

Assimilation across Word Boundaries in British English and Czech: A Comparative Study

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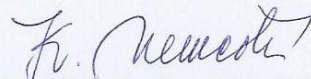
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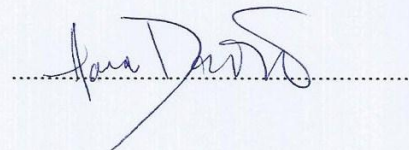
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ABSTRAKT

Tato práce se zabývá shodami a rozdíly v asimilacích přes hranice slov ve standardní češtině a standardní britské angličtině. Částečně se dotýká i tématu nestandardních typů hláskových změn. Podává ucelený přehled druhů asimilací v plynulé mluvě obou jazyků, dále předkládá podmínky pro asimilaci konsonantů v českém i anglickém jazyce a přináší přehled nejčastěji se vyskytujících typů asimilací přes hranice slov. Veškeré v teorii zmíněné druhy výslovnostních spodob jsou poté ilustrovány na příkladech v praktické části. Ačkoli se jedná o dva typologicky odlišné jazyky, co se hláskových změn týče, je možno najít hned několik podobností, na něž práce poukazuje. Výsledek rozboru autentického materiálu dokazuje četnost těchto shod a zdůrazňuje ty nejmarkantnější z nich.

Klíčová slova: Standardní britská výslovnost, standardní česká výslovnost, ortoepie, fonetika, fonologie, asimilace znělosti, asimilace místa artikulace, asimilace způsobu artikulace, hranice slov, exploziva, afrikáta, frikativa.

ABSTRACT

This thesis focuses on similarities and differences in assimilation across word boundaries in standard Czech pronunciation and Received Pronunciation. Marginally, the paper touches on the issue of non-standard types of sound changes. It states all the main types of assimilation in fluent speech of both languages. Further it points out crucial conditions for assimilation of consonants in British English and Czech language and also describes the most frequent types of assimilation across word boundaries. All of the assimilation processes mentioned in the Theory are illustrated by the relevant examples in the Analysis. The paper explains that although English and Czech are typologically different languages, many similarities are found regarding the sound changes in fluent speech. The findings of the analysis of authentic spoken material demonstrate the quantity of these similarities and emphasise the most significant ones.

Keywords: Received Pronunciation, standard Czech pronunciation, orthoepy, phonetics, phonology, assimilation of voicing, assimilation of place of articulation, assimilation of manner of articulation, word boundary, stop, affricate, fricative.

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INTRODUCTION

Although English and Czech are typologically different languages, many similarities are found at the level of phonology and phonetics. This thesis focuses on Received Pronunciation being the recognisable standard British accent of spoken English, and a standard variety of Czech language. Thus, as for transcription, the thesis uses the International Phonetic Alphabet (IPA) symbols. IPA is nowadays the most widely used and versatile means for transcriptions of spoken languages. When describing the Czech sound system, it is sufficient to use Czech phonetic alphabet, or in other words standard symbols generally used for Czech transcription. Nevertheless, regarding a comparison of two different languages, usage of IPA symbols is vital. Therefore all transcriptions stated in this paper respect the IPA principles. For the purposes of an appropriate interpretation of a certain phenomenon, phonemic (broad) or phonetic (narrow) transcription is used. This language comparison focuses on the same phonemic and phonetic features found in English and Czech pronunciation, and at the same time tries to highlight the specific features of both. In principle, assimilation across word boundaries is studied in each case, unless it is stated differently.

In this thesis, assimilation is understood as a process where one phoneme is realized differently as a result of being near some other phoneme which belongs to a following word. Assimilations are realized during connected speech of every English and Czech speaker. In fluent speech, sound changes can be found within a word as well as across word boundaries. Considering Czech pronunciation, assimilation of voicing affects consonants across word boundaries even more than it does in RP. In English, this phenomenon is not so common as it is in Czech, however, voicelessness is passed across word boundaries in certain cases. Still, many similarities are observed in pronunciation regarding assimilation of voicing in general. The main type of assimilation in English language is assimilation of place of articulation, which is not usually found in Czech pronunciation. As for the assimilation of manner of articulation, many similarities in pronunciation of both languages are observed. As far as the Analysis is concerned, transcriptions of speech of native speakers are compared. In this part, all the major types of assimilation stated in the Theory are analyzed, therefore only the relevant sequences of speech are taken into consideration. As assimilation processes in Received Pronunciation and standard Czech pronunciation are the target of this paper, BBC programmes and programmes of Český rozhlas Radiožurnál are important sources for the further analysis.

I. THEORY

1 ASSIMILATION OF VOICING ACROSS WORD BOUNDARIES

1.1 Regressive Assimilation of Voicing across Word Boundaries

Assimilation of voicing across word boundaries is understood as a process in which voicing or voicelessness of one sound influences voicing or voicelessness of another sound belonging to a neighbouring word. Phonologically, many changes occur in fluent speech and those affect units at suprasegmental level as well as segmental units. This change in pronunciation is natural to many speakers during their speech. “Assimilations are common in the speech of every sort of speaker in Britain” (Ladefoged 2006, 110) as well as in Czech, where the assimilation of voicing is absolutely regular between two neighbouring sounds across word boundaries (Krčmová 2008, 184). In this chapter the similarities and also the differences in the process of assimilations of both languages are analyzed. As Duběda (2005, 15) notes in his comparative study of sounds of the world’s languages, a scientific approach to comparison of languages is based on the idea of equality, and the similarities as well as the specific characteristics are taken into consideration.

As far as assimilation of voicing is concerned, this change occurs in Czech more often than in English pronunciation. In English, there is the tendency to preserve voiced sounds voiced and voiceless sounds voiceless. On the other hand, there are many exceptions from the phonological point of view where the rules are laid clearly. Phonetically, there are even more possible changes during fluent speech, because every speaker can pronounce certain word in many different ways.

In Czech, however, voicing is preserved in most situations, yet not always correctly used. Orthoepically, Czech speakers should not pronounce voiced sound at the end of a word, even if the word ends with it in its written form, because a pause following the word is obviously voiceless. That suggests that a pause influences what precedes it. A pause in Czech is thus an element which initiates the process of regressive assimilation. Unlike in Czech, English speakers try to preserve voicing at the end of a word even when a pause follows. In fluent speech, speakers usually do not make many pauses and thus lots of assimilation processes across word boundaries occur. This happens in Czech as well as in English language.

1.1.1 Voicing Assimilation in Weak Forms

As Volín argues, process of assimilation of voicing is common in pronunciation of English weak forms. For instance, weak form of a preposition *of* could be either /əv/ or

/əf/. Its final form in a concrete realization depends on voicing/voicelessness of the following sound. Another examples are those of *his* usually transcribed as /'hɪz/, but occasionally /'hɪs/, and *is* normally transcribed as /'ɪz/, but in some positions can be also transcribed as /'ɪs/ (Volín 2006, 67).

Interestingly, in his quantitative acoustic study of British English obstruent clusters Jansen (2007, 273) found out that post-pausal and post-sonorant weak forms of *is* are usually pronounced with /z/ before lenis obstruents and sonorants, as in a phrase *Where is Wendy?* in which *is* is realized with voiced /z/: [(ɪ)z'wɛndi], and with /s/ before fortis obstruents, as in a phrase *Where is Pete going?* pronounced as [(ɪ)s'pʰi:t]. Another example is *have to* where the final voiced phoneme /v/ becomes voiceless /f/ because of the following voiceless alveolar stop /t/, thus it is pronounced [ˈhæf tu]. According to Roach (2009, 112), in the same way the final voiced fricative /z/ in *cheese* phonemically transcribed as /'tʃi:z/ becomes more like /s/ when it occurs in *cheesecake* pronounced as [ˈtʃi:skeɪk]. Interestingly enough, “these devoiced consonants do not shorten preceding vowels as true fortis consonants do” (Roach 2009, 112).

Such changes suggest that assimilation of voicing across word boundaries in fluent speech is in English mostly an aim of regressive assimilation. As Volín (2006, 67) claims, when considering both languages “Czech and English assimilation processes are prevalingly regressive.”

1.1.2 Key Differences in Passing Voicing across Word Boundaries in English and Czech

As stated above, regressive assimilation of voicing is found in Czech pronunciation. For instance, the words *z mostu* or *s mostu*, which is its second possible written form, are both phonetically transcribed as only one possible realization and that is /'z mɔstʊ/ (Krčmová 2008, 185). This illustrates that the regressive assimilation of voicing is very common in Czech. Moreover, the tendency of erasing the border between a word and a preposition occurs, thus *pod zemí* phonemically transcribed as /'pɔd'zɛmi:/ is often pronounced as [ˈpɔdʒɛmi:] even though this can be misleading because the word *podzemí* exists in Czech as well. This could be the case of many other realizations of a preposition-plus-word sequence.

According to Volín (2006, 67), English and Czech regressive assimilation is in principle the same process, but the assimilation types in English are rather different. He further suggests key differences, where one of them is that “voicing is never passed across the

word boundary”. The example of *black ball* pronounced as [ˈblæg ˈbɔ:l] is stated as an example of illegal realization in English. On the other hand, the second key difference is that “voicelessness can be occasionally passed across a word boundary, but the process is usually restricted to weak forms of structural words or certain stabilized structures.” This statement develops the possibility of assimilation of voicing in English, even though English words should preserve their voicing or voicelessness considering the final consonant. Phonetically, a lot of variants can be heard. Words *is she* should be pronounced as /ˈɪz ʃi:/, however the form [ˈɪs ʃi:] or rather [ˈɪz̥ ʃi:] with devoiced phoneme /z/ could be found in fluent speech of English speakers as well. In this case, /ˈɪz/ should preserve its voicing at the end, but the following voiceless /ʃ/ influences the preceding phoneme /z/, thus it assimilates to its voiceless counterpart /s/, or rather devoiced form of final phoneme /z/, which has its own symbol in concrete realization [z̥]. This is again the example of regressive assimilation of voicing.

This is similar to passing the voicelessness across the word boundary, as in Volín’s example of words *leave cords* transcribed as /ˈli:f ˈkɔ:dz/ which is again illegal realization (Volín 2006, 67). Yet this does not mean that in certain realization this strictly cannot be heard. This only suggests that such pronunciation is not realized legally considering phonological rules. Phonetics, however, allows certain speaker to realize their pronunciation differently and thus even hypothetically illegally.

In his study, Jansen claims that alveolar sibilants (in orthographic form with s) tend to be voiced before both lenis obstruents and sonorant consonants, as in *because we* pronounced as [bɪˈkʰɔ:z wi:]. However, all fricatives are voiceless when the following consonant is a fortis obstruent (2007, 274).

In Czech, the process of voicing assimilation is illegal only when the initial consonant is a unique consonant, i.e. a consonant which does not have its voiceless variant. When using a pair consonant assimilation process is absolutely legal. For instance, words *tak bych* in fluent speech realized as /ˈtag bɪx/ are correctly pronounced according to the rules of standard Czech pronunciation. In this case, the phoneme /k/ has lost its voicelessness due to the influence of the following phoneme /b/.

1.1.3 Assimilation and Unique Consonants

As previously stated, assimilation of voicing in Czech does take place when a pair consonant follows, that means a consonant which has its voiceless and at the same time its voiced variant, such as /p/, /b/ or /k/, /g/, etc. In general, unique consonants /l/, /r/, /m/, /n/,

/p/, /j/ are not affected by assimilation of voicing in standard Czech. The only right standard realizations of words *had leze* is thus ['ɦat 'lɛzɛ], because in Czech pronunciation, each word ended with a pair consonant should be realized with its voiceless variant when a unique consonant follows.

Such consonant cannot influence the preceding one when considering legal standard Czech pronunciation. For instance, the process of realization of words “kousek másla” as ['kɔʊsɛg ma:sla] is not considered as the right pronunciation of standard Czech, because of illegal application of regressive assimilation of voicing where the unique sonorant /m/ influences the preceding pair consonant /k/ (Krčmová 2008, 185). Another examples are *trend módy* transcribed as ['trɛnt 'mɔ:di] or *otřes mozku* as ['ʔɔřɛs 'mɔskɔ] (Pokorná and Vránová 2007, 14). In these examples, regressive assimilation of voicing does not take place, and such pronunciation is correct according the rules stated above.

1.1.4 Voiced Labiodental Fricative

In Czech, the same rule is applied to the voiced variant of a labiodental fricative. The phoneme /v/ thus behaves as a unique consonant. Krčmová claims that even though /v/ is a pair consonant and a voiced one, it does not influence other consonants and no process of assimilation takes place. What is more, the meanings of certain pairs of words are differentiated, as in *sval* and *zval* pronounced as ['sval] and ['zval]. Therefore, no assimilation change is realized even across word boundaries. Still, Volín and Skarnitzl proved by their research that Czech speakers apply voicing assimilation on a consonant which precedes /v/ in their pronunciation (Volín and Skarnitzl 2006, 262). It can be stated that this process is similar to that one in English regarding /v/ and unique consonants, because phonologically, no regressive assimilation of voicing caused by /v/ or any other unique consonant takes place under any conditions. It is obvious that when a voiced consonant follows another voiced consonant in English pronunciation, the previous one preserves its voicing due to the next voiced phoneme.

1.1.5 Assimilation due to Vowel Influence

Another example of voicing assimilation in connected speech is transcription of words *most of us have* as /'mɔʊst əv əs 'hæv/ or /'mɔʊst əv 'ʌs 'hæv/, which could be in fluent speech pronounced as [mɔʊst əv 'ʌz hæv] where phoneme /s/ is influenced by the following vowel /æ/ and that is why /s/ assimilates to /z/. This change is caused by a vowel this time, because each vowel is voiced. According to Palková (1994, 145), a voiceless consonant can change into the voiced one due to the following vowel, which is illegal

considering the standard Czech pronunciation. Thus pronouncing words *pět osob* as [ˈpjɛd ɔsɔp] is incorrect. In this case no glottal stop was realized before the initial vowel, therefore it is considered to be a non-standard pronunciation. As stated above, voicing is never passed across word boundaries in English, that is why this pronunciation would be characterized as illegal.

1.1.6 Czech Phoneme /ɾ/

Phoneme /ɾ/ is affected by an assimilation process (Krčmová 2008, 185). For instance, when a word *keř* is correctly pronounced as [ˈkɛɾ̥], then the phoneme /ɾ/ loses its voicing due to the following pause at the end. However, pronouncing this word when it is followed by another word beginning with a voiced consonant, the phoneme /ɾ/ must be pronounced voiced as well, as in *keř bude* transcribed as [ˈkɛɾ̥ bʊdɛ]. In this example, the phoneme /ɾ/ is of a very similar quality as the same phoneme in *keře* pronounced as [ˈkɛɾɛ] where the sound is fully voiced due to the following vowel /ɛ/.

1.2 Progressive Assimilation of Voicing across Word Boundaries

In Czech, progressive assimilation of voicing can occur only within a word where one of a pair phoneme is found, as in *shoda* pronounced as /ˈsxɔda/. Still, regressive variant of assimilation of “shoda” as /ˈzɦɔda/ is found as well, frequently in region of Moravia (Krčmová 2008, 184). The progressive variant is common for speakers in region of Bohemia. Another example is a change of a phoneme /ɾ/ into /ɾ̥/ due to preceding voiceless sound, as in /ˈtʃi:t/, or /ˈkɪɔvi:/. If a voiced phoneme precedes, /ɾ/ stays also voiced, as in *zřídka* transcribed as /ˈzɾi:tka/ (Pokorná and Vránová 2007, 14). This change is realized only within a word. In general, progressive assimilation of voicing is not found in Czech pronunciation considering assimilation across word boundaries and the orthoepic rules.

1.2.1 English Devoiced Approximants

In English, progressive assimilation of voicing is not common feature of fluent speech. As was mentioned above, regressive assimilation is prevailing feature in English considering voicing. However, progressive assimilation of voicing within a word is usually found in pronunciation, as in *clay*, *play*, *tray*, or *cute* transcribed as [ˈkɫeɪ], [ˈpl̥eɪ], [ˈtɫeɪ], and [ˈkju:t]. Gimson (2001, 298) argues that such assimilation is apparent at word boundaries in pronunciation of close-knit sequences, as in *at last* pronounced as [əˈtɫɑ:st], in *at rest* pronounced as [əˈtɫɛst], *at once* as [əˈtwʌns], or in a phrase *thank you* pronounced as [ˈθæŋkju:]. All approximants are devoiced due to the preceding voiceless consonants.

1.2.2 Assimilation in Contracted Forms and Suffixes

Although “anticipatory coarticulation is by far the most common cause of assimilations in English, ...[t]here are also perseverative assimilations, in which the gesture for one sound perseveres into the gesture for the next sound” (Ladefoged 2006, 109). Ladefoged further gives an example of the phrase *it is* pronounced as [‘?Its] and claims that this is “result of the perseveration of the voicelessness of [t]” (2006, 109). Volín applies different approach and argues that there is no progressive assimilation of voicing across word boundaries, however, he observes progressive assimilation with inflectional morphemes *-s*, *-es*, and *-ed*, and morphemes of the form of *'s* and *s'* (Volín 2006, 67). Thus, he only puts such process into different category than Ladefoged does.

Roach (2009, 12) strengthens Volín’s assumptions by the following statement: “...a type of assimilation that has become fixed is the progressive assimilation of voice with the suffixes *s*, *z*.” Such suffixes will be pronounced as /s/ if the preceding consonant is fortis and as /z/ if the preceding phoneme is lenis. Thus, the noun *hats* is pronounced as /‘hæts/, the noun *dogs* as /‘dɒgz/, the verb *smokes* as /‘sməʊks/, *sings* as /‘sɪŋz/, the possessive noun *Tom’s* is pronounced as /‘tɒmz/ while *Pat’s* as /‘pæts/.

Gimson (2001, 300) explains this phenomenon in a similar way as Ladefoged does, and claims that the weak form of *is* or *has* is pronounced as /s/ or /z/ according to the final consonant of the preceding word, as in *the cat’s gone* where *cat’s* is transcribed as [‘k^hæts] due to preceding voiceless /t/, and in the phrase *the dog’s gone* where *dog’s* is transcribed as [‘dɒgz̥] due to the preceding voiced consonant /g/. This is applicable to all contracted forms of *'s*. As this form of *'s* represents another word in such situations this should therefore be taken into account. Such contracted forms are very similar to those of the verb *jsi* in Czech, as in *tys byl*. Thus the pronunciation of the words mentioned is [‘tɪz bɪl] where the phoneme /z/ is realized due to the following voiced /b/. However, this again is the process of regressive assimilation.

Gimson does not assume that the final consonant should be devoiced in the examples mentioned above. He considers those forms to be fully voiceless according to the /s/ symbol used in his transcription. Volín (2006, 55), however, develops the idea of devoicing: “English word-final /z/ is often partially or fully devoiced and can sound quite like Czech /s/. English /z/, however, does not become /s/ even when it loses its voicing.” He adds that Czech beginners often claim that they cannot recognize the difference between final /s/, and /z/.

Volín further claims that even though English /z/ loses its voicing, it still keeps its lenis character, which in his words “means that it is shorter and not as sharp as fortis /s/” (2006, 55). Words such as *price* and *prize* where one of them is a word ending in a voiceless consonant can sound similarly as the other one ending in voiced consonant, and thus can seemingly be considered as homophones. Still, they are different in sound, as the diphthong /aɪ/ in the word *prize* is longer than the same diphthong in *price*, the word ending in voiceless consonant. Thus, lenis and fortis are important terms even in the process of assimilation across word boundaries, because when the consonants are in final position “they are scarcely voiced at all” (Roach 2009, 28).

As this process changes also the features of the final consonant, this finding should be taken into consideration for the purposes of the assimilation across word boundaries. This supports Gimson’s statement that at word-final positions the devoicing of voiced plosives or fricatives takes place before silence, as in the phrase *What can you give?* with devoiced [ɥ] at the end, or in *It’s his* pronounced with devoiced [z̥] in *his*. This change also occurs when fricatives are followed by a voiceless consonant, as in *They’ve come*. pronounced with devoiced [ɥ] in the contracted form of have. In some cases, a word-initial voiced plosive or a fricative is devoiced when preceded by silence, as in *very good* pronounced with devoiced [ɥ] at the beginning.

To conclude this chapter, there are many similarities observed, even though English regressive assimilation of voicing is rather limited that the one of Czech language. The pronunciation of weak forms in certain positions or certain stabilized structures in English suggests passing voicelessness across the word boundary; however, the tendency to keep voicing at the end of a word is rather strong. The process of progressive assimilation of voicing across word boundaries is not found in standard Czech pronunciation as well as in Received Pronunciation. Assimilation in English allows passing the voicelessness across word boundaries. On the contrary, voicing is passed across a word boundary in most situations in Czech language.

Theories of progressive assimilation of voicing in English considering contracted forms of *is* or *has* were stated and their voiceless variants were highlighted. In Czech such voiceless variants do not exist in pronunciation. Moreover, progressive assimilation of voicing is found only across morpheme boundaries, unlike in English.

These findings lead to the final conclusion that in both languages there is a prevailing tendency to apply regressive assimilation rather than progressive one considering

assimilation of voicing in general. For summary of all the possible assimilation processes which were stated above see Table 1.

Table 1. Types of voicing assimilation across word boundaries in English and Czech pronunciation

Phoneme undergoing the assimilation process	Influenced by	The specific sound realized at the word boundary	Example	Eng/ /Cz	Prog/Reg
Voiced variant of a pair consonant	Pause and/or followed by a glottal stop	Voiceless variant of a pair consonant	['pak se 'fiat'ʔɔtplazɪl]	Cz	Reg
Voiced variant of a pair consonant	Pause and/or followed by a glottal stop	Devoiced consonant	['grɪʔɪt]	Eng	Reg
Voiceless variant of a pair consonant	Voiced consonant	Voiced consonant	['tag bɪx]	Cz	Reg
/z/ (in spelling as 's being contracted form of is/has)	Voiceless consonant	/s/	['kʰæts]	Eng	Prog
/j/, /ɹ/, /l/, /w/	/k/, /p/, /t/	/j/, /ɹ/, /l/, /w/	['θæŋkjʊ:]	Eng	Prog

Note: Data in Table 1 summarize the main assimilation types mentioned in Chapter 1.

Table 1 summarizes all the types of assimilation of voicing which were discussed above. The information in this table support the statement that the type of regressive assimilation prevails in both languages and that the progressive type of assimilation is found only in

English pronunciation regarding the sound change across word boundaries. In Czech, however, the process of progressive assimilation of voicing is found within words.

Nevertheless, the assimilation process in English targets usually place of articulation, unlike in Czech. The process of assimilation of place of articulation across word boundaries is discussed in the following chapter.

2 ASSIMILATION OF PLACE OF ARTICULATION ACROSS WORD BOUNDARIES

In this context, assimilation of place of articulation means that two neighbouring phonemes are realized by the same articulators, thus, the two phonemes are homorganic. “This process is more likely to be found in rapid, casual speech and less likely in slow, careful speech. Sometimes the difference caused by assimilation is very noticeable, and sometimes it is very slight” (Roach 2009, 110). This is very similar to the same kind of assimilation in Czech language (see chapter 2.1 below). As Bybee (2001, 15) points out, the fluency and automation of stringing words together is characterized by overlapping of movements in pronunciation. She further suggests that this tendency leads to the limiting of phonetic inventory.

For the purposes of this chapter regressive type of assimilation means such process in which a final consonant of one word changes to become like an initial consonant of a neighbouring word in the way pronouncing it by the same articulators. Opposite to this, if an initial consonant changes to become like a final consonant then process is regarded as a progressive assimilation of place of articulation.

2.1 Regressive Assimilation of Place of Articulation across Word Boundaries

2.1.1 Alveolars Becoming Bilabials or Velars

“Assimilation of place is most clearly observable in some cases where a final consonant with alveolar place of articulation is followed by an initial consonant with a place of articulation that is not alveolar” (Roach 2009, 111). Roach further gives an example of change of the final consonant in *that* transcribed as /'ðæt/, where an alveolar /t/ occurs. He argues that in rapid, casual speech the phoneme /t/ will become /p/ before a bilabial consonant, as in *that person* pronounced as ['ðæp'pɜ:sn̩], or *meat pie* realized as ['mi:p'paɪ]. The same process can be found in *that man* phonetically transcribed as ['ðæp'mæn]. Another type of this assimilation process is observed when alveolar stop /t/ or /d/ becomes velar stop /k/ or /g/, if the alveolar stop precedes a velar consonant, as in *that case* pronounced as ['ðæk'keɪs], in *quite good* as ['kʷwaɪk'gʊd], or *good girl* pronounced as ['gʊd'gɜ:l]. Roach adds that in similar contexts alveolar phoneme /d/ becomes bilabial /b/, as in *good boy* pronounced as ['gʊd'bɔɪ], thus this is a voiced variant of previously mentioned /t/ becoming /p/ before bilabial phoneme /p/. Interestingly, Gimson points out

that “[e]lectropalatographic research shows that phonemic assimilations of place are rarely complete” (Gimson 2001, 301). He further gives an example of *bad boy* pronounced as [ˈbæbˈbɔɪ] where the change of alveolar phoneme to bilabial one takes place. He comments on this process by an assumption that “some residual articulation on the teeth ridge may accompany the labial articulation” (2001, 301). Once /n/ precedes /p/, it becomes /m/ in this case, as an airflow still runs through nasal cavity until /p/ is definitely pronounced. The example of this is when words *brown paper* are pronounced as [ˈbrʌʊmˈpeɪpə]. Changes of alveolar stops into velar stops or bilabials are not seem to be found in Czech pronunciation. Such changes are natural for English rather than Czech speakers. When preceded by a velar consonant, nasal alveolar /n/ becomes velar /ŋ/, as in *ten girls* transcribed as [ˈtɛŋˈgɜːlɪz]. In his study, Gaskell claims that the change of alveolar /n/ to velar /ŋ/ or bilabial /m/ under certain conditions is often described in categorical terms, but there is a continuum of assimilatory change in which the assimilated consonants still retain some residual alveolar characteristics (Gaskell 2003, 448).

Orthoepically, once there is a word boundary between words, it is not considered to be correct realization if Czech speakers apply the process of assimilation of place of articulation. Both consonants, initial and final, must be pronounced without assimilation, thus, *pan král* should be pronounced as /ˈpanˈkraːl/, not as [ˈpaŋˈkraːl] which can be sometimes heard. Such pronunciation is incorrect, because velar /k/ cannot influence the preceding alveolar phoneme /n/. On the other hand, assimilation across morpheme boundaries is absolutely natural. Words, such as *maminka*, *tango*, *bronchitida* are all realized with velar /ŋ/ due to the following velar phonemes /k/, /g/, /x/, thus these words are pronounced as /ˈmamɪŋka/, /ˈtɑŋɡɔ/, /ˈbrɔŋxɪtɪːda/ (Krčmová 2008, 187).

2.1.2 Labiodental Nasal

Gimson adds another possible sound change – /m/ becoming labiodental /ɱ/ when it is preceding initial labiodental fricative /f/ or /v/, as in *ten forks* pronounced as [ˈtɛm fɔːks], or *come for me* which can be realized as [ˈkʰɒm fə mi]. This change is observed in Czech pronunciation as well. However, it is not legal to apply such assimilation process at the word boundary. On the other hand, once it is pronounced within a word it is considered to be correct pronunciation, as in *nymfa* pronounced as [ˈnɪmfa], or *tramvaj* pronounced [ˈtramvaj] (Krčmová 2008, 187).

2.1.3 Assimilation of Alveolar Fricatives

Roach points out that the alveolar consonants /s/ and /z/ behave differently. He claims that the only noticeable change is that /s/ becomes /ʃ/, and /z/ becomes /ʒ/ when followed by /f/ or /j/. He gives an example of words *this shoe* transcribed as [ˈðɪʃˈʃuː], and *those years* pronounced as [ˈðəʊzˈjɪəz]. Then, Roach introduces important notice: “[T]he consonants that have undergone assimilation have not disappeared, ...the duration of the consonants remains more or less what one would expect for a two-consonant cluster” (Roach 2009, 111). This means that the length of the realized consonants is prevailed, even though the same two consonants are pronounced. This is very similar to Czech pronunciation of the same two phonemes where one of them is in the final position within a word and the other one in the initial position, as in *chceš šít* pronounced as [ˈxtsɛʃˈʃiːt]. This is, on the other hand, the example without applying any assimilation process as such a process (without any pause between words) is not found in proper Czech pronunciation, and thus not correctly used in fluent speech considering the orthoepic rules of standard Czech. Therefore, when the same sounds are realized across a word boundary, they must not be omitted. Thus, *kluk, kterému* is pronounced as /ˈklʊkˈktɛrɛːmʊ/ where both /k/ sounds are realized properly. Another example is *přílet této* transcribed as /ˈpɾiːlɛtˈtɛːtə/, or *přines seno* as /ˈpɾɪnɛsˈsɛnə/ (Krčmová 2008, 187). Pokorná and Vránová (2007, 14) support this with a statement that articulatory assimilation across word boundaries is characterized as a non-standard without any exceptions. For instance, pronouncing words *z Čech* as [ˈʃtʃɛx] instead of [ˈs tʃɛx] is illegal in standard Czech pronunciation, but it may occur in connected speech of certain Czech regions.

2.1.4 Dental Assimilation

In some cases, only certain features of one consonant can influence the preceding one, as in *often they* realized as [ˈʔɒfənˈðeɪ] where the phoneme /n/ is influenced by the following dental fricative /ð/ and only one of its features is assimilated and thus /n/ becomes dental as well as /ð/. There is an assimilation of /n/ to [ɲ] because of the following /ð/ in the phrase *in the* pronounced as [ˈɪn̪ ðə]. Another example is *fine thought* pronounced as [ˈfaɪn̪ θɔːt]. “The assimilation may be complete if the nasal becomes absolutely dental, or partial if it is somewhere between dental and alveolar, a form we cannot symbolize in transcription” (Ladefoged 2006, 109). In similar context, /d/ and /t/ can change into [ɖ] and [ɗ] in concrete realizations, as in *hide them* pronounced as [ˈhaɪɖ ðəm].

2.1.5 Palatal Assimilation

Krčmová further claims that a change of alveolar stops into palatal stops is very common in Czech, however, this change is realized only across morpheme boundaries. Thus, the words *puntík*, *kotník* are allowed to be realized as /'pʊŋci:k/, /'kɔɕni:k/, but words, such as *před nimi*, *od dětí* should be pronounced without palatalization of the final consonant of the preceding word, that means it should be pronounced as /'přɛd'ɲimi/, /'ʔɔd'jɛci:/ due to the word boundary. As English has no palatal stops, this cannot be anyhow compared to it. It must be taken into consideration, that all of the changes which appear in Czech pronunciation at word boundaries are not allowed to be realized in connected speech when orthoepic rules are applied. Still, those words mentioned above could be realized differently when applying the assimilation process and when a concrete phonetic realization of any speaker is taken into consideration.

2.2 Progressive Assimilation of Place of Articulation across Word Boundaries

Progressive (or perseverative) assimilation of place of articulation across word boundaries is not found as a separate or an independent feature in pronunciation of either of the analyzed languages. Gimson (2001, 303) observes the progressive type of assimilation only within a word and marks it as relatively uncommon. According to him, such changes may occur when a plosive is followed by a syllabic nasal and the nasal undergoes the process of assimilation of the same place of articulation as the preceding plosive, as in *happen* pronounced as ['hæpɪ̃] where /n/ becomes /m/ when preceded by bilabial /p/, or in *organ* pronounced as ['ʔɔ:gɪ̃] where /n/ becomes /ŋ/ due to the preceding velar /g/. However, the progressive type of assimilation across word boundaries is observed simultaneously with an assimilation of manner of articulation. This is applicable to both languages. In Czech, a stop and a fricative assimilate to an affricate, and at the same time these two alveolar consonants change into one postalveolar consonant. This change is possible due to the influence of a preceding consonant which influences the following one. This process is sometimes referred to as a fusion of two different forms of consonants, thus manner of articulation is changed. Assimilation of manner of articulation is discussed in detail in the following chapter.

The summary of all the types of place assimilation discussed above is stated in Table 2.

Table 2. Types of assimilation of place of articulation across word boundaries in English and Czech pronunciation

Phoneme undergoing the assimilation process	Influenced by	The specific sound realized at the word boundary	Example (including frequent but non-standard pronunciation)	Eng/ /Cz	Prog/Reg
/t/	/p/	/p/	['ðæp 'pɜ:sɪ]	Eng	Reg
/t/	/m/	/p/	['ðæp 'mæn]	Eng	Reg
/t/	/k/	/k/	['ðæk 'kʰeɪs]	Eng	Reg
/t/	/g/	/k/	['k ^w ɹɑ:k 'gɜ:d]	Eng	Reg
/d/	/k/, /g/	/g/	['bæg 'kɑ:]	Eng	Reg
/d/	/b/	/b/	['gɜb 'bɔɪ]	Eng	Reg
/n/	/p/	/m/	['bɪɑsɪm 'peɪpə]	Eng	Reg
/n/	/g/	/ŋ/	['tʰeŋ 'gɜ:lɪvz] ['veŋ 'gdɪ]	Eng, Cz	Reg
/n/	/k/	/ŋ/	['tʰeŋ 'kʰɑsɜz] ['pɑŋ 'kra:l]	Eng, Cz	Reg
/n/, /m/	/f/, /v/	/m/	['tʰeŋ fɔ:ks] ['tɑŋ veŋkɜ]	Eng, Cz	Reg
/s/	/ʃ/	/ʃ/	['ðɪʃ 'ʃu:]	Eng	Reg
/z/	/j/	/ʒ/	['ðəʒ 'ʒɪəz]	Eng	Reg
/n/	/ð/	/ŋ/	['ʔɒfəŋ 'ðeɪ]	Eng	Reg
/n/	/θ/	/ŋ/	['faɪŋ 'θɔ:t]	Eng	Reg
/d/	/ð/	/d̪/	['haɪd̪ ðəm]	Eng	Reg
/t/	/ɲ/	/c/	['pɹɪjɪ:c ɲegdɪ]	Cz	Reg
/d/	/ɲ/	/ʒ/	['pɹɛʒ ɲɪmɪ]	Cz	Reg
/n/	/c/, /ʒ/	/ɲ/	['pa:ɲ ci:fnɔɪ]	Cz	Reg

Note: Data in Table 2 summarize the main assimilation types mentioned in Chapter 2.

Table 2 above summarizes all the types of assimilation of place of articulation across word boundaries which were stated in Chapter 2.

To summarize the process of place assimilation, a lot of changes are observed in English pronunciation. Especially, the process where an alveolar stop changes to a bilabial or a velar consonant because of what follows. The major similarity between Czech and English pronunciation is when /n/ changes to velar /ŋ/. Another similarity is seen in a process of nasals changing to labiodental /ɱ/ when labiodental /f/ or /v/ follows. In English, however, more changes can be found, as nasals become dental nasals in some cases because of following dental /θ/ or /ð/. No such process is observed in Czech, as dentals are not part of its phonemic inventory. Czech palatal consonants are often found at word boundaries, unlike in English, where these phonemes do not exist. Still, all types of Czech and English assimilation of place of articulation across word boundaries are regressive.

3 ASSIMILATION OF MANNER OF ARTICULATION ACROSS WORD BOUNDARIES

According to Krčmová (2008, 188), assimilation of manner of articulation in Czech is often realized with assimilation of place of articulation at the same time. A change of a stop and a fricative into an affricate is the most common type of this kind of assimilation. The example of this process is a change of sounds in words *pod zemí* pronounced as [ˈpɔdʒɛmi:]. This happens due to an easier pronunciation of the alveolar stop /d/ and the fricative /z/, because in such process they are realized simultaneously. According to the correct pronunciation, these words should be pronounced as /ˈpɔdˈzɛmi:/, where both sounds /d/ and /z/ should be pronounced properly (Krčmová 2008, 188).

In the examples of words *pod stolem*, *pod židlí*, *nad štítem* can be found the same process in an improper pronunciation. Thus, the words *pod stolem* could be pronounced as [ˈpɔtstɔlɛm], *pod židlí* as [ˈpɔdʒɪdli:], and *nad štítem* as [ˈnatʃci:tɛm]. Pokorná and Vránová (2007, 14) present illegal pronunciation of words *předat štafetu* realized as [ˈpřɛdaˈtʃɪtafɛtɔ] and thus support the statement claimed above. Although such assimilation processes are very frequent in Czech, the only correct pronunciation is to realize all the relevant consonants within these consonant clusters, so that no affricate is pronounced, as in [ˈkvjɛdʒɪvɔta] (Krčmová 1999, 307). In this concrete example both alveolar stop /d/ and postalveolar fricative /ʒ/ are realized. Still, regressive voicing assimilation process is observed here. Kučera (1997) stresses the possible problems of simplified pronunciation of consonant clusters and at this point emphasises the importance of awareness of the difference between the spoken and written form, especially when teaching children the correct form of pronunciation according to the orthoepic rules. Interestingly enough, when considering assimilation of manner of articulation across morpheme boundaries, this process is absolutely acceptable, as in *podzim* pronounced as [ˈpɔdʒɪm], or *podšívka* pronounced [ˈpɔtʃi:fka].

In English pronunciation, an example of what is sometimes called coalescence, or coalescent assimilation is as well an example of assimilation of manner of articulation due to a change of an alveolar stop and an approximant /j/ to an affricate, as in *not yet* pronounced [ˈnɒtʃɛt] and *could you* pronounced [ˈkʊdʒu], where the final /t/, /d/ and the following initial /j/ combine to form /tʃ/ or /dʒ/ (Roach 2009, 111). According to Roach, this stated example could also be analyzed as a progressive assimilation considering the change of manner of articulation and also assimilation of place of articulation as the

following approximant /j/ becomes different due to the preceding /t/, or /d/ and both together change into an affricate which is postalveolar. Gimson (2001, 297) argues that the process of coalescence is a fusion of forms as an alveolar stop and an approximant coalesce to become a different consonant, an affricate. The Czech example of pronunciation of words *pod zemi* which has been stated above, undergoes the same process. The initial phoneme /z/ assimilates due to the preceding final phoneme /d/, and together change into an affricate /d͡z/. Therefore in both languages, assimilation of manner does exist.

Considering standard Czech pronunciation this process is applicable only to those sounds which are across morpheme boundaries. In English this phenomenon is commonly observed even across word boundaries. This finding suggests that the assimilation of manner of articulation affects the same alveolar consonants considering the final phonemes in both, English and Czech pronunciations. In English, however, an approximant /j/ undergoes this process, unlike in Czech, where /s/, /z/, /ʃ/, and /ʒ/ change the preceding consonants /t/ or /d/ to an affricate /t͡s/, /d͡z/, /t͡ʃ/, or /d͡ʒ/, respectively.

Roach (2009, 112) observes another possible change in rapid and casual speech, and that is an example of regressive assimilation of manner of articulation where a final stop becomes a fricative or a nasal, as in *that side* pronounced as ['ðæs saɪd], and *good night* pronounced ['gʊn naɪt]. As he further points out, it is most unlikely to find a case where a final fricative or a nasal stop would become an oral stop.

Progressive assimilation of manner of articulation is also possible to apply in those examples where a word-initial /ð/ follows an oral stop or a nasal at the end of a preceding word, but preserving its dental release. For instance, the words *in the* in their unstressed position thus become [ɪn̩ðə], *get them* become ['geɪt̪ ðəm], and *read these* are in such a case pronounced as ['ri:ð̪ ði:z] (Roach 2009, 112). In Czech, no dental phoneme is a part of the phonemic inventory. Therefore those changes cannot be applied here.

Still, the assimilation of manner of articulation is principally progressive in pronunciation, or is rather the result of a fusion regarding both languages, except particular cases of regressive assimilation of manner of articulation found only in English pronunciation. Table 3 below summarizes all the types of assimilation of manner of articulation mentioned in this chapter.

Table 3. Types of assimilation of manner of articulation across word boundaries in English and Czech pronunciation

Phoneme undergoing the assimilation process	Influenced by	The specific sound realized at the word boundary	Example (including frequent but non--standard pronunciation)	Eng/ /Cz	Prog/ /Reg/Fusion
/d/ + /z/	Each other	/d̥z/	['pɒd̥zɛmi:]	Cz	Fusion
/t/ + /s/	Each other	/t̥s/	['pɒt̥stɔləm]	Cz	Fusion
/d/ + /ʒ/	Each other	/d̥ʒ/	['pɒd̥ʒɪdli:]	Cz	Fusion
/t/ + /ʃ/	Each other	/t̥ʃ/	['næt̥ʃi:təm]	Cz	Fusion
/t/ + /j/	Each other	/t̥j/	['nɒt̥jɛt]	Eng	Fusion
/d/ + /j/	Each other	/d̥j/	['kɒd̥ʒu]	Eng	Fusion
/t/	/s/	/s/	['ðæs sɑd]	Eng	Reg
/d/	/n/	/n/	['gɒn nɑt]	Eng	Reg
/n/ + /ð/	/n/	[n̥]	[ɪn̥nə]	Eng	Prog
/t/ + /ð/	/t/	[t̥]	['geɪt̥təm]	Eng	Prog
/d/ + /ð/	/d/	[d̥]	['ri:d̥di:z]	Eng	Prog

Note: Data in Table 3 summarize the main assimilation types mentioned in Chapter 3.

Table 3 summarizes types of assimilation of manner of articulation considering specific phonemes which are involved in the process. The major similarity between assimilation of manner of articulation in both, English and Czech pronunciation, is seen rather in the process than in the result or the phonemes affected. Mostly, this is caused by different consonants undergoing the process of fusion.

As for assimilation of manner of articulation, process of fusion of certain sounds is found in both languages. However, in English more types of assimilation of manner are observed. Although, fusion exists in both languages, regressive and progressive assimilation is found only in English assimilation of manner of articulation. When comes to fusion, more possibilities can be seen in Czech pronunciation as more phonemes are able to fuse into

one sound, unlike in English where only two sounds can form one, that is /t/ and /j/ or /d/ and /j/.

4 ASSIMILATION AS A PROBLEM FOR PHONEME THEORY

Due to inseparable interaction between phonetics and phonology, a problem has developed in a process of assimilation across word boundaries. In principle, a phoneme differentiates meanings of words. Nevertheless, in some cases, certain assimilation process causes that one phoneme is fully assimilated and becomes not only alike but identical to the preceding one. As Roach (2009, 113) points out, when, for instance, /d/ in *good* originally transcribed as /'gʊd/ becomes /g/ in the phrase *good girl* pronounced as ['gʊg gɜ:l] or /b/ in the phrase *good boy* pronounced as ['gʊb bɔɪ], should then be said that one phoneme has been substituted for another? If yes, then dental assimilation should be taken into consideration. In the phrase *good thing* pronounced as ['gʊd̥ θɪŋ] phoneme /d/ becomes dental [d̥] when it precedes the dental /θ/ in *thing*. In another phrase of *good father* phoneme /d/ is pronounced as a labiodental plosive before the initial labiodental fricative /f/ in *father*. Roach further notes that “English has no dental or labiodental plosive phonemes” (Roach 2009, 113). Therefore he concludes that in these cases, although there is an obvious assimilation, it cannot be said that there is a substitution of one phoneme for another.

Once it is said that a certain phoneme is realized by a different allophone, it must be also stated that in the case of *good boy* realized as ['gʊb bɔɪ] phoneme /d/ has its bilabial allophone /b/, and in the example of *good girl* realized as ['gʊg gɜ:l] the same phoneme /d/ also has its velar allophone /g/. These findings changed the traditional approach to phonemes and their allophones. Traditionally, phonemes could not overlap in their allophones. The only stops (plosives) which had their bilabial allophones were /p/ and /b/. Traditional phonology claims that one phoneme in certain contexts can change into different phonemes, however, based on modern findings this idea is no longer supported. Nowadays, the example of *good boy* is seen not as an issue of the word *good* ending in a phoneme /d/ or in /b/, but rather as a matter of the fact that alveolar and/or bilabial closure are achieved. As Roach claims, considering the words *good girl*: “There may be an alveolar closure immediately preceding and overlapping with a velar closure; there may be simultaneous alveolar and velar closure, or a velar closure followed by slight contact but not closure in the alveolar region“ (Roach 2009, 113).

Gimson’s approach to this issue is different: “Assimilations at boundaries may be merely of an allophonic kind; or they may be of such an extent that a change of phoneme is involved” (Gimson 2001, 297). Thus he suggests that when comparing a word in isolation to the same word pronounced in a certain context the phoneme may not have only some of

its features different, i.e. to contain different allophone, but it can be pronounced with a different phoneme. This statement supports the idea that /p/ cannot be an allophone of /t/ in the final position of the word *that* which precedes the bilabial consonant, as in *that man* pronounced as [ˈðæp mæn]. On the other hand, by this statement Gimson suggests that phonemes can change their place when being part of a different context. He afterwards divides the possible variations of consonants realized in pronunciation into allophonic and phonemic ones.

As the assimilation of place of articulation is usually found in English language, Czech phonologists do not have to take into account this approach considering standard Czech pronunciation. There is no such case in standard Czech pronunciation where one phoneme fully adapts due to another one, where for instance, /d/ becomes /b/ as it is possible in English. All phonemes have a complete list of their allophones which could be found in standard causal speech. However, this is noted as far as Czech phoneticians and phonologists go in the studies considered and quoted in this thesis.

In previous chapters three major types of assimilation were mentioned and supported by examples. The following analysis includes transcriptions of authentic utterances with all the types of assimilation process across word boundaries which were stated above and thus implements the theory into practice.

II. ANALYSIS

5 COMPARISON OF TRANSCRIPTIONS

5.1 Collecting Research Materials and Methodology

The following transcriptions of native speakers' pronunciations illustrate all the types of assimilation across word boundaries in English and Czech mentioned in the Theory. For the purposes of this thesis only the relevant sections of utterance were taken into consideration. Therefore, fluent English and Czech pronunciation with clearly noticeable assimilation processes was selected to be transcribed. Approximately four hours of spoken Czech and four hours of spoken English are chosen so that the assimilation processes in fluent pronunciation of both languages can be analyzed. All the chosen materials are attached to the thesis appendices so that the transcribed fractions of utterance are easily found. The approach of auditory phonetics is applied when analyzing the spoken material. The following division of certain types of assimilation processes is done with respect to the context of consonants found at the word boundary.

To some extent, the two phonemic inventories of both languages are divergent. As this is a comparison of two different phonemic systems the International Phonetic Alphabet symbols are used in all transcriptions. Although the divergence is obvious, many similarities are observed considering the process of assimilation.

The following parts of Czech utterance are taken from the broadcasting of Český rozhlas Radiožurnál, which has been established as the first Czech public radio. All parts of English utterance are transcribed from spoken material of the BBC Radio 4. For the purposes of this thesis the analyzed material is carefully selected so that only the standard pronunciation is described and no regional items are included. If the original spoken material includes regional type of pronunciation, then this is not the target of the following analysis and is not used for illustrating the assimilation phenomena. Transcriptions thus include only those assimilation processes which can be found in Received Pronunciation and standard Czech pronunciation.

5.2 Voicing Assimilation across Word Boundaries

The following utterances show the process of voicing assimilation at the word boundary. The authentic spoken material is in each case transcribed by using the symbols of the International Phonetic Alphabet. The following types are divided according to the specific consonantal environment. Some examples include non-standard assimilation processes as these were also mentioned in the Theory.

Type 1 VOICELESS/VOICED CONSONANT + PAUSE/GLOTTAL STOP

When a voiceless consonant precedes a pause or a glottal stop, the consonant should stay voiceless, as in example 1, where the speaker correctly uses this orthoepic rule. The same process is illustrated by example 2.

1 *člověk občas* [CRR03] [ˈtʃlɔvʲɛkˈʔɔptʃas]

2 *k obrovskému* [CRR06] [ˈkˈʔɔbrɔfskɛ:mʊ]

Example 3 shows that voiced [v] is influenced by a glottal stop preceding the vowel [ʊ] and that is why originally voiced phoneme /v/ becomes voiceless [f] in this particular realization.

3 *v ulicích* [CRR05] [ˈfˈʋlɪtʃiːx]

In English, the final consonant which is originally voiced can be only devoiced when followed by a glottal stop. It cannot be fully voiceless because the final voiced sounds have the tendency to preserve their voicing, as shown in example 4 where the speaker correctly applies this rule.

4 *image in* [BBC02] [ˈɪmɪdʒˀˈɪn]

Example 5 illustrates [d] sound which is devoiced due to the following pause between the final [d] and the initial glottal stop.

5 *made about* [BBC09] [ˈmeɪdˀˈʔəˈbaʊt]

The following example shows both stops realized properly. A slight pause follows the final stop of the first word pronounced.

6 *next opportunity* [BBC03] [ˈnekstˀ,ʔɔpɔˈtʃju:nəti]

Type 2 VOICELESS CONSONANT + UNIQUE CONSONANT

In examples 7 and 8 the Czech speaker uses the assimilation of voicing according to the orthoepic rules. As illustrated by the two following examples, no voicing assimilation takes place when the unique consonant follows the voiceless one. Considering example 7 the unique consonant [j] does not influence the preceding voiceless [x]. Although it is a pair consonant it stays correctly unassimilated.

7 *příběh jednoho* [CRR04] [ˈpɾiːbjɛxˀˈjɛdnɔɦɔ]

Example 8 shows similar process where [x] does not assimilate due to the following unique consonant [l], even though this is a voiced one. Thus, both those unassimilated forms are correctly realized according to the orthoepic rules.

8 *rybářských lodkách* [CRR04] [ˈrɪbaːɾʃkiːxˀˈlɔckaːx]

Example 9 shows pronunciation of another Czech speaker, still with correct application of assimilation process.

9 *šikovných lidí* [CRR01] [ˈʃikɔvniːxˈliːʃiː]

In example 10 [s] does not react to its closeness to [r] being the unique consonant and stays voiceless.

10 *občas reaguje* [CRR03] [ˈɔptʃasˈrɛagɔjɛ]

In example 11 no assimilation takes place. The unique consonant [n] does not influence the preceding consonant and therefore the sound stays voiceless.

11 *pořád nevíme* [CRR07] [ˈpɔraːtˈnɛviːmɛ]

Incorrect application of assimilation of voicing is seen in the following example where unique consonant /n/ influences the preceding consonant and thus this one assimilates to its voiced variant [ɲ]. Instead of orthoepically correct pronunciation of the first word /ˈtɛc/ this speaker uses incorrect realization with [ɲ].

12 *ted' novým* [CRR03] [ˈtɛɲ nɔviːm]

In English, unique consonants generally do not influence preceding voiceless consonants. Example 13 shows such process where the speaker pronounces voiceless [t] followed by voiced unique [w]. These two sounds correctly do not influence each other.

13 *about oneself* [BBC02] [ˈəbɑːtˈwʌnsɛlf]

In the following example no assimilation takes place. The voiceless [t] is not influenced by the following unique sound of [ɹ], even though all unique sounds are voiced.

14 *not really* [BBC01] [ˈnɒtˈɹɪli]

Type 3 VOICELESS CONSONANT + VOICELESS CONSONANT

Example 15 shows two voiceless consonants adjacent to each other, thus [k] in this case influences the preceding [x] and that is why it stays voiceless when it is realized.

15 *věcech které* [CRR05] [ˈvjɛtsɛxˈkɛrɛː]

Example 16 illustrates how voiceless [p] influences the preceding consonant [x]. Therefore [x] stays voiceless due to regressive assimilation of voicing.

16 *nových prvků* [CRR01] [ˈnɔviːxˈpɪfkɔː]

In example 17 [x] sound stays unassimilated due to the following voiceless sound of [s]. If the initial consonant was voiced, [x] would change into its voiced variant [ɣ]. Such process is demonstrated by examples in section of Type 5.

17 *těch sedm* [CRR05] [ˈtɛxˈsɛdɪ]

When realizing the following piece of utterance the English speaker pronounces final voiceless [t] and initial voiceless [θ] correctly, because the two sounds influence each other being adjacent to one another.

18 *sort things* [BBC02] ['sɔ:t'θɪŋz]

Example 19 shows two voiceless consonants which stand fully voiceless as no voiced sound influences either of them. Additionally, this example illustrates progressive assimilation of voicing within one word as [ɹ] is devoiced in each of the analyzed words. This is caused by the influence of the voiceless stop which precedes the approximant in each case.

19 *Christmas traditions* [BBC09] ['krɪsməs'trɪʃən]

The only possible Czech progressive assimilation of voicing is shown on the example below. Progressive assimilation can be realized only within a word, as in example 20, where the sound [x] is realized without voicing due to the preceding voiceless fricative [s].

20 *shodou* [CRR04] ['sxɔdɔʊ]

According to this type of pronunciation it is obvious that the speaker comes from Bohemia region. If the word *shodou* was pronounced as ['zɦɔdɔʊ], this would mean that the speaker is probably Moravian, as discussed in Chapter 1.2.

The English progressive assimilation of contracted forms was mentioned in Chapter 1.2.2. Such process is shown in the following example. The contracted form 's stands for *is*. The preceding [t] sound influences the following [s] which originally comes from *is*. The auxiliary *is* should be pronounced with voiced consonant [z], however, the contracted form triggers the progressive assimilation process and voiced sound becomes voiceless.

21 *What's his name?* [BBC04] ['wɒts'hɪz'nɛɪm]

On the other hand, when contracted form of *is* follows a vowel [z] is pronounced as devoiced rather than its voiceless variant, as in example 22.

22 *she's wearing* [BBC01] ['ʃi:z'weəriŋ]

Different situation is seen in the following example where the speaker realizes only one [s] instead of two divergent sounds [z] and [s]. Therefore this sound of a sibilant is voiceless as being treated as an initial consonant of the following word *something*.

23 *there's something* [BBC01] ['ðeə'sʌŋθɪŋ]

Type 4 VOICED CONSONANT + VOICED CONSONANT

Example 24 shows the opposite to the preceding example. This time the following voiced sound [d] influences [v] and therefore in this concrete realization both are correctly voiced.

24 *v Dánsku* [CRR04] [ˈv da:nskʊ]

The same process is illustrated by the example 25 where /b/ being the voiced bilabial consonant influences the preceding fricative and thus makes it voiced as well. If the first word was pronounced without any further context, then the final [ʃ] would be voiceless due to the following pause. In this example voiced consonant [ʒ] is realized because of the voiced [b] sound.

25 *soutěž bude* [CRR01] [ˈsɔʊtʃɛʒ bʊdɛ]

Influence of voiced [v] is illustrated by the example 26 in which [v] influences the preceding sound, thus both consonants are voiced.

26 *už věděla* [CRR04] [ˈʔʊʒ vjɛʃɛla]

No devoicing takes place in the following example. The English speaker pronounces the final voiced consonant [z] and the initial voiced [g] sound without any pause between them so that both consonants stay voiced.

27 *is great* [BBC02] [ˈɪz grɛɪt]

The similar process is shown in example 28 where the voiced consonant [z] is followed by voiced [b].

28 *as being* [BBC02] [ˈæzˈbɪɪŋ]

The same phenomenon is illustrated by example 29. The voiced sound of [b] influences the preceding [z] and stays fully voiced.

29 *Francis Bacon* [BBC02] [ˈfrɑ:nsɪz beɪkən]

In the following phrase the speaker pronounces both consonants fully voiced as it is pronounced within connected speech and these two sounds are adjacent to each other. To be precise, example 30 shows assimilation process during which voiced labiodental fricative and voiced bilabial stop are realized as no pause takes place between the two consonants.

30 *leave behind* [BBC09] [ˈli:v bɪˈhaɪnd]

Type 5 VOICELESS CONSONANT + VOICED CONSONANT

In the following example the originally voiceless [x] assimilates to its voiced variant [ɣ] due to the following voiced consonant [ʒ].

31 *těch dětí* [CRR04] [ˈtɛɣ ʃɛci:]

In example 32 the speaker incorrectly pronounces the final consonant as voiced. This is caused by the fact that the initial sound of the following word is voiced as well.

32 *několikrát žádalo* [CRR02] [ˈɲɛkɔlɪkra:d ʒa:dalɔ]

Correctly not applied assimilation process is shown by example 33 where [x] is not influenced by the following initial voiced [z]. In this case the final consonant [x] stays voiceless.

33 *státních zástupců* [CRR07] ['sta:tɲi:x'za:stɔptsu:]

The same process shows example 34 where a very short pause follows the final [ts̆], thus no assimilation takes place and the voiced [z] does not influence the preceding voiceless consonant.

34 *moc zákonodárnou* [CRR07] ['mɔts̆'za:kɔnɔda:mɔʊ]

As stated in Chapter 1.1.4, /v/ should not trigger the process of assimilation, because phonologically it behaves as a unique consonant. The following examples 35 and 36 show the same phenomenon without realization of assimilation process. In addition, example 36 illustrates the importance of pronunciation of [s] sound when followed by [v]. If the word *sval* was pronounced with [z], this means if the assimilation process was applied, the meaning of the word would be different, as already mentioned in the Theory.

35 *jak velká* [CRR01] ['jak'velka:]

36 *sval* [CRR06] ['sval]

No assimilation process is observed in the following example of pronunciation of words *but there* as the English speaker correctly pronounces voiceless [t] and preserves its voicelessness, even though this consonant is followed by the voiced [ð]. The tendency to preserve the final voiceless sounds voiceless and voiced sounds voiced is very strong in English.

37 *but there* [BBC02] ['bʌt'ðeə]

The same tendency is illustrated by example 38 where the voiceless [s] remains voiceless, even though the initial consonant of the second word is the voiced [d]. No assimilation process is observed here.

38 *less disturbed* [BBC02] ['les,dɪs'tɜ:bɹd]

Example 39 shows voiceless [t] unchanged when followed by voiced [b]. This is again example of preservation of voicelessness of the final consonant. The initial voiced [b] does not influence the preceding sound.

39 *just before* [BBC04] ['dʒʌst,bɪ'fɔ:]

The following example shows voiceless alveolar stop and voiced alveolar stop. Although this is a combination of two sounds distinguished only by their voicing/voicelessness, no assimilation change takes place.

40 *set down* [BBC04] ['set'daʊn]

Type 6 VOICED CONSONANT + PAUSE/VOICELESS CONSONANT

The regressive type of assimilation of voicing causes that in Czech realizations consonants are fully voiceless when followed by voiceless sounds. In English, as illustrated by the transcription in example 41, initial voiceless consonant triggers the process of devoicing of the preceding—originally voiced—consonant.

41 *of paintings* [BBC02] [ˈʔɔɪˈpeɪntɪŋ]

Example 42 shows the final [d] being influenced by the following initial [t] when these consonants are adjacent to each other in connected speech. The consonant [d] is devoiced in this case. Still, it is not fully voiceless as English voiced consonants tend to preserve their voicing at the end of words. As discussed in Chapter 1.1.2, final voiced consonants are rather devoiced than fully voiceless or fully voiced when a pause follows.

42 *made to* [BBC09] [ˈmeɪd̥t̪ʊ]

The same assimilation process is observed in example 43 where [d] sound becomes devoiced because of the following voiceless consonant [k].

43 *band called* [BBC09] [ˈbænd̥kɔːlɪd̥]

Example 44 shows the originally voiced consonant [z] which is devoiced in this case due to the influence of the following voiceless [k] sound.

44 *those cases* [BBC08] [ˈðəʊz̥keɪsɪz̥]

Considering example 45, which shows Czech pronunciation, the consonant [tʃ] as the voiceless variant of a pair phoneme influences the preceding sound of [v], thus it assimilates and becomes voiceless as well.

45 *v Čechách* [CRR04] [ˈf tʃɛxɑːx]

In example 46 voiceless consonant [t] influences the preceding [ʃ] and makes it voiceless, thus the voiceless [ç] is realized.

46 *ted' tedy* [CRR05] [ˈtɛç tɛdɪ]

Similar sound conditions are shown in example 47. Voiceless fricative [s] triggers the process of assimilation where the final consonant of the preceding word becomes voiceless.

47 *když se* [CRR05] [ˈgdɪʃsɛ]

In the following example the speaker applies correctly the rules of voicing assimilation and thus [d] is pronounced as voiceless [t] due to the following voiceless [p].

48 *před první* [CRR02] [ˈpɪɛt prvɲiː]

The same phenomenon is shown in the following example. Voiceless fricative [s] is realized when influenced by voiceless alveolar stop.

49 *bez takových* [CRR02] ['bɛs takɔvi:x]

Type 7 APPROXIMANT + /p/, /t/, /k/

As discussed in Chapter 1.2.1 approximants or semivowels undergo assimilation process when they immediately follow voiceless variants of alveolar stop, velar stop, or bilabial stop. Such process causes that these approximants lose their voicing, as in example 50 where the final [k] influences the initial [j]. This is progressive type of assimilation process as the following sound is influenced by the preceding one.

50 *thank you* [BBC10] ['θæŋ kju:]

The same phrase is found several times in the analyzed spoken material.

Example 51 shows the [l] sound devoiced when being preceded by voiceless [t]. In this phrase the stress is passed across the word boundary to the voiceless alveolar stop therefore [l] is devoiced. This is again progressive assimilation of place or articulation.

51 *at least* [BBC09] [ə'tli:st]

5.3 Assimilation of Place of Articulation across Word Boundaries

This chapter deals with the phenomenon of place assimilation at the word boundary. Although more natural for English speakers, transcriptions of Czech authentic utterances illustrate that this process can be found even in connected speech of Czech speakers.

Type 8 IDENTICAL CONSONANTS

As previously stated in Chapter 2.1, no elision of the same two adjacent sounds can be realized. This orthoepic rule was correctly applied to the following example 52, where both nasal bilabial consonants are pronounced properly. If a speaker wants to realize two identical sounds at the word boundary, they must make at least a very short pause and apply the stress when pronouncing the following initial sound.

52 *bychom mohli* [CRR04] ['bixɔm'mɔfilɪ]

Example 53 shows similar process. Both postalveolar [ʒ] sounds are realized.

53 *až žasnul* [CRR02] ['ʒaʒ'ʒasnʊl]

Alveolar stops at word boundaries in the following example are again pronounced according to the orthoepic rules. Both [t] sounds are realized.

54 *připomínat tuto* [CRR02] ['pɪpɔmi:nat'tʊtʊ]

The following example shows two adjacent unique consonants which are both properly realized at the word boundary.

55 *pár rodin* [CRR05] [ˈpa:rˈrɔʃɪn]

In the following utterance, the English speaker also uses the rule of pronouncing two identical sounds properly when these same consonants are neighbouring sounds. Two same voiceless alveolar stops are pronounced in example 56.

56 *look at today's* [BBC10] [ˈlʊkətˌtəˈdeɪs]

In some cases of English connected speech the speaker pronounces only one alveolar stop instead of two consonants at the word boundary although different sounds are originally present in those words. Example 57 shows correct realization of both, voiceless alveolar stop and voiced alveolar stop.

57 *great depression* [BBC10] [ˈɡreɪtˌdɪˈpreʃn]

On the other hand, in another example the speaker pronounces only one alveolar stop even though two sounds should be realized. Instead of two [t] sounds only one of them is pronounced in example 58 where this sound is immediately followed by the vowel [ʊ] because this is not the end of the whole fluent utterance.

58 *adjacent to* [BBC10] [ʔəˈdʒeɪsntʊ]

Type 9 ALVEOLAR STOP/NASAL + VELAR STOP

This type of an assimilation change was discussed in Chapter 2.1.1. In example 59 speaker pronounces velar nasal stop due to the following velar stop. He realizes no pause before the stop therefore the assimilation process takes place.

59 *you can get* [BBC06] [ˈju:kənˈget]

The following example shows the name of a presenter. The speaker who pronounces it uses the stress on [k] which is the initial sound of the second word being the surname. This is example of correct pronunciation as both sounds, [n] and [k], are realized without applying any assimilation process.

60 *Sharon Kinsella* [BBC06] [ˈʃa.rən ˌkɪnˈzɛlə]

In the following example Czech speaker pronounces velar nasal instead of correct pronunciation of alveolar nasal. The assimilation process is caused by the velar consonant which follows the preceding nasal and thus influences originally alveolar sound which then becomes velar.

61 *ten Karel* [CRR02] [ˈtɛŋ kareɫ]

This assimilation change is mainly observed within a word as this process is understood as incorrect pronunciation when considering realization across word boundaries. Regarding standard Czech both sounds should be clearly realized at the boundary.

Example 62 illustrates what has been stated above. The speaker realizes a change in pronunciation of alveolar nasal into velar nasal as these sounds are adjacent to each other within the word *tenkrát*. Such change of a consonant is natural at the morpheme boundary.

62 *tenkrát* [CRR08] [ˈtɛŋkra:t]

In the following example the speaker does not realize any assimilation change and both consonants [n] and [k] are pronounced properly.

63 *ten kuň* [CRR05] [ˈtɛnˈku:ɲ]

The same consonantal change is present in English pronunciation. This type of assimilation is regarded as a natural change when the consonants are within a word, as in example 64.

64 *thank you* [BBC10] [ˈθæŋkjʊ:]

On the other hand, no change of an alveolar stop into velar stop can be found in Czech pronunciation. This assimilation process is natural for English speakers. In example 65 alveolar stop changes into velar stop due to the following velar [g] sound.

65 *Tate gallery* [BBC02] [ˈteɪk ɡæləri]

Example 66 shows correct pronunciation of [d] and [g] when being adjacent to each other. Both are properly realized without letting [g] influence the preceding [d]. In some examples of different utterances a speaker can pronounce two [g] sounds instead of two divergent consonants, as shown in Chapter 2.1.1.

66 *good girl* [BBC04] [ˈɡʊdˈgɜ:lɪv]

When the speaker of the following phrase pronounces United Kingdom no change of place of articulation occurs. The velar stop does not influence the preceding consonant and the alveolar stop stays alveolar. This again proves what has been discussed previously—that in proper and correct pronunciation assimilation process of this kind does not take place.

67 *United Kingdom* [BBC05] [juˈnaɪtɪdˈkɪŋdəm]

Type 10 ALVEOLAR/BILABIAL NASAL + LABIODENTAL FRICATIVE

The first two of the following examples show how the speaker applies the assimilation process across word boundaries. In each of these examples [v] sound influences the preceding bilabial nasal and thus labiodental [ɱ] appears.

68 *tam viděl* [CRR04] [ˈtaɱ vɪɛl]

69 *mám velikánské* [CRR03] [ˈma:ɱ vɛlɪka:nskɛ:]

Unlike in English, when an alveolar nasal precedes a labiodental fricative the assimilation process does not take place and both sounds are properly pronounced, as in example 70 and 71.

70 *naladěn večerní* [CRR03] ['nalaʃɛn'vɛtʃɛrni:]

71 *Antonín viděl* [CRR01] ['ʔantɔni:n'viʃɛl]

Example 72 shows the pronunciation of a word *different* with elided [t] at the end, thus the word ends with [n] sound which is in this case influenced by the following labiodental fricative and therefore assimilates into labiodental nasal.

72 *different family* [BBC09] ['dɪfɪəŋ'fæməli]

The English speaker does not apply the assimilation process in the following example. Although alveolar nasal immediately precedes the labiodental fricative [f], both sounds are properly realized and no labiodental [m] appears in a pronunciation of the words *human form*.

73 *human form* [BBC02] ['hju:mən'fɔ:m]

Example 74 shows unassimilated sounds [n] and [f]. Considering the fact that the following example is a spoken form of a name it would not be appropriate to pronounce it with a non-standard assimilation process.

74 *Ian Fleming* [BBC07] ['i:ʃən'fleɪŋ]

As discussed in the Theory, the phenomenon of labiodental [m] is observed at morpheme boundaries rather than across the word boundary. The speaker applies the assimilation process in the following example of pronunciation. The labiodental [m] appears in his realization of the word *information* where the labiodental fricative immediately follows the nasal.

75 *information* [BBC06] [ɪŋfə'meɪʃn]

The same process is found in the pronunciation of the word *conversation* illustrated by the transcription in example 76.

76 *conversation* [BBC06] [kɒŋvə'zɔ:ʃn]

Type 11 ALVEOLAR STOP + PALATAL STOP

The following example shows the phenomenon of alveolar stop changing into palatal stop which was discussed in Chapter 2.1.5. In example 77 and 78 the speaker realizes this kind of assimilation within one word.

77 *trestní* [CRR07] ['trɛsɕni:]

78 *vlastně* [CRR01] ['vlascɕɛ]

On the other hand, the word *státní* was pronounced without applying assimilation process, as illustrated by example 79.

79 *státní* [CRR07] ['sta:tɕi:]

Considering realization of this assimilation process across word boundaries the speakers of the analyzed utterances use the orthoepic pronunciation and do not apply any assimilation of this kind, as in example 80.

80 *dělat něco* [CRR01] [ˈʃɛlatˈnɛtsə]

The last example of this type of assimilation, however, shows the omission of an alveolar stop [t]. Due to an easier pronunciation, the speaker deletes the stop at the end of the word *pět* and continues with the palatal stop [c] when realizing the word *tisíc*.

81 *pět tisíc* [CRR04] [ˈpjɛ cɪsiːts]

As palatal stops are present only in Czech phonemic inventory, no such assimilation process takes place in English pronunciation.

Type 12 ALVEOLAR STOP/NASAL + DENTAL FRICATIVE

This type of assimilation can appear only in English pronunciation as no dental fricatives are in Czech phonemic inventory. In example 82 the voiceless dental fricative influences the preceding alveolar nasal, and [n] is then pronounced with a dental release. This is caused due to the omission of the final stop [t] which can happen in clusters of three or more consonants.

82 *don't think* [BBC02] [ˈdɔːŋ ˈθɪŋ]

The following example shows unassimilated sounds because of the proper pronunciation of two adjacent consonants. The alveolar nasal is realized without any dental release. The initial voiceless fricative does not influence the preceding [n].

83 *nineteen thirties* [BBC07] [ˈnaɪn ˈtiːn ˈθɜːtɪːz]

The assimilation process is shown in example 84 where [ŋ] is realized as a dental stop because of the following dental fricative.

84 *in the* [BBC02] [ˈɪŋðə]

Another example of this kind is demonstrated by the following transcription. This time the voiced dental fricative [ð] causes the dental release to the preceding voiced alveolar stop [d].

85 *understand them* [BBC02] [ˌʌndəˈstænd ðəm]

In the following example both consonants [t] and [ð] are pronounced so that no assimilation takes place and [t] stays released as an alveolar.

86 *plot them* [BBC02] [ˈplɒt ˈðəm]

In example 87 voiceless alveolar stop [t] assimilates because of the following voiced dental fricative. Therefore its release is dental.

87 *at the* [BBC02] [ət̚ðə]

Example 88 shows [t] with its dental release due to the following dental fricative. No pause precedes [ð] thus the [t] sound is released at the same time as the beginning of the interdental consonant realization.

88 *without them* [BBC09] [ˈwɪðəʊt̚ ðəm]

Example 89 illustrates the dental release at the end of realization of the sound [t] due to its adjacent dental consonant [θ]. Another noticeable change is that the final [z] is fully voiced because no glottal stop was realized after this consonant was pronounced, and a vowel immediately follows. Therefore, this example shows two assimilation changes of a different kind—assimilation of place of articulation and assimilation of voicing.

89 *sort things out* [BBC02] [ˈsɔːt̚ θɪŋz əʊt]

Type 13 ALVEOLAR STOP/NASAL + BILABIAL STOP/NASAL

As discussed in the Theory in Chapter 2.1.1, this type of assimilation is not present in Czech pronunciation. English speakers, however, apply this assimilation process often in connected speech.

Example 90 shows the process of assimilation of alveolar sound to bilabial sound due to the following bilabial stop [p].

90 *in painting* [BBC02] [ˈɪm p̚eɪntɪŋ]

The following example illustrates the context in which [t] becomes [p] when preceding another voiceless bilabial consonant.

91 *that problem* [BBC10] [ˈðæp̚ ˈprɒbləm]

In example 92 the same phenomenon is observable. Instead of pronouncing alveolar stop and bilabial stop the speaker realizes two bilabial consonants. Later on, he pronounces the same two words in the same way.

92 *that person* [BBC10] [ˈðæp̚ ˈp̚ɜːsn̩]

Example 93 shows consonants [t] and [p] properly pronounced instead of applying assimilation process when realizing them. The [k] sound in the first word is unreleased fully due to the following alveolar stop [t]. Then the sound of [p] is pronounced as it is stressed and the pause precedes it.

93 *perfect page* [BBC03] [ˈp̚ɜːfɛk̚ t̚ ˈp̚eɪdʒ̚]

The following example shows correct pronunciation without any assimilation process, even though [d] and [b] are adjacent to each other. The alveolar stop stays unassimilated

and is only devoiced as it is the final sound and it is not influenced by the following bilabial stop.

94 *demonstrated by* [BBC08] [ˈdemənstɹɛɪtɪd̥ˈbaɪ]

As also mentioned in Chapter 2.1.1, this type of assimilation is not found in Czech pronunciation. Czech speakers do not realize bilabial stop instead of alveolar stop, as in examples 95 and 96.

95 *připravovat pozemková* [CRR02] [ˈpɹɪpɹavəvatˈpɔzɛmkɔvɑː]

96 *západ brazilský* [CRR05] [ˈzaːpad bɹaɪlskiː]

Change of an alveolar nasal into bilabial nasal is not found in Czech pronunciation either as this is not regarded as a natural process of assimilation for Czech speakers. Correct realization is shown in example 97.

97 *ten přízvuk* [CRR05] [ˈtɛnˈpɹiːzvʊk]

Type 14 VOICELESS ALVEOLAR FRICATIVE + VOICELESS POSTALVEOLAR FRICATIVE

The change of an alveolar fricative into postalveolar fricative does not seem to appear in Czech pronunciation. English speakers, however, can in some cases realize [ʃ] instead of [s] at the word boundary. Still, if they do so then such change is regarded as an improper pronunciation, as discussed in Chapter 2.1.3. This assimilation process is regarded as rare considering its frequency of occurrence.

Example 98 shows pronunciation where double [ʃ] appears at the word boundary and no alveolar fricative is realized. Also, alveolar stop in *but* has changed due to the following dental fricative and both are realized with dental release. This change is described and analyzed in Type 17.

98 *but this show* [BBC07] [ˈbʌt̚ ʃʃɹəʊ]

In Czech fluent speech no such change takes place as a change of alveolar fricative into postalveolar fricative is regarded as improper and not natural pronunciation. Example 99 illustrates correct Czech pronunciation.

99 *dodnes Šumava* [CRR08] [ˈdɔdnɛsˈʃʊmavɑ]

Type 15 ALVEOLAR FRICATIVE + APPROXIMANT /j/

Example 100 illustrates the assimilation process where initial [j] influences the preceding alveolar [s] which assimilates to postalveolar [ʃ].

100 *this youth* [BBC07] [ˈðɪʃˈjuːθ]

The same process is observed in example 101. The alveolar fricative is assimilated due to the approximant [j].

101 *this year* [BBC09] ['ðɪf'jɪə]

In example 102 the speaker pronounces voiced postalveolar fricative instead of voiced—or rather devoiced—alveolar fricative. This is caused by the following initial sound of [j].

102 *as you* [BBC10] ['æz'ju:]

On the other hand, example 103 illustrates realization of adjacent sounds of [z] and [j] without any assimilation process. The only change is devoicing of final [z].

103 *because you* [BBC10] [br'k^hɒz'ju:]

In Czech pronunciation, no change of an alveolar fricative into postalveolar fricative is found. Such pronunciation would be characterized as a speech disorder. Assimilation process applied in such cases is assimilation of voicing rather than assimilation of place of articulation. Correct realization is illustrated by the pronunciation of a Czech speaker in the following example.

104 *vás jestli* [CRR07] ['va:s'jestlɪ]

Example 105 shows the same process. The speaker realizes both consonants properly and does not apply any assimilation at the word boundary.

105 *minus jeden* [CRR07] ['mi:nʊs'jedɛn]

5.4 Assimilation of Manner of Articulation across Word Boundaries

In this chapter process of assimilation of manner of articulation is illustrated by the following transcribed utterances. Fusion, the phenomenon of dental release, and alveolar stops changing into alveolar fricatives or nasals are the types discussed below.

Type 16 FUSION

As for the process of fusion, two consonants are realized simultaneously so that a new consonant can appear. In other words, the manner of articulation changes. The following examples show that Czech and English speakers use this kind of assimilation process very often. The analyzed utterances contain assimilation of manner of articulation not only within a word but across the word boundaries as well. In example 106 [d] and [z] fuse together in order to form [d̥z̥].

106 *podzim* [CRR04] ['pɔd̥z̥ɪm]

In example 107 the alveolar stop [t] and the fricative [s] influence each other in that way that a new sound [t̥s̥] is pronounced.

107 *pět set* [CRR04] [ˈpjɛtset]

On the other hand, in example 108 no assimilation process is found as the speaker correctly realizes the following word where [t] and [j] stay unassimilated.

108 *sedmisetšedesátiletá* [CRR02] [ˈsɛdmɪsɛtˈʃɛdɛsɑːtɪˈlɛtɑː]

Example 109 shows the process of elision of the [ts̩] sound which is originally found in the last syllable of the word *dvanáct*. The speaker coarticulates the final [t] with the initial [s] and another consonant [ts̩] is pronounced. As the realization of two [ts̩] sounds would be regarded as unacceptable, one of them has to be omitted, as it was done in the pronunciation of the following words *dvanáct set*.

109 *dvanáct set* [CRR02] [ˈdvanaːts̩ɛt]

In English, no similarity to Czech fusion is observed considering consonants [t] and [s]. Example 110 shows realization of alveolar stop and alveolar fricative. These sounds do not fuse together, but each of them is pronounced separately.

110 *not surprisingly* [BBC05] [ˈnɒt səˈpraɪzɪŋli]

In the following English example of pronunciation of [t] and [j] no assimilation process of fusion takes place as the speaker realizes both sounds properly.

111 *fit your* [BBC02] [ˈfɪtˈjɔː]

Example 112 illustrates the same conditions as the preceding example. This time, however, the speaker applies assimilation process when he dictates an email address. In *dot UK* being the last part of this address he pronounces an affricate [tʃ] instead of two different sounds.

112 *dot UK* [BBC10] [ˈdɒtʃˈwɪːkheɪ]

Example 113 shows such pronunciation where the speaker realizes the process of assimilation of manner of articulation. Due to the influence of the following [j] the alveolar stop [t] becomes an affricate [tʃ]. When [j] follows [tʃ] it is easily pronounced as the airflow is not stopped during the whole realization of an affricate but only at the beginning. Once the narrowing is formed realization of an approximant [j] can follow.

113 *want your* [BBC01] [ˈwɒntʃjɔː]

The speaker who pronounces the following piece of utterance applies the process of assimilation of manner of articulation. Example 114 thus shows [t] becoming an affricate due to the influence of [j].

114 *ignore it you see* [BBC02] [ˈɪɡnɔːtʃjɪˈjuːsiː]

When the speaker pronounces the phrase *don't you*, which is illustrated by the following transcription, the approximant triggers the assimilation process and [t] becomes [tʃ].

115 *don't you* [BBC08] [ˈdɒntʃu:]

The two following examples show the process of assimilation where the consonants [d] and [j] form an affricate [dʒ] as they influence each other.

116 *could you* [BBC02] [ˈkʊdʒu:]

117 *how do you* [BBC02] [ˈhaʊdʒu:]

In examples 118, 119 and 120 no fusion takes place as the speakers realize both sounds of [d] and [j] in a proper way.

118 *remind you* [BBC01] [ˌrɪˈmaɪndʒu:]

119 *second year* [BBC02] [ˈsekəndʒɪə]

120 *and you* [BBC01] [ˈʔændʒu:]

In Czech, no fusion is realized when alveolar stop and approximant are adjacent to each other. Realization of an affricate would be characterized as an improper pronunciation. Correct Czech pronunciation is shown in the two following examples.

121 *snad jediný* [CRR06] [ˈsnatʃejɪni:]

122 *dvacet jedna* [CRR02] [ˈdvacetʃjedna]

Type 17 ALVEOLAR STOP/NASAL + DENTAL FRICATIVE

In example 123 the English speaker pronounces the following phrase as a one word rather than three words. This triggers the process of assimilation where two adjacent alveolar consonants are realized. The dental release stays present, even though no dental fricative is pronounced.

123 *look at the* [BBC10] [ˈlʊkettə]

Example 124 shows the change of a dental fricative into a nasal stop with dental release. The speaker realizes both /n/ and /ð/ as nasals with dental release.

124 *in the* [BBC06] [ˈɪnnə]

In example 125 alveolar nasal and dental fricative are both realized as dental nasals.

This change is unusual as the final /d/ is not pronounced and the initial dental fricative /ð/ influences the preceding nasal so that both are realized with dental release.

125 *and then* [BBC05] [ˈʔennən]

Type 18 ALVEOLAR STOP + ALVEOLAR FRICATIVE/NASAL

As discussed in Chapter 3 change of an alveolar stop into an alveolar fricative or a nasal can be found only in an improper pronunciation of English speakers. Standard Received Pronunciation does not allow such assimilation process.

In the analyzed four-hour long spoken English material no change of an alveolar stop to an alveolar fricative has been found. This supports the statement mentioned in the Theory that the process where alveolar stops change into fricatives is not regarded as a proper pronunciation and is rather rare.

In the following example the speaker pronounces the phrase *it says* without any assimilation process. Only one change is apparent in the speaker's realization and that is the one of a vowel [e] becoming a diphthong [eɪ] which is not a feature of standard pronunciation.

126 *it says* [BBC08] [ˈɪtseɪz]

Example 127 illustrates the same phenomenon. Alveolar stop and alveolar fricative are both properly pronounced and no assimilation process takes place.

127 *hot seat* [BBC05] [ˈhɒtˈsi:t]

The following example shows correct pronunciation of alveolar stop and alveolar nasal where both sounds are properly realized.

128 *had never* [BBC04] [ˈhædˈnevə]

As discussed in Chapter 3 the change of alveolar stop into alveolar nasal when another alveolar nasal follows is observed in the case of certain fixed structures, as in *good night* pronounced as [ˈgʊn naɪt].

In Czech connected speech, adjacent sounds of [t] and [s] form an affricate [ts̩]. This change has been already discussed in Type 16. In this case, pronunciation of two identical sounds of [s] would be characterized as an improper realization, or rather as a speech disorder.

A change of [d] into [n] in Czech pronunciation would be identified in the same way as the one mentioned above. Moreover, final *d* in written form of a word should be always pronounced as voiceless [t] in correct Czech pronunciation, as in example 129.

129 *dosud nejsou* [CRR07] [ˈdɔsʊtˈnejsɔʊ]

Example 130 shows correct realization of adjacent sounds of [t] and [s] pronounced by Czech speaker. In this case no assimilation change takes place.

130 *let sídlí* [CRR01] [ˈletˈsi:dli:]

The same correct pronunciation is shown in the following example, where the speaker realizes both sounds, [t] and [s], at the word boundary.

131 *pořád si* [CRR01] [ˈpɔɾa:tˈsɪ]

All of the findings are summarized in the following chapter. Assimilation processes which have been found during analyzing authentic utterances are further discussed with respect to the previous division of types of particular assimilation changes.

5.5 Conclusion to Analysis

The analyzed material supports the types of assimilation across word boundaries described and discussed in the Theory. The speakers whose utterances have been analyzed used orthoepically correct realizations and in certain cases also non-standard pronunciation. Several similarities have been found in utterances of English and Czech speakers regarding assimilation features observed in connected speech.

For the purposes of the analysis assimilation of voicing has been divided into seven types. The first type of voiced/voiceless consonant and the following pause or a glottal stop illustrates that in Czech the final consonant is always voiceless. In English the similarity is observed only when the final consonant is voiceless. Once the consonant is voiced, it becomes devoiced due to the influence of the following glottal stop or a pause, but it is unlikely that it becomes fully voiceless as English speakers tend to preserve its voicing.

As for the type of voiceless sound and following unique consonant the speakers preserve the voicelessness of the preceding consonant in most cases. Another similarity is observed in Type 3 where both voiceless consonants stay voiceless. The type of voiced and voiced consonant influences each other so that both are finally voiced in connected speech of English and Czech speakers.

The type where voiced consonant precedes the voiceless one reveal a difference. While English speakers pronounce final devoiced consonant due to the influence of the following voiceless sound, Czech speakers pronounce fully voiceless sound at the end of the first word; in such case no influence occurs.

When the voiceless consonant precedes the voiced one, no assimilation change takes place considering both languages. Unique change which occurs only in English is the one of devoiced approximant when preceded by voiceless stop.

Assimilation of place of articulation have been divided into eight types. The first one shows pronunciation of two identical consonants when being adjacent to each other. Both languages behave in the same way considering such consonantal environment. Orthoepically, both identical consonants should be pronounced, however, in some cases only one of them is realized.

In case of the type of alveolar stop/nasal and velar stop both languages tend to apply the assimilation process in the same way. In English and Czech such changes across word boundaries are regarded as non-standard, however, natural to casual and rapid speech. Many similarities have occurred when analyzing the spoken material. Considering environment of nasal sounds and velar sounds English as well as Czech react by producing velar nasal in many cases. Considering the type of alveolar stop plus velar stop, only English speakers pronounce velar sound instead of an alveolar. Such change has not been found in Czech.

Bilabial nasal tends to change into labiodental nasal when followed by labiodental fricative. This change has been observed in both languages. Process of alveolar stops becoming palatal stops is natural only to Czech speakers as palatal phonemes are found only in Czech phonemic inventory. All assimilations regarding dental fricatives are found only in English as dental fricatives are part of the English sound system, unlike in Czech.

A change of alveolar stop/nasal into bilabial stop/nasal is quite frequent and natural only to English speakers. In spoken Czech such change has not been found. Alveolar fricative becoming postalveolar fricative due to the following postalveolar fricative has been observed only in English language, however such change is regarded as rare.

Very natural change in English language is the one of alveolar fricative into postalveolar fricative due to the following approximant. This assimilation has not been found in Czech as such type of a change would be regarded as a speech disorder.

The third major type of assimilation being the assimilation of manner of articulation have been divided into three subtypes. The first subtype is fusion. In Czech different types of fusion are found than in English language. While Czech fusion includes stops and fricatives, English fusion includes stops and an approximant [j].

As a change of alveolar stop into fricative or nasal is rather rare and found most likely in fixed structures, no such change has occurred in analyzed material.

The subtype of assimilation resulting in dental release is natural only to English speakers.

All in all, it can be concluded that more similarities than differences have been found in analyzed utterances considering all three major types of assimilation across word boundaries.

CONCLUSION

This paper was dealing with the major types of assimilation across word boundaries which can be found in Received Pronunciation (RP) and standard Czech pronunciation. Differences between phonemic inventories and possible kinds of assimilation were pointed out in the Theory. The theoretical findings were supported by the research whose results were stated in the Analysis. The analyzed spoken material consists of utterances taken from BBC Radio 4 and Český rozhlas Radiožurnál. Attention was also paid to orthoepy which prescribes the rules for correct standard pronunciation. Therefore correct and incorrect realizations of sound clusters at word boundaries were differentiated. In some cases non-standard pronunciation was transcribed as these cases were discussed in the Theory. The International Phonetic Alphabet symbols were used in all transcriptions.

Despite their different phonemic systems in both languages several similarities are observed considering pronunciation at word boundaries. Czech speakers naturally apply voicing assimilation in connected speech, however, English speakers tend to devoice word final consonants when followed by a pause or a voiceless sound. Even though such sounds are realized only with a partial voicelessness, the regressive process of voicing assimilation is applied in the same way as it is in Czech pronunciation. Another similarity tends to occur while applying assimilation of place of articulation. In particular, velar nasal and labiodental nasal can be found when the same consonantal environment takes place in Czech as well as in British English utterance.

As far as assimilation of manner of articulation is concerned fusion appears in both languages, however, conditions for realizing this type of assimilation are slightly different in RP and standard Czech. In RP an approximant is needed so that fusion can appear, whereas Czech speakers need a particular stop to be adjacent to a certain fricative so that those sounds can fuse to an affricate. In both languages sound changes within a word are more likely to be found as these are more natural for English and Czech speakers to realize in comparison to assimilation at word boundaries.

Moreover, regressive type of assimilation prevails in English and Czech. Progressive assimilations across word boundaries are regarded as marginal phenomena in both languages with respect to their frequency of occurrence. On the other hand, the major sound change differences are found due to divergent phonemic inventories. Thus, no assimilation of dental fricatives occurs in Czech and no assimilation of palatal stops can be found in RP.

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APPENDICES

- P I Analyzed Czech utterances taken from Český rozhlas Radiožurnál.
- P II Analyzed British English utterances taken from BBC Radio 4.

APPENDIX P I: ANALYZED CZECH UTTERANCES TAKEN FROM ČESKÝ ROZHLAS RADIOŽURNÁL

[CRR01]

Phrase/Word	Transcription	Example Number in the Analysis
<i>šikovných lidí</i>	[ˈʃikɔvniːxˈliːʃiː]	9
<i>nových prvků</i>	[ˈnɔviːxˈpɾfkuː]	16
<i>soutěž bude</i>	[ˈsɔʊceʒ bʊdɛ]	25
<i>jak velká</i>	[ˈjakˈvɛlkaː]	35
<i>Antonín viděl</i>	[ˈʔantɔniːnˈviːʃɛl]	71
<i>vlastně</i>	[ˈvlascɲɛ]	78
<i>dělat něco</i>	[ˈʃɛlatˈnɛʦɔ]	80
<i>let sídlí</i>	[ˈlɛtˈsiːdliː]	130
<i>pořád si</i>	[ˈpɔɾaːtˈsi]	131

[CRR02]

Phrase/Word	Transcription	Example Number in the Analysis
<i>několikrát žádalo</i>	[ˈnɛkɔlikraːdˈzaːdalo]	32
<i>před první</i>	[ˈpɾɛtˈprvniː]	48
<i>bez takových</i>	[ˈbɛsˈtakɔviːx]	49
<i>až žasnul</i>	[ˈʔaʒˈʒasnʊl]	53
<i>připomínat tuto</i>	[ˈpɾipɔmiːnatˈtʊtɔ]	54
<i>ten Karel</i>	[ˈtɛɲˈkareɪ]	61
<i>sedmisetšedesátiletá</i>	[ˈsɛdmɪsɛtˈʃɛdɛsaːciˈlɛtaː]	108
<i>dvanáct set</i>	[ˈdvanaːʦɛt]	109
<i>dvacet jedna</i>	[ˈdvacetˈjɛdna]	122

[CRR03]

Phrase	Transcription	Example Number in the Analysis
<i>člověk občas</i>	[ˈtɕlɔvɲɛkˈʔɔptɕas]	1
<i>občas reaguje</i>	[ˈʔɔptɕasˈrɛagʊjɛ]	10
<i>ted' novým</i>	[ˈtɛʃˈnɔviːm]	12
<i>mám velikánské</i>	[ˈmaːɲˈvɛlikaːnskɛː]	69

naladěn večerní ['nalaʃɛn 'vɛtʃɛrni:] 70

[CRR04]

Phrase/Word	Transcription	Example Number in the Analysis
<i>příběh jednoho</i>	['pɾi:bjɛx 'jɛdnɔɦɔ]	7
<i>rybářských lodkách</i>	['rɪba:ɾʃki:x 'lɔcka:x]	8
<i>shodou</i>	['sxɔdɔʊ]	20
<i>v Dánsku</i>	['v da:nskʊ]	24
<i>už věděla</i>	['ʔʊʒ vjɛʃɛla]	26
<i>těch dětí</i>	['cɛɣ ʃɛci:]	31
<i>v Čechách</i>	['f tʃɛxa:x]	45
<i>bychom mohli</i>	['bɪxɔm 'mɔɦli]	52
<i>tam viděl</i>	['tam vɪʃɛl]	68
<i>pět tisíc</i>	['pjɛ cɪsi:ʦs]	81
<i>podzim</i>	['pɔdʒɪm]	106
<i>pět set</i>	['pjɛtʃɛt]	107

[CRR05]

Phrase	Transcription	Example Number in the Analysis
<i>v ulicích</i>	['f ʔʊlɪʦi:x]	3
<i>věcech které</i>	['vjɛʦɛx 'ktɛrɛ:]	15
<i>ted' tedy</i>	['tɛc tɛdɪ]	46
<i>když se</i>	['gdɪʃ sɛ]	47
<i>pár rodin</i>	['pa:r 'rɔʃɪm]	55
<i>ten kůň</i>	['tɛn 'ku:ɲ]	63
<i>západ brazilský</i>	['za:pad brazɪlski:]	96
<i>ten přízvuk</i>	['tɛn 'pɾi:zvʊk]	97

[CRR06]

Phrase/Word	Transcription	Example Number in the Analysis
<i>k obrovskému</i>	['k ʔɔbrɔfskɛ:mʊ]	2
<i>sval</i>	['sval]	36
<i>snad jediný</i>	['snat 'jɛɦmi:]	121

[CRR07]

<u>Phrase/Word</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>pořád nevíme</i>	['pɔ̃ɾa:t'nevi:mɛ]	11
<i>státních zástupců</i>	['sta:tɲi:x'za:stɔ̃ptsu:]	33
<i>moc zákonodárnou</i>	['mɔ̃ts'za:kɔ̃nɔda:rnɔ̃ʊ]	34
<i>trestní</i>	['trɛscɲi:]	77
<i>státní</i>	['sta:tɲi:]	79
<i>vás jestli</i>	['va:s'jestlɪ]	104
<i>mínus jeden</i>	['mi:nɔ̃s'jedɛn]	105
<i>dosud nejsou</i>	['dɔ̃sɔt'nejsɔ̃ʊ]	129

[CRR08]

<u>Phrase/Word</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>tenkrát</i>	['teɲkra:t]	62
<i>dodnes Šumava</i>	['dɔ̃dnes'ʃɔ̃mava]	99

**APPENDIX P II: ANALYZED ENGLISH UTTERANCES TAKEN
FROM BBC RADIO 4**

[BBC01]

Phrase	Transcription	Example Number in the Analysis
<i>not really</i>	['nɒt 'rɪli]	14
<i>she's wearing</i>	['ʃi:z 'weəriŋ]	22
<i>there's something</i>	['ðeə 'sʌŋ θɪŋ]	23
<i>want your</i>	['wɒntʃjɔ:]	113
<i>remind you</i>	[,rɪ 'maɪnd 'ju:]	118
<i>and you</i>	['ʔænd 'ju:]	120

[BBC02]

Phrase	Transcription	Example Number in the Analysis
<i>image in</i>	['ɪmɪdʒ 'ɪm]	4
<i>about oneself</i>	['əbaʊt wʌnself]	13
<i>sort things</i>	['sɔ:t 'θɪŋz]	18
<i>is great</i>	['ɪz grɪt]	27
<i>as being</i>	['æz 'bi:ŋ]	28
<i>Francis Bacon</i>	['frɑ:nsɪz beɪkən]	29
<i>but there</i>	['bʌt 'ðeə]	37
<i>Tate gallery</i>	['teɪk gæləri]	65
<i>human form</i>	['hju:mən 'fɔ:m]	73
<i>less disturbed</i>	['les dɪs'tɜ:bəd]	38
<i>of paintings</i>	['ʔɔv 'peɪntɪŋ]	41
<i>don't think</i>	['dɒŋθ 'θɪŋ]	82
<i>in the</i>	['ɪnðə]	84
<i>understand them</i>	[,ʌndə'stænd ðəm]	85
<i>plot them</i>	['plɒt 'ðəm]	86
<i>at the</i>	[ətðə]	87
<i>sort things out</i>	['sɔ:tθ 'θɪŋz aʊt]	89
<i>in painting</i>	['ɪm p'eɪntɪŋ]	90
<i>fit your</i>	['fɪt 'jɔ:]	111

<i>ignore it you see</i>	[ˈɪɡnəʊɪtʃˈjuːˈsiː]	114
<i>could you</i>	[ˈkʊdʒuː]	116
<i>how do you</i>	[ˈhaʊdʒuː]	117
<i>second year</i>	[ˈsekʌdˈjɪə]	119

[BBC03]

<u>Phrase</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>next opportunity</i>	[ˈnekst ˌɔpəˈtʃjuːnəti]	6
<i>perfect page</i>	[ˈpɜːfɛkˈtɪpˈeɪdʒ]	93

[BBC04]

<u>Phrase</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>What's his name?</i>	[ˈwɒtsˈhɪzˈneɪm]	21
<i>just before</i>	[ˈdʒʌstˌbɪˈfɔː]	39
<i>set down</i>	[ˈsetˈdaʊn]	40
<i>good girl</i>	[ˈɡʊdˈgɜːl]	66
<i>had never</i>	[ˈhædˈnevə]	128

[BBC05]

<u>Phrase</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>United Kingdom</i>	[juˈnaɪtɪdˈkɪŋdəm]	67
<i>not surprisingly</i>	[ˈnɒt səˈpraɪzɪŋli]	110
<i>and then</i>	[ˈɹeɪnən]	125
<i>hot seat</i>	[ˈhɒtˈsiːt]	127

[BBC06]

<u>Phrase/Word</u>	<u>Transcription</u>	<u>Example Number in the Analysis</u>
<i>you can get</i>	[ˈjuːkənˈget]	59
<i>Sharon Kinsella</i>	[ˈʃaʊn kɪnˈzela]	60
<i>information</i>	[ɪnfəˈmeɪʃn]	75
<i>conversation</i>	[kɒnvəˈzeɪʃn]	76
<i>in the</i>	[ɪnə]	124

[BBC07]

Phrase	Transcription	Example Number in the Analysis
<i>Ian Fleming</i>	['ʔi:jən 'fleɪmɪŋ]	74
<i>nineteen thirties</i>	['naɪn ˈti:n 'θɜ:tɪ:z]	83
<i>but this show</i>	['bʌt ðɪʃ ʃəʊ]	98
<i>this youth</i>	['ðɪʃ ju:θ]	100

[BBC08]

Phrase	Transcription	Example Number in the Analysis
<i>those cases</i>	['ðəʊz 'keɪsɪz]	44
<i>demonstrated by</i>	['demənstreɪtɪd 'baɪ]	94
<i>don't you</i>	['dəʊnt(ju:)]	115
<i>it says</i>	['ɪtseɪz]	126

[BBC09]

Phrase	Transcription	Example Number in the Analysis
<i>made about</i>	['meɪd 'ʔə 'baʊt]	5
<i>Christmas traditions</i>	['krɪsməs ˌtrə'dɪʃn]	19
<i>leave behind</i>	['li:v bɪ 'haɪnd]	30
<i>made to</i>	['meɪd 'tə]	42
<i>band called</i>	['bænd 'kɔ:lɪd]	43
<i>at least</i>	[ə 'tli:st]	51
<i>different family</i>	['dɪfərənt 'fæməli]	72
<i>without them</i>	['wɪðaʊt ðəm]	88
<i>this year</i>	['ðɪʃ jɪə]	101

[BBC10]

Phrase	Transcription	Example Number in the Analysis
<i>thank you</i>	['θæŋ kju:]	50
<i>look at today's</i>	['lʊkət tə'deɪs]	56
<i>great depression</i>	['greɪt ˌdɪ'preʃn]	57
<i>adjacent to</i>	[ʔə'dʒeɪsntə]	58
<i>thank you</i>	['θæŋkju:]	64
<i>that problem</i>	['ðæt 'prɒbləm]	91

<i>that person</i>	[ˈðæpˈpɜːsn]	92
<i>as you</i>	[ˈæzˈjuː]	102
<i>because you</i>	[bɪˈkɪbzˈjuː]	103
<i>dot UK</i>	[ˈdɒtʃwuːˈkeɪ]	112
<i>look at the</i>	[ˈlʊkɛtə]	123