between male and female production of assimilated target sequences (Table 2). However as clear from the diagrams drawn for each participant, we can note that most of the assimilated contexts in the group of female participants was made by the speaker 7(f) who produced 50.8% of the assimilated target sequences taken for the female group thus the given difference between male and female may not be relevant.

	ASSIMILATED	NON-ASSIMILATED	Marginal Row Totals
FEMALE	**61** (50.5) [2.18]	**355** (365.5) [0.3]	416
MALE	**40** (50.5) [2.18]	**376** (365.5) [0.3]	416
Marginal Column Totals	101	731	832 (Grand Total)

Table 2: The chi-square contingency table for female and male showing number of target sequences pronounced with assimilation and without

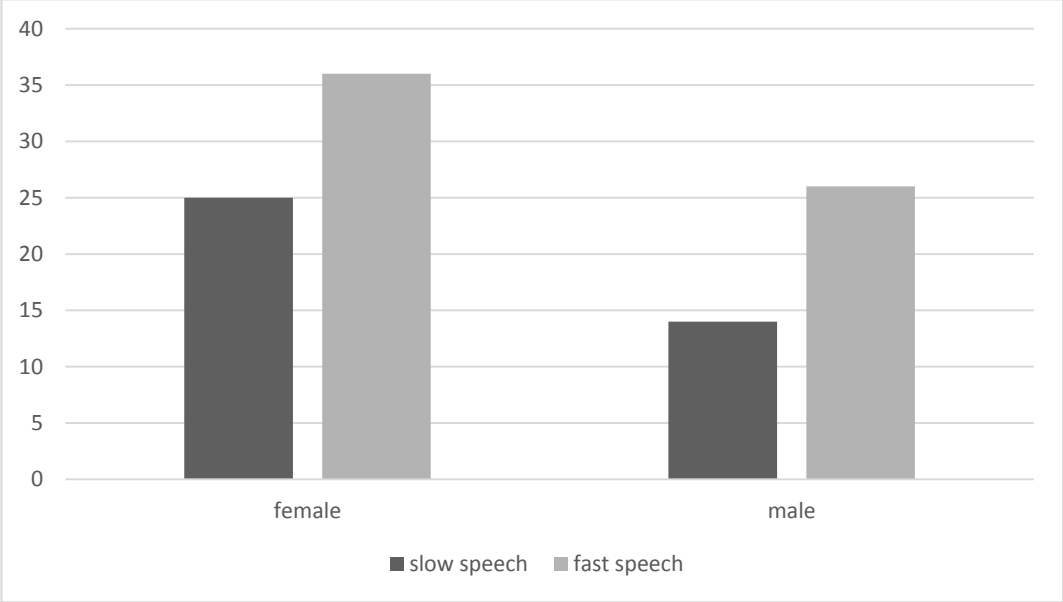

Figure 9: The amount how the female and male produced assimilation in normal speech tempo and in fast speech tempo

To ascertain whether the presence of assimilation in the speech of the high-proficiency learners was higher in fast speech than in slow speech we used the chi-square test. To calculate the chi-square, we used a webpage program. For the statistical analysis the target sequences classified as ‘‘glottalized’’ and the target sequences classified as containing deletion were merged into a category of non-assimilated.

We observed that having normal speech tempo the subjects produced correctly assimilated speech in 39 cases out of 416 and in fast speech tempo they produced 62 target sequences with assimilation and 354 target sequences without assimilation as clearly visible from the chi-square contingency table in Table 3. The chi-square statistic showed that the number of assimilations produced in the fast speech tempo differed significantly from the number of assimilation produced in normal speech tempo (χ^2 (1; n = 832) = 5.96, $p < 0.05$).

	ASSIMILATED	NON-ASSIMILATED	Marginal Row Totals
SLOW	**39** (50.5) [2.62]	**377** (365.5) [0.36]	416
FAST	**62** (50.5) [2.62]	**354** (365.5) [0.36]	416
Marginal Column Totals	101	731	832 (Grand Total)

Table 3: The Chi-square contingency table for slow speech tempo and fast speech tempo showing number of assimilated and non-assimilated target sequences

We further observed that most subjects produced correctly assimilated speech in the context of /t/ followed by /j/ and /d/ followed by /j/ in normal speech tempo as visible from Figure 10 below. The 46.2% of all the assimilated target sequences were those in the context of /t/ and /j/ and 20.5% of all the assimilated target sequences were in the context of /d/ and /j/.

As already mentioned above, the subjects produced more target sequences with assimilation in fast speech tempo than in normal speech tempo. They used the assimilation correctly not only in the context of /t/ and /j/ and /d/ and /j/ but the values increased also in these contexts; /n/ and /b/, /t/ and /b/ and /n/ and /p/ as clear from the Figure 10.

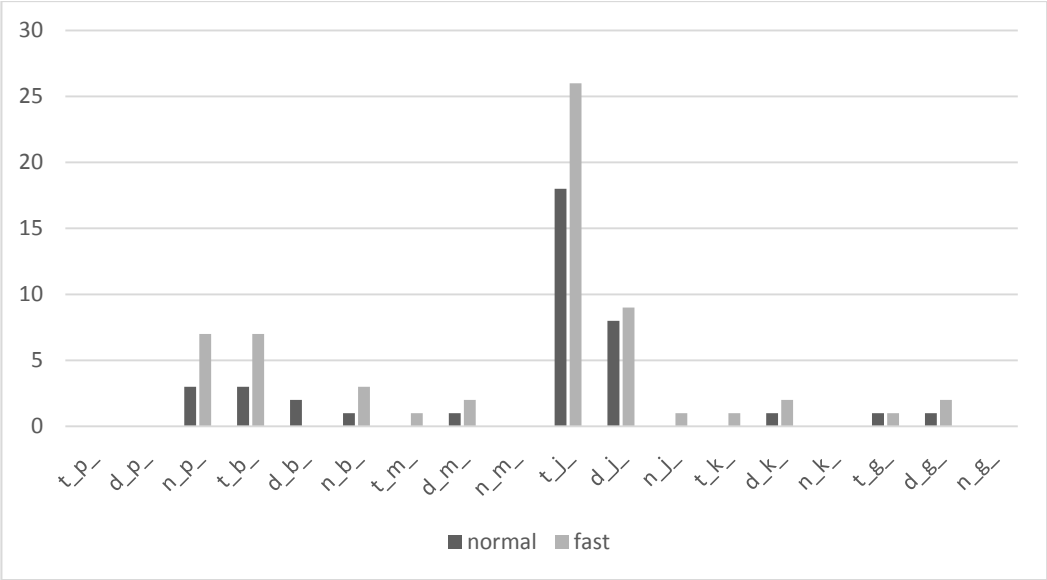

Figure 10: The number of assimilated sequences (vertical line) in the given context (horizontal line)

As the Figure 10 above shows, the amount of target sequences produced with assimilation in the context of /t/ and /j/ increased by 44.5% and in the context of /n/ and /p/ and /t/ and /b/ it increased by 133.3%.

To reveal whether the difference between the assimilated target sequences in the context of /t/ and /j/ in normal speech and in fast speech tempo is significant, we used the Fisher's exact test. For this purpose, it was not adequate to use the chi-square test because of the small amount of target sequences. Nonetheless, the Fisher's exact test revealed the difference not to be significant *(P* = 0.151252, at $p<0.05$) as we can see from the contingency table in Table 3 below.

	ASSIMILATED	NON-ASSIMILATED	Marginal Row Totals
NORMAL SPEECH TEMPO	**18**	**30**	48
FAST SPEECH TEMPO	**26**	**22**	48
Marginal Column Totals	44	52	96 (Grand Total)

Table 4: The Fisher's exact test contingency table for the occurrence of assimilation in the context of /t/ and /j/ compared in normal speech tempo and fast speech tempo

We further conducted the Fisher's exact test to establish, whether the difference between the assimilated target sequences in the context of /t/ and /b/ and further on with the context /n/ and /p/ produced in the normal speech tempo and fast speech tempo is significant as visible from Table 4. However, the increase was also shown as not being significant *(P*= 0.252413 at $p < 0.05$). Since the number of presence of the assimilated target sequences in the context of /t/ and /b/ and /n/ and /p/ was the same as well as the number of non-assimilated target sequences in both contexts, the result for both contexts is not significant and it is visible in Table 5.

	ASSIMILATED	NON-ASSIMILATED	Marginal Row Totals
NORMAL SPEECH TEMPO	**3**	**13**	16
FAST SPEECH TEMPO	**7**	**9**	16
Marginal Column Totals	10	22	32 (Grand Total)

Table 5: The Fisher's exact test contingency table for the assimilated contexts of /n/ and /p/ and /t/ and /b/

We also compiled the Fisher's exact test for the context of /n/ and /b/ (Table 6) in which the amount of assimilated target sequences also increased in the fast speech tempo. The result was considered not significant *(P* = 0.599555, at $p < 0.05$).

	ASSIMILATED	NON-ASSIMILATED	Marginal Row Totals
NORMAL SPEECH TEMPO	**1**	**15**	16
FAST SPEECH TEMPO	**3**	**13**	16
Marginal Column Totals	4	28	32 (Grand Total)

Table 6: The Fisher's exact test contingency table for the assimilated context of /n/ and /b/

5 Discussion

As described in the results above the native speakers of English produced most of the target sequences unassimilated. As we mentioned in the first chapter, Giegerich (2001) states that assimilation occurs much more often in casual speech than it occurs in formal and careful speech. This claim is also supported by Gimson who states that unassimilated forms 'occur more often than assimilated forms which tend to increase in frequency in the more casual style of speech, regardless of pace' (2001, 294). Thus we can assume that the absence of assimilated target sequences was caused by the formal conditions of the experiment.

Based on the literary review we hypothesized that the high proficiency Czech learners of English will be able not only to decode the assimilated speech but they will be also able to produce correctly assimilated speech. The result showed that Czech high proficiency learners are indeed able to produce correctly assimilated speech in normal speech tempo and also in fast speech tempo. Specifically, they produced 9.4% of the target sequences assimilated in normal speech tempo and 14.9% of the target sequences assimilated in fast speech tempo.

As far as the difference between normal speech tempo and fast speech tempo is concerned, we detected that the high proficiency learners produced more target sequences with assimilation in fast speech tempo than in normal speech tempo. This difference was shown to be significant. Although Gimson (2001) mentions that the speech tempo does not play role in using the assimilation, we observed that in the speech of high proficiency learners it does. This may be due to the fact that in normal speech tempo the speakers concentrated on pronunciation of every word in order to pronounce it clearly and correctly, however in higher speech tempo they concentrated on not to make a mistake or mispronounce something and thus they did not pay much attention to clear pronunciation.

In Chapter 1 we proposed that Czech high proficiency learners of English will be most likely able to produce correctly assimilated speech in cases where the bilabial /m/ or alveolar /n/ precedes the velar /k/ or velar /g/ because this kind of assimilation already exists in their native language. However, in this experiment

we found that the subjects did not prove /m/ or /n/ to assimilate to the following sound /k/ or /g/ in any of the cases. As the reason for this result we may mention the difference between the occurrence of the assimilation in Czech and in English in the fact that in Czech the assimilation of place across the word boundaries is considered non-standard and thus is it considered a mistake whereas in English the assimilation of place is realized mainly across the word boundaries.

As expected the assimilation of alveolar /t/ or /d/ followed by palatal /j/ proved to be the one which was assimilated almost in all the target sequences by all the speakers. Even if the subject did not produce the target sequence with assimilation in any other contexts they produced this context as assimilated. Although this type of assimilation is for the Czech native speaker relatively a new thing because it does not exist in their native language they proved to produce this assimilation correctly in many cases. The reason for this may be the fact, that this type of phonetic change is the most salient which means that the speaker most easily notices it and thus producing it does not pose a problem for them.

Furthermore, we observed that the assimilated sequences of alveolar /n/ and bilabial /b/ increased in number in the fast speech tempo. This type of assimilation in Czech is standard only exceptionally in words such as *bonbon* 'candy' or in word *hanba* 'shame' pronounced as /boŋbon, haŋba/ and never across the boundaries, however in non-standard and dialectal speech it occurs rather frequently, even across the word boundaries, as in central Bohemian dialect where the phrase *on byl* 'he was' would be pronounced as /vom bil/. Thus we can assume that our subjects produced this assimilation because it already exists in their native language, despite the fact that it occurs only in limited number of words.

Interestingly, we also observed an increased occurrence of assimilated target sequences of /n/ and /p/ in fast speech. According to Romportl this type of assimilation of place exists in Czech only in Královehradecký dialect and not in standard speech. Since none of the speakers came from the Královehradecký region we cannot say that they were influenced by the distribution of the assimilation of place in the dialect.

The assimilation of place in the context of /t/ and /b/ does not occur in Czech however, interestingly our experiment showed that speakers produced these target sequences with assimilation in fast speech tempo and we also observed that the

same speakers produced the assimilations in both in the context of /n/ and /p/ and also in /t/ and /b/.

We also investigated whether female produced the target sequences with assimilation in more cases than male and we discovered that they did. However, as we stated above, most of the assimilated target sequences for the female group were produced by a single speaker and thus this result is not relevant. In addition, after the experiment, we discovered that the speaker was participating in a phonetic course concerned with the pronunciation with special attention to assimilation and glottal replacement and that she may have anticipated the purpose of this experiment.

6 Conclusion

This thesis focuses on the place assimilation in the speech of Czech high proficiency learners of English. The special attention is paid on the influence of the speech tempo on the production of assimilation of place in the non-native speech. Literature review aims at showing the differences between the occurrence of place assimilation in both Czech and in English. The assimilation of place in Czech and in English has different distribution. Whereas in English place assimilation is common phenomenon, in Czech especially in standard speech it occurs only in small number of cases, however in non-standard Czech the place assimilation occurs more frequently.

We conducted an experiment aiming at showing whether high proficiency learners of English are able to produce correctly assimilated speech. Further on we focused on whether the speech tempo plays role in the production of place assimilation. The results have shown that Czech high-proficiency learners are able to produce correctly assimilated speech proving that even though the distribution of this phonological phenomena is different and limited in their native language they are able to adopt the phenomena and be able to produce it correctly. And most importantly we observed that the speech tempo indeed influences the production of place assimilation in the speech of non-native speakers. We also proved that the most participants produced the target sequences with assimilation in the context of /t/ and /j/ and /d/ and /j/ which does not exist in their native language but it is the most salient of all the assimilations.

7 Resumé

Tato bakalářská práce se věnuje fenoménu asimilace místa v řeči nerodilých mluvčí, jejichž znalost anglického jazyka je na vysoké úrovni (minimálně B2 Evropského rámce). Hlavním cílem této práce je zjistit, jestli jsou nerodilí mluvčí schopni správné asimilace místa a pokud ano, tak do jaké míry je produkce asimilovaných kontextů ovlivněna rychlostí řeči.

Asimilace místa, neboli spodoba artikulačního místa je jev, kdy je jedna hláska ovlivněna produkcí hlásky druhé. Asimilace místa je běžný jev jak v britské, tak v americké angličtině. Běžnou příčinou výskytu asimilace v anglickém jazyce je anticipační koartikulace dvou po sobě jdoucích hlásek. Asimilace umožňuje mluvčímu vyslovit stejnou informaci s menším úsilím a tudíž mu nejen šetří čas, ale také mu umožňuje být efektivnějším.

Zatímco v angličtině se asimilace místa vyskytuje poměrně často, ve spisovné češtině je její výskyt omezený na pouze pár slov jako například *maminka,* kde se alveolární /n/, které následuje velární /k/ pod jeho vlivem mění na velární /ŋ/**.** Rodilí mluvčí si takové změny jak v angličtině, tak v češtině nejsou vědomi. Hlavním rozdílem mezi distribucí asimilace místa v angličtině a češtině je jejich výskyt. V angličtině se asimilace místa nachází ve většině případů přes hranici slov, zatímco ve spisovné češtině je taková asimilace nepřípustná. Nicméně v nespisovné češtině a zejména v některých dialektech se tato asimilace přes hranice slov může vyskytovat.

Praktická část této práce je věnována experimentu, zkoumajícímu vliv řečového tempa na asimilaci místa v řeči nerodilých mluvčí. Experiment má dvě části. V první části byli nahráni dva rodilí mluvčí, abychom zjistili a ověřili přítomnost jevu v jejich řeči. V druhé části jsme nahrávali řeč osmi vysokoškolských studentů angličtiny, tito studenti měli za úkol číst dané věty nejdříve pomalu a později rychle. Získaná data byla analyzována, abychom zjistili přítomnost asimilace místa a vliv tempa řeči na její produkci. Výsledky nám ukázaly, že nerodilí mluvčí jsou schopni produkovat správně asimilaci místa v angličtině. Dále jsme zjistili, že řečové tempo má vliv na produkci asimilace místa v řeči nerodilých mluvčí. V závěru práce je diskuze vysvětlující konkrétní změny v určitých kontextech.

8 Works Cited

Darcy, Isabelle, Sharon Peperkamp, and Emmanuel Dupoux. 2007. ‘‘Billinguals play by the rules: perceptual compensation for assimilation in late L2- learners. ’’ *Papers in Laboratory Phonology IX*. Champaign: University of Illinois.

Chen, Larissa. 2003. ‘‘The origins in overlap of place assimilation.’’*Proceedings of the XXIIth West Coast Conference on Formal Linguistics,* p.137-150. Somerville, MA: Cascadilla Press.

Clark, John, and Collin Yallop. 1995. *An Introduction to Phonetics and Phonology 2nd Edition*. Oxford, UK: Blackwell.

Cruttenden, Alan, and A.C. Gimson. 2001. *Gimson’s Pronunciation of English 6th edition*. Oxford, UK: Blackwell.

Crystal, David. 2008. *A Dictionary of Linguistic and Phonetics 6th Edition*. Oxford, UK: Blackwell.

Giegerich, Heinz J. 1992. *English Phonology: An Introduction*. Cambridge, UK: Cambridge University Press

Hayes, Bruce, Robert Martin Kirchner, and Donca Steriade. 2004. *Phonetically Based Phonology*. Cambridge: Cambridge University Press.

Jun, Jongho. 1996. ‘‘Place assimilation is not the result of the gestural overlap: Evidence from Korean and English.’’ *Phonology* 13 (3): 377- 407.

Krčmová, Marie. 2005. ‘‘ Výslovnost ve veřejném projevu.’’ *Linguistica Online.*

Krčmová, Marie. 2007. *Úvod do fonetiky a fonologie.* Ostrava: Repronis Ostrava.

Ladefoged, Peter. (1975) 2010. *A Course in Phonetics.* 6th ed. New York: Harcourt Brace Jovanovic.

Lass, Roger. 1984. *Phonology: An Introduction to basic concepts*. Cambridge, UK: Cambridge University Press

Laver, John. 1994. *Principles of Phonetics.* Cambridge, UK: Cambridge University Press

Roach, Peter. 1991. *English Phonetics and Phonology: A Practical Course 2nd edition.* Cambridge: Cambridge University Press.

Romportl, Milan. 1954. ‘‘K artikulační asimilaci nosových souhlásek v češtině.’’ *Slovo a slovesnost 15(1).* Available on: http://sas.ujc.cas.cz/archiv.php?art=741

Son, Minjung, Alexei Kochetov, and Marianne Pouplier. 2007. ‘‘The role of gestural overlap in perceptual place assimilation in Korean.’’ *Papers in Laboratory Phonology IX*. Champaign: University of Illinois.

Suprenant, Aimée, and Louis Goldstein. 1998. ‘‘The perception of speech gestures.’’*Journal of the Acoustical Society of America* 104(1): 518-529.

Šimáčková, Šárka, Václav Jonáš Podlipský, and Kateřina Chládková. 2012. ‘‘Czech spoken in Bohemia and Moravia.’’*Journal of the International Phonetic Association, 42, pp 225-232.* doi:10.1017/S0025100312000102

9 Appendix

	P,B,M	**J**	**K,G**
T	Bring me that pen!	The dress doesn't fit you.	She's got a fat cat.
	Jane's a great beauty.	Don't forget your book.	Don't eat the hot cake.
	It was a great battle.	Meet young students.	Who's that girl?
	The ball hit me.	Look at you.	It was a last minute goal.
	Claire bought a white mug.	Please don't yell.	Meet me at the front gate.
	Peter loves my meat pie. She was a sweet baby.	This is what you want. I met her last year.	He wore his silly flat cap.
D	That's the good part.	You wouldn't mind, would you?	Kate's a good girl.
	I had a bad month.	I said yes.	Serena Williams won the Fed Cup.
	Be a good boy.	The wall was painted bright yellow.	I like this card game.
	All I want is world peace.	He competed at the World Yacht Competition.	There was a wide gap.
	Jane works in food magazines. Do you have a world map?	That's a good yoghurt.	Good quality. He's a good kid.
	I loved my old bag.	I'm in my third year.	You smell like an old goat.

	P, B, M	**J**	**K,G**
N	He's a thin boy.	She's ten years old.	Mary is in a group of ten girls.
	Write with your own pen.		I've got a clean car.
	James ran ten miles.	Hanna wore a lemon yellow jacket.	Barbara ran quickly.
	My favourite superhero is Iron man.		This is my own garden.
	Jane works in the Green Park.		You can see open ground.
	There's a good wine bar.		I wore just a thin coat.
J	**S**	**Z**	
	I miss you.	You will loose your mind.	
	Jane met him this year	I thought you were with those young men.	
	I want to kiss you.		