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**Importance of Individual Features of Czech Accent in English for Perceived  
Foreign-accentedness**

(Master Thesis)

**Význam jednotlivých znaků českého přízvuku v angličtině, a jejich vliv na  
vnímání cizího přízvuku**

(Diplomová práce)

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Prohlášení:

Prohlašuji, že jsem diplomovou práci vypracovala samostatně a uvedla v ní předepsaným způsobem všechnu použitou literaturu.

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Podpis:

### Poděkování:

Děkuji vedoucímu práce za cenné rady, ochotu a trpělivost. Dále bych chtěla poděkovat všem, kteří byli ochotni zúčastnit se fonetického experimentu, který je součástí této práce. V neposlední řadě děkuji své rodině za podporu a trpělivost.

# CONTENTS (OBSAH)

1.	Introduction .....	6
2.	Foreign Accent and Language Inference.....	7
3.	Foreign Accent and Social Stigma .....	8
4.	General Differences between English and Czech.....	10
5.	Overview of Phonological Features of Czech Accent in English – Segmentals .....	11
5.1.	English and Czech Consonants – Introduction.....	11
5.1.1.	Plosives.....	13
5.1.2.	Affricates .....	15
5.1.3.	Fricatives .....	16
5.1.4.	Nasals .....	22
5.1.5.	Approximants .....	24
5.1.6.	English and Czech Consonants – summary.....	30
5.2.	English and Czech Vowels – Introduction .....	32
5.2.1.	Vowel Length.....	34
5.2.2.	Reduced Vowels.....	36
5.2.3.	Rhoticity .....	37
5.2.4.	Contrastive Vowel Pairs: English /i/ and /ɪ/; Czech /i:/ and /i/.....	38
5.2.5.	Contrastive Vowel Pairs: English /æ/ and /ɛ/; Czech /ɛ:/ and /ɛ/ .....	39
5.2.6.	Contrastive Vowel Pairs: English /ʌ/ and /ɑ/; Czech /a/ and /a:/.....	40
5.2.7.	Contrastive Vowel Pairs: English /ɒ/ and /ɔ/; Czech /o/ and /o:/ .....	41
5.2.8.	Contrastive Vowel Pairs: English /ʊ/ and /u/; Czech /u/ and /u:/ .....	41
5.2.9.	English and Czech Diphthongs .....	42
5.2.11.	English and Czech Vowels - Summary.....	46
6.	Overview of Phonological Features of Czech Accent in English – Suprasegmentals.....	48
6.1.	Suprasegmental Feature of Stress in English and Czech .....	49
6.1.1.	Sentence Stress in English and Czech.....	51
6.2.	Suprasegmental Feature of Rhythm in English and Czech.....	51
6.3.	Suprasegmental Feature of Intonation in English and Czech .....	53
6.4.	Suprasegmentals in English and Czech – Summary .....	54
6.4.1	Instruction of Prosody at Learning Institutions.....	56
7.	Conclusions Drawn from the Theoretical Part.....	57
8.	Research Focusing on Recognizing Czech-Accented Features of Spoken English.....	59
8.1.	Participants .....	60
8.2.	Materials.....	60

8.3.	Procedure.....	61
8.4.	Results.....	62
8.5.	Discussion.....	63
9.	Theoretical Conclusions Compared with Experiment Results.....	64
10.	Shrnutí (Summary).....	65
11.	APPENDIX – THEORETICAL PART.....	70
	Table Summarizing English and Czech Consonants.....	70
	Table Summarizing the Similarities and Differences between Corresponding Members of Czech and English Contrastive Pairs.....	72
	Table Summarizing Suprasegmental Features of English and Czech.....	73
11.	APPENDIX – PRACTICAL PART.....	74
	Figure 1 Regarding Total Accent Score.....	74
	Table 2: Post-hoc Test Regarding Total Accent Score.....	74
	Figure 2 Regarding ‘Pairs’ Reaction Times.....	75
	Table 3: Post-hoc Test regarding ‘Pairs’ RT.....	75
	Figure 3 Regarding Mean Accent Rating.....	76
	Table 4: Post-hoc Test Regarding Mean Accent Rating.....	76
	Figure 4 Regarding ‘Single’ Reaction Times.....	77
12.	List of Literature Used.....	78
13.	Annotation.....	82
14.	Anotace.....	83

# 1. INTRODUCTION

English is a lingua franca. It is a language which dominates the industries of business, arts and sports, and has evolved into the Esperanto of the modern world. It functions in connecting countries, nationalities and ethnicities.

Children at schools worldwide are learning the language and its knowledge has almost become a mandatory requirement. Reaching a level of proficiency and erasing any trace of a foreign accent has become a desire for many students. Foreign accent can be viewed as a personal challenge to be overcome. It can however also be viewed as a personal flaw which, when encountered by a native speaker, contributes to a negative evaluation and can grow into a significant social obstacle. It has a power to negatively influence all kinds of relationships, ranging from personal ones to professional ones.

The main aim of this thesis is to contribute to decreasing the chance of this negative evaluation based on a person's Czech accent when speaking English. In order to do that I will try to perform a detailed analysis of English and Czech phonologies, comparing and contrasting both segmental and suprasegmental features, and highlighting areas of the largest difficulty. Theoretical elements will be illustrated with practical examples. At the end of this paper I will propose ideas of how to increase the efficiency of teaching English phonology at schools, which might help to decrease the degree of Czech accent in English, and thus help to avoid negative social evaluation.

This paper will be divided into theoretical and practical parts. The first chapter of the theoretical part will focus on the issue of language inference, negative and positive transfer and contrastive analysis, which will be used as a tool to compare and contrast English and Czech phonological systems. The second chapter will then discuss social stigmatization caused by a foreign accent.

The main part of this thesis will be dedicated to comparing and contrasting phonological systems of English and Czech. First I will give a detailed analysis of consonant phonemes; I will describe and contrast them, trying to predict as many instances of a possible negative transfer. Then I will move to a detailed analysis of English and Czech vowel phonemes. Lastly, I will analyze suprasegmental features of these languages, comparing and contrasting phenomena of stress, rhythm and intonation.

The very last section of this thesis will discuss a research study focusing on the degree of perceived foreign-accentedness. This research was conducted with the help of seventeen

native speakers who took part in it. I will then try to relate the practical part to the theoretical part, comparing whether phonological features described to be most important in theory, proved to be equally important in practice.

## 2. FOREIGN ACCENT AND LANGUAGE INFERENCE

A foreign accent is a common by-product of learning a second language. There is a theory that the previously learned language, which might be the mother tongue (L1), has a significant impact on the language that is being learned as a foreign language (L2). David Nunan (Nunan & Carter, 2001: 87) in accordance mentions the term ‘contrastive analysis’, and claims:

“Proponents of Contrastive Analysis argued that where L1 and L2 rules are in conflict, errors are likely to occur which are the result of ‘interference’ between L1 and L2”

Nunan (2001: 87-88) then goes on to describe positive and negative inference. This argues that when rules for a certain linguistic phenomena diverge in both languages in question, a ‘negative transfer’ occurs. On the other hand if those rules are similar, a ‘positive transfer’ occurs. The author also links contrastive theory with behaviorism, explaining that the habits formed while learning the first language reappear while learning the second language.

Nevertheless, it seems that the success of a second language acquisition and extent of negative transfer depends on various aspects. While in certain language levels such as syntax or morphology a student can theoretically achieve native-like accuracy at any age, achieving the same in the field of phonology often seems to be age-dependent. There are various studies that mention the ‘Critical Period Hypothesis’ which implies that there is a certain age limit, which borders the person’s ability to master the L2 phonology on a native-like level. Christian Abello-Contesse (2008: 170-171) places the limit at six years of age. However, he simultaneously adds that there is a lack of direct link between an earlier start of L2 acquisition and greater proficiency. That is further supported by John Archibald (in Ritchie & Bhatia, 2009: 239), who says:

“Thus, we note that while there is still a definite connection between age of acquisition and degree of foreign accent, it is not the case that it becomes impossible for adults to acquire phonological ability that is undistinguishable from native speakers”

Subsequently it emerges that even though it is possible to reach native-like level in pronunciation of L2 later in life, there is a tendency for negative transfer to be reduced the earlier the learning process begins.

However, from a personal experience acquired as a student and as a part-time tutor of English, I know that not many people have the advantage of an earlier start. These people (though they do not serve a sole example) benefit from a significantly increased chance of native-like pronunciation by a contrastive analysis.

Contrastive analysis can help greatly as it identifies areas for a possible negative transfer. Learners can then focus on those areas, thus make their learning process more effective. Contrastive analysis between English and Czech will therefore be the topic of the larger part of this thesis.

Before I move to the actual contrastive analysis, there is one highly significant issue to be discussed. Successful approximation to an L2 pronunciation does not only represent a personal goal, but it is actually often encouraged by society itself, such as speaker's foreign accent often evokes negative social evaluation.

### 3. FOREIGN ACCENT AND SOCIAL STIGMA

Foreign accents are a common feature of learning a second language. Where it does not prevent the speaker from being understood, it should be accepted as being perfectly normal. However, numerous research studies disprove so. For instance, Munro et al (2006: 72) says that “stereotyping on the basis of language occurs in a wide variety of contexts”. Negative evaluation of a foreign-accented speech is sometimes taken to such extremes that it was, in a study by Greene and Wells (in Munro et al, 2006: 71), grouped together with diseases such as cerebral palsy or imbecility. Or more recently, it was included in the research of *Talking to children, foreigners, and retarded adults*, conducted by DePaulo & Coleman (1986).

Even though the two aforementioned examples can indeed be considered to be contentious, negative evaluation of a speaker based on his speech is more common than most

people allow themselves to admit. From a study, conducted by Nesdale & Rooney (1996), it became clear that foreign accent evokes ethnic stereotypes.

Lev-Ari & Keysar (2010) focused on similar issue, and analyzed the impact of accented speech on credibility. They chose a statement, which was read by a native speaker with non-accented English, and then by a non-native speaker with a foreign accent. They found out that if an identical statement was read by a speaker with a foreign accent, volunteers considered it less truthful, than if it was read by a native speaker without an accent. As an explanation they proposed that “people believe non-native speakers less, simply because they are harder to understand” (2010: 1093). This is supported by an earlier study by Munro & Derwing (2005: 286), who revealed that „nonnative utterances tend to require more time to process than native-produced speech”.

In a different study, accented speech was related to degree of guilt. What was observed was the change in evaluation of a criminal suspect regarding varying degree of his accent. If the suspect spoke in an accent-free manner, he was attributed a lesser degree of guilt than if he spoke with a strong foreign accent (Dixon et al, 2002: 21).

Among other negative evaluations is for instance social status and attractiveness, as featured in a research conducted by Giles & Cargile (1998: 351), which “confirmed that the increasing strength of a speaker’s accent is associated with less favourable ratings of status and attractiveness”

A different research study focused on the perception of ability (including intelligence), and accomplishments pertaining to the individual. It again found that non-native speakers of English were rated lower, than native English speakers (Weyant, 2007: 703).

These negative notions can have rather serious implications. Accented speech can have a detrimental effect on a job interview, as is evident from a study by Deprez-Sims & Morris (2010), which showed that a native English speaker was rated more favourably by a prospective employer, than speakers of foreign-accented English.

All studies mentioned above clearly demonstrate that an accented speech greatly influences perception of an individual, perception that is often negative and creates a distorted impression about the speaker. Even though most of the accents that were featured in these studies were not of Slavonic origin, there is no reason to think that English speech marked with a strong Czech accent would not evoke the same negative emotions.

Therefore, the main topic of this thesis is a detailed contrastive study of English and Czech phonology, which aims to predict the majority of areas that could cause a negative

transfer. By focusing on areas that I will find as the most problematic, I hope to help to reduce degree of Czech accent in English, and thus decrease the chance of being judged by it.

#### 4. GENERAL DIFFERENCES BETWEEN ENGLISH AND CZECH

It is first necessary to outline some most relevant differences between English and Czech. English belongs to the West Germanic branch of Indo-European languages (Minkova & Stockwell, 2009: 31). In terms of morphology and syntax, is present day English labeled as an analytic language: its usage of inflectional endings is minimal. That only accentuates the importance of word order, which in English is fixed (Gelderen, 2014: 26-27).

Standard British English is in terms of phonetics and phonology, classified as a non-rhotic dialect. Rhoticity rules the pronunciation of the rhotic liquid /r/, which is in Standard British English allowed only pre-vocalically (Shay, 2008: 186). What is however perhaps the most striking feature of English, and also a great challenge presented to most learners of English, is the relationship of spelling and pronunciation.

In the majority of cases English orthography does not match its phonetic realization, which is particularly evident in the area of vowels. This huge gap between letters and sounds can be traced back to the 15<sup>th</sup> century, when printing press fixed English orthography on page. The problem was that English pronunciation kept evolving, and with the help of The Great Vowel Shift, English sounds significantly drew away from their orthographical realizations, to the point of complete non-transparency in many cases (Lass, 2000).

Czech language belongs to the Western branch of Slavonic languages. All Slavonic language, Czech included, are highly inflected. Czech language therefore falls into the category of synthetic languages, which create meanings mostly through inflection, rather than word order (Sochrová, 1996: 7-9).

In terms of phonetics and phonology is Czech a rhotic dialect, which means that pronunciation of rhotic liquid is not limited, and it is correctly pronounced both pre-vocalically as post-vocalically (Skaličková, 1979: 143-144). In terms of the relationship between spelling and orthography, is Czech spelling largely phonetic and orthography in most cases coincides with pronunciation (Sedláček, 1993).

These differences will, along with other, be analyzed in a greater detail in the following chapters.

## 5. Overview of Phonological Features of Czech Accent in English – Segmentals

In previous chapters I dealt with the more general differences between Czech and English; discussed the phenomena of accent, and stressed the important role of accented speech in social evaluation. Bearing that in mind, in order to eliminate the foreign-accentedness of English, and therefore to reduce the chance of distorted perception of a speaker, detailed contrastive analysis of both language systems (L1 and L2) is vital. Therefore, the central part of this thesis will be concerned with a detailed study of phonologies of English and Czech.

The brief description of both languages sufficiently demonstrated that English and Czech are not similar but rather dissimilar languages, which leads to a conclusion that their phonological systems are language-specific (Selinker, 2008: 168). Since they are language-specific, a negative transfer, which was already mentioned earlier, will inevitably occur.

Anyone's aim in learning a second language is to approximate to a native speaker. A significant part of such approximation lies in its phonological aspect, such as when "nonnative speakers deviate from native speakers' production patterns, it gives rise to a nonnative accent" (Chakraborty et al, 2011: 311-330). Thus, in order to approximate to a native speaker (which in this case is the native speaker of English), it is important to first determine areas that would cause the most significant difficulty. Hence the next couple of chapters will deal with phonological segments of both languages. The larger half will be dedicated to the study of segmentals, which will first deal with consonants and then with vowels. The second half will then discuss suprasegmentals.

As standard and therefore referential English dialect I will be using the Received Pronunciation (RP) and it will be referred to simply as English. As standard Czech pronunciation I will use the Standard Czech, and will refer to it simply as Czech.

### 5.1. ENGLISH AND CZECH CONSONANTS – INTRODUCTION

Consonant phonemes, being the speech sounds that are created with the help of an obstruction in the air-flow, appear in both Czech and English phonological systems. In terms of numbers, there are 24 consonant phonemes in English (Skadera and Burleigh, 2011: 20), and 25 consonant phonemes in Czech (Sochrová, 2011: 27). The vast majority of consonant

categories (bilabials, labiodentals, alveolars, palatals, velars and glottals) exist in both languages.

A category exclusive to English is the category of dentals, which contains phonemes that cause major problems to Czech students. Another problem arises with /w/, which in English comes into the category of labio-velars. In Standard Czech it does not appear at all. What is notoriously problematic is rhotic liquid, which is in English placed into the category of post-alveolars, In Czech it is featured in the category of alveolars. Another difference is in the Czech velar group, which contains additional sounds /x/ and /ɣ/ that have no direct counterparts in English. Skaličková (1979: 75) adds one more sound that is not featured in Czech consonant tables, and that is a dark [ɫ].

Apart from these differences, she goes on to say that even if consonant sounds appear in both systems, and share the same place of articulation, they often differ greatly in terms of their distribution, frequency, and function, which leads to a significant difference in the phenomena of minimal pairs (Skaličková, 1979: 75). A difference in distribution (in particular the phonemic character in terms of three phases of articulation: approach, hold and release) she claims to be particularly peculiar in the case of /r/.

Distribution is closely connected with the process of assimilation of voice, i.e. the way voiced and voiceless consonants influence their neighboring sounds and the way they are on the other hand influenced by them, assimilation of voice will represent a vital part of description of plosives, and will be mentioned all throughout the section about consonants. Skaličková (1979: 85-88) claims that all Czech sounds are liable to assimilation within words (and at word boundaries), with the sole exception of unpaired consonant phonemes /l, r, m, n, j/. In English, on the other hand, are paired consonants generally not subjected to assimilation of voice. Roach (2009: 112) explains that although the assimilation of voice does exist in English, it is greatly limited and passes almost unnoticed. Furthermore he adds that frequent application of assimilation of voice by ESL<sup>1</sup> speakers leads to a distinctly foreign accent.

I will now discuss consonant sounds. I will compare and contrast them and try to point out the main difficulties that a Czech ESL speaker might face. They will be sorted according to manner of articulation and the first category to be discussed is the category of plosives.

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<sup>1</sup> ESL – English as a Second Language

### 5.1.1. PLOSIVES

Into the category of plosives (or voiced/voiceless stops) belong the bilabial plosives: /p/, /b/, alveolar plosives: /t/, /d/, velar plosives: /k/, /g/, and a glottal stop: [ʔ] (Gimson, 2008: 138).

Plosives (or stop consonants) belong into a larger group of obstruents, a label that foreshadows their articulation, which involves a total closure. Sounds in this category are placed into two groups: the voiced /b/, /d/, /g/, and the voiceless /p/, /t/, /k/. I decided to use opposition of voice/voiceless for both languages, not the opposition of fortis/lenis, even though it would be, with respect to English, more accurate.

In terms of plosives I chose not to discuss them as individual phonemes, but rather discuss two highly important processes that are with plosives connected. It is the assimilation of voice and aspiration, and therefore I will discuss them in two individual chapters. In the last chapter I will turn my attention to glottal stops, and their allophonic as well as linking function.

#### 5.1.1.1 Aspiration of Voiceless Stops

The most distinct phonetic feature of English stop consonants is the feature of aspiration, being the “period of voicelessness after the stop articulation and before the start of the voicing for the vowel” (Ladefoged, 2006: 56). Aspiration is in narrow transcription identified by [h] symbol, and applies solely to voiceless stops, /p/, /t/ and /k/. Voiceless stops are aspirated when syllable initial, such as in *top* [t<sup>h</sup>ɒp], and unaspirated after /s/, such as in *stop* [stɒp] (Ladefoged, 2006: 65-73).

Thus, aspiration, as a distinct feature of voiceless stops, is a common phenomenon in the English language. However, Czech voiceless stops are not liable to aspiration, such as their connection with the following vowel is always tight, unlike from the English connection, which is rather loose (Skaličková, 1979: 81-82), and therefore permits aspiration, being basically a prolonged phase of explosion (Palková, 1994: 77).

Therefore, naturally, the pronunciation of the typically aspirated word-initial voiceless stops in words such as *pill*, *till*, *kill*, appears to be a frequent problem and contributes to the impression of a foreign-accent.

### 5.1.1.2. Assimilation of Voice

Voicing is a distinction that originates in the second phase of articulation, the compression phase, which is either accompanied by voice, or not (Gimson, 2008: 139).

Stop consonants are in both languages labeled as either voiced, or voiceless, and coupled into consonant pairs. What in Czech regularly affects voiced and voiceless stop is the phenomenon of assimilation of voice, which belongs to the broader category of syntagmatic alternation of consonants (Šefčík, 2005: 2). Assimilation of voice is the most spread consonant change in Czech and Palková (1994: 328-330) presents following examples:

*kdo* → [gdo], *odpor* → [otpor], *sdružení* → [zdruʒɛni:],  
*přes jezero* → [přɛz jɛzɛro], *hned vedle* → [ɦnɛt vɛdlɛ]

All the above mentioned examples are regarded as a regular pronunciation. However, Czech ESL speakers often apply it also when speaking English, which often results in a foreign accent, or even a change of meaning:

“Incorrect assimilation of voice is executed according to the traditional Czech usage, so that backbone [bækbəʊn] then becomes a [bægbəʊn], which would mean something like ‘pytlová kost’ (Skaličková, 1979: 183)<sup>2</sup>

To sum up, the pronunciation of plosives can cause significant problems to Czech ESL speakers. Regarding aspiration, the problem consists in the fact that Czech voiceless stops are unaspirated, and therefore Czech speakers either do not aspirate English voiceless stops at all, or they exaggerate it, which either way results in an unnatural accent.

In terms of assimilation of voice, it is in Czech a regular feature regarding consonants, plosives included, and therefore Czech ESL speakers often apply it in English as well. As assimilation of voice is not as common a process in English as it is in Czech, its application can cause a foreign accent or even a misunderstanding in terms of meaning.

### 5.1.1.3. Glottal Stop

The last speech sound that was listed at the beginning of this section was a glottal stop [ʔ]. In standard pronunciation it often occurs as an allophone of voiceless alveolar plosive /t/,

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<sup>2</sup> Překlad autorky.

and therefore I listed it in category of plosives. It occurs especially in words where it is followed by a syllabic nasal, such as in *beaten* [biʔn̩] (Ladefoged, 2006: 61).

In Czech is glottal stop not used as an allophone of /t/. It is however frequently used before a word that begins with a vowel (Volín, 2003: 63), or „between vowels within a word after a prefix” (Dankovičková, 1997: 70). Volín presents an example *k oknu*, which is regularly pronounced as [k ʔoknu]. On the other hand, in English it is used mainly as an allophone of a consonant, such as /t/, only rarely before a word-initial vowel. Volín (2003: 63) says that the fact that Czech ESL speakers regularly use glottal stops before vowels in English, disrupts the overall continuity of the speech, and Czech ESL speakers should avoid it. Now I will discuss the category of affricates.

### 5.1.2. AFFRICATES

Affricates consist of /dʒ/ and /tʃ/ in English, and /dʒ̨/ and /tʃ̨/ in Czech (Dankovičková, 1997: 70). The category of affricates has in English had a rather obscure status, such as affricate phonemes could be regarded either as consonant clusters (a combination of stop and fricative) or as unit phonemes, such is the case of /dʒ/ and /tʃ/.

Palato-alveolar affricates also form a pair, consisting of a voiceless /tʃ/ and its voiced counterpart /dʒ/. In English they can appear in any word position, in Czech they can appear either initially or medially. The English /dʒ/ is a counterpart of the Czech /dʒ̨/, which replaced the obsolete /dž/, considered by Skaličková (1979: 110-111). The English /tʃ/ is a counterpart of the Czech /tʃ̨/.

In terms of /dʒ/ and its pronunciation by Czech speakers, no significant problems seem to arise. However, the pronunciation of /tʃ/ is slightly more complicated. As stated above, it is regarded as one unit, not as a sequence of sounds (/t/ + /ʃ/), which is the way native-speakers see it:

„ (a native speaker) is likely to consider that *chip, catch* consist of three parts in the same way as *ship* or *cat*, or again, *jam, badge*, as structures equivalent to *dam, bad*.” (Gimson, 2008: 159).

In addition to that, Gimson (2008: 159-160) names one more prospective stumbling-block. He draws attention to consonant clusters ‘tr’ and ‘dr’, in words like *trip* and *drew*,

which should not be confused with /tʃ/ and /dʒ/ respectively. He demonstrates in on pairs such as: *trip* and *chip*; *drew* and *Jew*.

From what was stated above, it is clear that even the relatively small category of affricates can present problems to non-native speakers. Attention of Czech ESL speakers should also be paid to correct application of affricate phonemes, which does not apply to consonant clusters ‘*dr*’ and ‘*tr*’.

### 5.1.3. FRICATIVES

The class of fricatives is fairly complex in both languages, and Gimson (2008: 162) admits that acquisition of fricatives presents “the largest area of difficulty”. In English the class consists of labiodental fricatives /f/ and /v/, dental fricatives /θ/ and /ð/, alveolar fricatives /s/ and /z/, palato-alveolar fricatives /ʃ/ and /ʒ/, and /h/ representing a glottal fricative. The former of the pair is voiceless and the latter of the pair is voiced. The Czech category of fricatives features additionally the voiced and voiceless velar fricatives /x/ and /ɣ/.

Even though the voiced velar fricative is not used in present-day standard English, it was used in the Old English and later disappeared over time (Algeo & Butcher, 2013: 96). Regarding the voiceless fricative /x/, it is used, however is limited to regional varieties, such as in the word *loch* in Scottish English (Gimson, 2008: 162).

#### 5.1.3.1. Labiodental Fricatives /f/ and /v/

Similarly to plosives, also labiodental fricatives come in pairs of voiced and voiceless. The main consequence of that is that a vowel is shorter before voiceless and longer before voiced consonant, and at the same time, voiceless fricatives are longer than voiced fricatives (Ladefoged, 2006: 65). The influence of voiced/voiceless consonants on their preceding vowels is much more significant in English, contrasts with Czech, and will be discussed in greater detail in the section dedicated to vowels.

According to Gimson (2006) and Palková (1994), there are no great differences between English and Czech labiodental fricatives. However, Palková (1994: 211) admits that degree of friction is in the case of Czech /v/ very small, and the sound could be perceived differently than its English counterpart.

Czech fricatives, as paired consonants, similarly to stop consonants make a use of the assimilation of voice, which is, as was stated earlier, not applied to English paired consonants. Therefore, if a Czech learner of English applies such (in Czech language) deep-rooted rule to English fricatives, it could cause a foreign accent, and Skaličková (1979: 116) claims that:

“...similarly to other Czech paired consonants, fricatives are also subjected to assimilation of voice, and /v/ in *lev* easily turns into /f/ in [lɛf]... whereas English fricatives, even though being subjected to desonorisation, are never subjected to assimilation of voice (have some [hæv səm])...”<sup>3</sup>

Therefore, Czech speaker of English can then turn the correct [hæv səm] into the accented [hæf səm].

However, according to Volín & Skarnitzl (2006) is the voicing assimilation of labiodental fricatives in reality applied only in roughly fifty percent of cases, and therefore Skaličková’s remark should not be taken as a rule, but rather as a possible pronunciation, which should be avoided.

#### **5.1.3.2. Dental Fricatives /θ/ and /ð/**

As was said in the introductory chapter about consonants, dental fricatives are phonemes that are rather uncommon to most European languages and therefore present a great degree of difficulty to most ESL learners, Czechs included (Brinton et al, 1984: 31). In fact, the area of fricatives, and especially dental fricatives, does not appear to be problematic solely for ESL learners, but for the native learners as well, such as in terms of consonant acquisition they prove to be the most problematic, and before any of the actual dental fricatives are acquired, they are replaced by plosives (Gimson, 2008: 165).

Dental fricatives, both voiceless /θ/ and voiced /ð/ appear exclusively as a pronounced version of the consonant cluster ‘*th*’: word-initially in *thief* and *there*, word-medially in *ethics* and *leather*, and word-finally in *path* and *mouth* (Gimson, 2008: 167). In terms of articulation, the “tip of the tongue is placed near the inner surface of the upper teeth” (Brinton & Brinton, 1984: 31). However, perhaps surprisingly, it is not the articulation that causes the most problems, such as:

„the difficulty of /θ/ and /ð/ lies not so much in their articulation, which most learners can perform correctly in isolation, as in their combination with other fricatives, especially /s/ and /z/” (Gimson, 2008: 168)

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<sup>3</sup> Překlad autorky.

Nevertheless, Czech speakers often incorrectly place the tip of the tongue in between the upper and lower teeth (Skaličková, 1979: 184) and turn the place of articulation from dental into interdental<sup>4</sup>. However, the above quotation holds true, such as correct pronunciation of words like *this*, *these* or *those*, appears to be highly problematic.

When ESL speakers do not attempt to achieve the prescribed articulation, they often replace the sounds of /θ/ and /ð/ altogether. They are replaced namely with: /t/ or /s/ in the case of /θ/, and /z/ and /d/ in case of /ð/, and in dental fricative-free languages it is a fairly common practice (Gimson, 2008: 168). Apart from the fact that it adds a very strong foreign accent to the speech, it also creates confusion, for instance in the case of /ð/, where the replacement with /d/ easily confuses *then* with *den* (Skaličková, 1979: 184).

Another potential problem for learners is the fact that when compared to other fricatives (such as sibilants), dental fricatives are marked with fairly low levels of intensity and flat spectra, and are therefore highly interchangeable, especially in certain English dialects (Raphael et al., 2007: 226). Moreover, since both /θ/ and /ð/ are applied to the orthography of 'th', students have understandable difficulties deciding whether to pronounce the voiced or voiceless variant of dental fricative.

To conclude, the fact that dental fricatives do not appear in the Czech language has a profound effect on their pronunciation in English. Czech speakers either change the place of articulation from dental into incorrect interdental, or they replace the abovementioned sounds with alveolar plosives or alveolar fricatives, so the pronunciation of *think* [θɪŋk] becomes [sɪŋk] or [tɪŋk]; and similarly the pronunciation of *this* [ðɪs] becomes [zɪs] or [dɪs], which all creates a strong foreign accent. On top of that speakers find it difficult to identify which variant of dental fricative to use, such as they have similarly flat spectra and are also applied to the same orthography of 'th' and thus *there* could hypothetically be pronounced both as [ðɛə] and [θɛə].

### 5.1.3.3. Alveolar Fricatives /s/ and /z/

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<sup>4</sup> In the traditional British English are the sounds /θ/ and /ð/ categorized as dental, and the correct pronunciation is that the tip of the tongue touches the inner surface of the upper teeth. The interdental pronunciation of /θ/ and /ð/ may signalize an immature speech, speech disorders, or also dialects, such as Californian English, as is pointed out by Ladefoged (in Hewlett & Beck, 2006). However, I choose to compare the Czech patterns of pronunciation to the standard British English, which is dialect-free. I will therefore consider the dental pronunciation as ideal, even though some textbooks present /θ/ and /ð/ as interdental.

In comparison with dental fricatives, are alveolar fricatives common in both Czech and English. The phonetic symbols for both voiceless and voiced alveolar fricatives are in both languages identical, /s/ and /z/ respectively.

In terms of articulation, there are no significant issues. Apart from Palková (1994), Skaličková (1979: 120-122) mentions two variants of Czech pronunciation of /s/. This difference lies in the fact that the tip of the tongue does not lean against the lower front teeth (compared to the usual pronunciation, where the tip of the tongue does lean against the front teeth). However she also admits that both articulations are permitted and do not create any significant accent.

In terms of the consonant phoneme /z/, and namely its character in connected speech, there appears to be a difference related to articulatory phases. Palková (1994: 73) says that out of the three phases of consonant articulation, the first and the last (the approach and the release respectively), are the most important, as the release of one phoneme often merges with the approach of another. Skaličková (1979: 122-123) points out that application of the traditional approach phase of Czech pre-consonant /z/ (*nazdar*), to its English counterpart could appear problematic. Such issue is linked to the word-final positions of /z/, where Czech speakers apply the release phase instead of the approach phase and often pronounce [zə] and can thus easily pronounce the word *buzz* [bʌz], as *buzzer* [bʌzə], and therefore change the word's meaning.

As a result, the category of alveolar fricatives does not seem to be as problematic as other categories. The only potential issue could be an incorrectly chosen articulatory phase of English /z/, if positioned word-finally, which would not only create a foreign accent, but also change meaning of the word.

#### **5.1.3.4 Palato-alveolar Fricatives /ʃ/ and /ʒ/**

The category of palato-alveolars in English includes a pair of voiceless and voiced consonants, /ʃ/ and /ʒ/, respectively. Corresponding Czech sounds are /ʃ/ and /ʒ/, are classified as post-alveolar, and correspond to graphemes 'š' and 'ž'.

One of the problems that could arise in terms of palato-alveolar fricatives lies in their articulation, and therefore I will first give Gimson's (2008: 172) description of it:

“soft palate (is) raised and the tip and blade of the tongue makes a light contact with the alveolar ridge, the front of the tongue is being raised ... in the direction of the hard palate and the side rims of the tongue being in contact with the upper side teeth”.

What is of particular importance is the fact that the tongue is being raised in the direction of hard palate, which is a sign of palatalization, first of the two kinds of secondary articulation<sup>5</sup> involved in the production of palato-alveolars. Palatalization applied to English palato-alveolars causes an additional [i]-ness quality (Gimson, 2008: 172).

In Czech, on the other hand, palatalization does not, similarly to aspiration, exist at all (Hála, 1962: 205) and thus could potentially contribute to a foreign accent. However, Gimson (2008) also mentions that English palatalization is not as strong as in other languages, for example Russian (Hála, 1962: 205) and therefore does not seem to be significantly related to the production of a foreign accent.

Another secondary pronunciation of palato-alveolar fricatives is labialization. Ladefoged claims that both /ʃ/ and /ʒ/ are strongly labialized (2006, p. 65), whereas the corresponding Czech variants are only slightly labialized (Palková, 1994: 229). Jones however explains that labialization is individual, and as some speakers pronounce /ʃ/ and /ʒ/ as labialized, others apply it only in certain environments (Skaličková, 1979: 124).

Therefore it appears that neither palatalization, nor labialization significantly contribute to foreign accent.

Now I am going to discuss assimilation of voice. Skaličková (1979: 123-126) says that both Czech sounds are subjected to assimilation and Palková (1994: 328-331) presents examples:

*máš říci* → [ma:ʒ ři:tsi], *náš dům* → [na:ʒ du:m]; *snažme se* → [snaʃme sɛ]

Skaličková (1979: 124-126) then goes on to say that neither /ʃ/ nor /ʒ/ are in English subjected to assimilation of voice, but she does not present any examples of a negative transfer.

In terms of palato-alveolar fricatives, no notable difference was found, neither were secondary articulations found to be greatly contributive to the impression of foreign-accent, as was the difference in assimilation of voice.

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<sup>5</sup> Ladefoged describes secondary articulation of consonants as „a lesser degree of closure by two articulators not involved in the primary articulation“ (2006, p. 65).

### 5.1.3.5. Glottal Fricative and Velar Fricatives /x/ and /y/

Even though Ladefoged (2006: 67-68) places /h/ in the category of approximants, I placed it in the category of fricatives, and thus followed the theory of Gimson (2008: 173), whom I have used as a primary source. Palková (1994: 209).also places /h/ in the category of fricatives, namely glottal fricatives.

Gimson (2008: 174) describes /h/ as a voiceless consonant, which mostly appears in a syllable-initial position. He goes on to say that in some accents and dialects, such as in Welsh or Australian English, /h/ is:

“often lost and no distinction between such RP minimal pairs as *hill* and *ill*; *hair* and *air*, ..... and usually in such speech, the /h/ words will behave as if they had an initial vowel”.

Ladefoged (2006: 68). adds that /h/ is only a “voiceless counterpart of surrounding sounds”. That said, it seems that /h/ has a very peculiar status in English, such as Gimson (2008) mentions a special group of RP words where it is not pronounced, for instance in *hour* or *honest*. In terms of English orthography Skaličková (1979: 130) draws attention to a special orthographical ‘wh’ group, in words *wh* or *whose*, where the two consonants ‘w+h’ melt into a voiceless fricative /ɸ/.

On the other hand, in Czech is /h/ a paired consonant, and is always voiced, despite its being often influenced by formants of surrounding sounds (Palková, 1994: 230). Skaličková (1979: 130-131) adds that the Czech /h/ is a voiceless counterpart of /x/, which is demonstrated in pairs of words *hlad* – *chlad*, and similarly to other paired consonants is subjected to assimilation of voice (*vrh* – *vrch*).

Overall, it is clear that Czech ESL speakers are presented with several challenges. Firstly Czech speakers are used to pronouncing glottal fricatives, which would be apparent in words such as *hour*, *honor*, *honesty*, *heir* or *vehicle*. Furthermore, in words where the English speakers do pronounce the glottal fricative, but pronounce it as a voiceless phoneme, the Czech speakers could pronounce it as voiced, and Skaličková (1979: 185) stresses that fully voiced pronunciation of the English voiceless glottal fricative would be considered as vulgar.

In a discussion of the category of velar fricatives, one could argue that it is exclusive to the Czech language which suggests that it should not present difficulties when speaking English. In the section about glottal fricatives I stated that the glottal fricative is a voiced counterpart of voiceless phoneme /x/, which is an assumption based on their co-occurrence in minimal pairs. Palková (1994: 213) however states, that /h/ is a ‘fake’ voiced counterpart to it,

and that a true counterpart is the voiced velar fricative /ɣ/. Nevertheless, she also adds that this opposition is only optional and its usage depends on the speaker.

Since category of velar fricatives does not apply to the English language and I have not found any evidence that would prove the application of Czech voiceless phoneme /x/ with the English voiceless phoneme /h/.

#### 5.1.4. NASALS

The phonemic inventory of nasals in English contains three phonemes: the bilabial nasal /m/, the alveolar nasal /n/ and then the velar nasal /ŋ/ (Gimson, 2008: 138). The Czech inventory is larger and consists of: bilabial nasal /m/, labiodental nasal [ɱ], alveolar nasal /n/, velar nasal [ŋ], and palatal nasal /ɲ/ (Palková, 1994:209). Nasals share certain features with oral plosives, namely the total closure in the mouth. However the soft palate that is raised in articulation of plosives, is lowered in the articulation of nasals and allows the air to be let out through the nasal cavity (Gimson, 2008: 176).

##### 5.1.4.1. Nasals /m/ and /ɱ/

In terms of the bilabial nasal /m/, there are no significant differences between Czech and English, as in both languages they are unpaired, voiced, they do not assimilate neighbouring sounds, and they share the same manner and place of articulation. The only difference is that unlike from its Czech variant, the English /m/ can be subjected to desonorization, which does not have a significant impact on its foreign-accentedness (Skaličková, 1979: 132-133).

In Czech, the category of nasal phonemes also includes the labiodental [ɱ], which is an optional variant of /m/ when found in the close proximity of some other labiodental sound, such as /v/ or /f/, in *tramvaj* [tramɘvaj] (Palková, 1994: 241). Even though English consonant tables do not include it, it does appear in the English language and its usage is identical, and applies to words like *comfort* [kəmɘfərt], as an optional variant of /m/, or even in *infant* [ɪmfənt], as an optional variant of /n/ (Gimson, 2008: 176-179).

Czech nasal phoneme /m/ shares most of the features with its English counterpart, and as I stated above, the only difference is in desonorization, which does not have an impact on foreign-accentedness. An additional instance where [ɱ] appears in English is functioning as a variant of /n/, this is however optional.

#### 5.1.4.2. Nasals /n/ and /ŋ/

Unlike from the previous category, both alveolar nasal /n/ and velar nasal /ŋ/ appear in Czech and English consonant tables, and share the same manner and place of articulation.

In terms of the alveolar nasal /n/, it is fair to say that similarly to the abovementioned /m/, there are no significant differences between Czech and English, such as they are both unpaired, voiced, appear in any word positions and do not subject their neighboring consonants to assimilation. The only difference is again the desonorization of English /n/, which again, should not have any significant impact on foreign accent (Skaličková, 1979: 133-134).

None of the nasals mentioned so far presented any considerable challenge; however the situation differs with the velar nasal /ŋ/, which according to Ladefoged (2006: 66). differs greatly from all the other members of its category. In English, /ŋ/ occurs in words where the following letter is a velar consonant (/g/ and /k/), thus in: *singer, sing, singing, tongue, tinker, monkey*, but also in words like: *uncle, distinct, bacon, income, anxious* or *bronchitis* (Gimson, 2008: 179-180), but it is not treated as an allophone.

On the other hand in Czech it exists exclusively as an allophone of /n/. Unlike from [m] is obligator. In terms of its position it is found exclusively preceding velars /g/ and /k/, and only in word-medial position (Palková, 1994: 241).

Naturally, an ESL speaker is then confronted with many challenges, which Gimson (2008: 181) describes as following:

“Those learners whose own language has [ŋ] only as an allophone of /n/ before /k,g/ should avoid using /g/ (or more rarely /k/) in those cases where /ŋ/ occurs in English without a following plosive, especially in sequences where final /ŋ/ is followed by a vowel, e.g. *singing, a long essay*.”

Subsequently, since the Czech [ŋ] appears exclusively as an allophone of /n/ before /k, g/ and only medially, a word like *running* [rənɪŋ] could be easily pronounced either with an alveolar nasal as [rənɪn], or it could be pronounced, according to Gimson, as [rənɪŋg] or even [rənɪŋk]. Skaličková (1979: 183-184) also presents an example, where such a mistake in pronunciation leads to misunderstanding, namely in the case of *sing* [sɪŋ] meaning ‘zpívat’,

which a Czech speaker hypothetically turns into [sin] ‘*hřích*’, or [sink] ‘*potopit se*’ (1979, pp. 183-184).

To make things even more complicated, dropping of /g/ and using the velar nasal /ŋ/ instead, does not apply to all English consonant clusters consisting of ‘ng’. Words, such as *finger* are pronounced as [fɪŋgər]. However a Czech speaker might pronounce it incorrectly as [fɪŋər], dropping /g/. Ladefoged (2006: 66-67) explains that any word, where ‘-ing’ or ‘-er’ is not a suffix, should be pronounced with [ŋg], such as in the case of *finger*.

To sum it up, in terms of alveolar and velar nasal, the latter is undoubtedly more challenging. Its usage in English differs considerably from its usage in Czech and therefore most problems originate in a negative transfer of patterns of pronunciation from Czech to English. A Czech speaker then either does not use velar nasal and uses alveolar nasal instead, and pronounces *running* as [rənɪn], or pronounces /g/ and /k/ as in [rənɪŋg] and [rənɪŋk]. What is also difficult for a Czech speaker is to recognize to what words with ‘ng’ clusters the rule about velar nasal applies and it is necessary to learn the abovementioned group of words, where the ‘ng’ cluster is indeed pronounced as [ŋg].

#### 5.1.5. APPROXIMANTS

The English category of approximants includes alveolar approximant /l/, post-alveolar approximant /r/, palatal approximant /j/ and labial-velar approximant /w/. This category is then further divided into central approximants /j, r, w/ and lateral approximants, which are represented by a sole sound and that is /l/. Thanks to many similar qualities are the sounds /r, l/ labeled as liquids (rhotic and lateral, respectively). Approximants differ from the other consonant sounds, because, as Ladefoged (2006: 67) puts it, their articulation “varies slightly depending on the articulation of the following vowel”.

The corresponding phonemes are in Czech labeled as sonorants and differ from other consonant phonemes in the way that they do not form pairs according to voicing and they are never subjected to desonorization. Sonorants consist of nasals, liquids /l,r/ and a sole sound labeled as approximant /j/ (Palková, 1994: 214).

Before I start discussing individual approximants, I will draw attention to a particular overlapping gesture that regards all of them and therefore will be mentioned now. According

to Roach, in English there are two syllable-initial consonant clusters<sup>6</sup> (two-consonant consonant clusters). The one that is relevant to the topic about approximants is the consonant cluster consisting of voiceless stops /p, t, k/ followed by approximants /r, w, j, l/ (Roach, 2009: 57). The fact that stop consonants are voiceless causes devoicing of the following approximants and thus words like *play*, *twice*, *clay* can, in narrow transcription, be rewritten as [p̥leɪ], [t̥waɪs] and [k̥leɪ], where /l/ and /w/ are devoiced. (Ladefoged, 2006: 67).

However, as I stated earlier, Czech approximants<sup>7</sup> are not subjected neither to devoicing, partial devoicing, nor desonorization, therefore this rule situation could prove to be problematic for Czech speakers, who would hypothetically pronounce /l/ and /w/ in *play* and *twice* as fully voiced.

#### 5.1.5.1. Alveolar Approximant /l/

The alveolar approximant (or lateral liquid), has in English got three distinct variants. One of them is the devoiced /l/ that was mentioned earlier. Of my interest is now the clear /l/ and a dark [ɫ]. They both differ in terms of articulation, and distribution. As for the clear /l/, the “tip (of the tongue) is touching the alveolar ridge and one or both sides are near the upper side teeth, but not quite touching” (Ladefoged, 2006: 67)

Clear /l/ appears in the majority of cases pre-vocally, such as in *leaf* [lif] or inter-vocally as in *a feeling* [ə fiɫɪŋ] (Ladefoged, 2006: 67-68). As for the dark [ɫ], regarding its distribution, it is used post-vocally as in *feel* [fiɫ], but also inter-vocally, mostly as inflected verbal form, such as *settling* [setəɫɪŋ]. In terms of its articulation, a beginning of it is similar to clear /l/, such as the tongue tip is touching the alveolar ridge, however the back of the tongue is then raised in the direction of a soft palate, which „gives it a back vowel (or velarized) resonance“ (Gimson, 2008: 183). However, Gimson warns ESL speakers that there should be no attempts of curling the tongue back.

In standard Czech, there is just one version of alveolar approximant and that is a clear /l/. Regarding its articulation, the tip of the tongue leans against alveolar ridge, while the airflow flows along its sides. Even though [ɫ], it does appear in the system as well, it is only in certain dialects. Its character is vocalic, similarly to the English [ɫ] (Palková, 1994: 232-236).

It could thus seem that Czech ESL speakers do not have any problems regarding the two distinct variants of English alveolar approximant; since dark [ɫ] does appear in the

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<sup>6</sup> The other syllable-initial consonant cluster is a cluster consisting of ‘s’ + ‘p,t,k’, where the initial ‘s’ cancels aspiration of the following voiceless stops (Ladefoged, 2008).

<sup>7</sup> Because of simplification I will call the corresponding Czech sounds /l, r, j, w/ also as approximants, even though only /j/ is labeled as such.

language. However, there are some important things that need to be taken into account. Firstly, even though Czech language does use dark [ɫ] in dialects, it is not normally used in standard Czech, and Czech ESL speakers are therefore not sensitive enough for its usage in English. Secondly, what we know about the English dark [ɫ] is that it is often positioned word-finally, and if a Czech word contains an alveolar approximant either word-finally or post-vocally, their articulation and acoustics is practically identical (Palková, 1994: 236-237). Therefore, a Czech speaker mostly finds using the velarized [ɫ] problematic. On top of that, Skaličková (1979: 140). states, that the Czech alveolar approximant is distinctly higher in terms of acoustics and also articulation, namely that the position of dorsum is different.

The right usage of a velarized [ɫ] in English however does not seem to be the most important factor in creation of a foreign accent, which is supported by Gimson (2008: 185), who says that “learners will be perfectly intelligible if they use only /l/”. However he also later admits that for those who strive to sound like native-speakers, mastering the velarized [ɫ] is vital, and therefore the distinction of clear and dark alveolar approximant should not be underestimated.

#### **5.1.5.2 Post-alveolar Approximant /r/**

The pronunciation of post-alveolar approximant is in English notoriously problematic. Its quality and variety is rarely matched in any other language. Post-alveolar approximant varies throughout English dialects and can become a retroflex /ɻ/, as in American English, or uvular trill /R/, or uvular fricative /ʁ/ as in north-East England, or Scottish English (Gimson, 2008: 187-189). In RP is the /r/ sound simply referred to as the post-alveolar approximant.

Its complexity lies both in its articulation and its distribution and in both aspects there are significant differences between English and Czech.

According to Gimson (2008: 168) is its pronunciation in RP as following:

“the soft palate (is) being raised and the nasal resonator (is) shut off, the tip of the tongue is held in a position near to, but not touching, the rear part of the upper teeth ridge; the back rims of the tongue are touching the upper molars; the central part of the tongue is lowered, with a general contraction of the tongue, so that the effect of the tongue position is one of hollowing and slight retroflexion of the tip”

On the other hand in Czech, where /r/ is not classified as a post-alveolar approximant, but rather as an alveolar fricative, the tip of the tongue vibrates against the alveolar ridge

(Palková, 1994: 232), unlike from the English articulation, where the tip of the tongue is held in a position. Interestingly enough, such quality puts the RP /r/ slightly closer to the Czech /r̥/ than to the Czech /r/ (Skaličková, 1994: 144).

Apart from the basic pronunciation, what often affects English /r/ is labialization. Even though the degree of lip-rounding varies from a speaker to speaker, it is present in most cases (Gimson, 2008: 188) unlike from Czech, where labialization does not affect any pronunciation of /r/ (Skaličková, 1979: 144).

As is sufficiently demonstrated above, the pronunciation of English post-alveolar approximant differs from its Czech counterpart significantly; however what differs equally or even more, is its distribution.

At the beginning of this chapter I stated that English dialects vary greatly in an articulation of /r/, but they also vary in the actual pronunciation of it, which leads to the phenomena of rhotic and non-rhotic dialects. Whereas General American, Irish English and Scottish English are classified as rhotic and permit a pronunciation of /r/ in any word-position, RP is classified as non-rhotic and only allows pronunciation of /r/ pre-vocally (Gramley & Patzold, 2004: 74). On the other hand, Czech is a rhotic dialect, and permits the pronunciation of /r/ in any word position, pre-vocally as well as post-vocally (Skaličková, 1979: 144).

What is related to the phenomenon of rhotic vs. non-rhotic dialects is existence or non-existence of so called ‘linking r’ and ‘intrusive r’. Rhotic dialects, in this case Czech, do not use it. On the other hand, RP uses it extensively. ‘Linking r’ occurs in instances where one word ends with the post-alveolar approximant and the other begins with a vowel such as in *a player of the game*, which is pronounced as [ə pleɪə r əv ðə geɪm]. There is also the ‘intrusive r’, where an additional /r/ sound is added when one word ends with a schwa and the following word begins with a vowel such as in the textbook example phrase of *India and Pakistan*, pronounced as [ɪndiə r ænd pækəstæn] (Yavas, 2011: 70). Both ‘intrusive r’ and ‘linking r’ represent linking phenomena and make the speech sound more fluent and continuous.

Taking into consideration all the consonants described thus far, the post-alveolar approximant appears to be the most challenging. Its articulation in English and Czech differs in two significant aspects and that is either presence or absence of vibration and labialization, which greatly alters its sound. However, it is not only the challenging articulation, but also its distribution, a challenge that lies in the fact that Czech is a rhotic and RP is a non-rhotic dialect. When a Czech speaker applies the rules of L1 distribution of /r/ and thus pronounces it in every word-position, either pre-vocally or post-vocally, it is again perceived as a

mark of a foreign accent. As for the phenomena of ‘linking r’ and ‘intrusive r’, its usage makes the speech sound continuous, and Czech ESL speakers should be advised to use it.

### **5.1.5.3. Palatal Approximant /j/**

Palatal approximant is along with the labio-velar approximant categorized as a semi-vowel. Semi-vowels are characteristic by a quick glide beginning with one vowel, and ending with following vowel, all within a single sound. Ladefoged (2010: 233). calls semivowels as “non-syllabic versions of high English vowels /i/ and /u/”. Additionally to that, the glide depends significantly on the nature of the following sound (Gimson, 2008: 198).

The palatal approximant is in English articulated by:

“the tongue assuming the position for a close-mid to close vowel (depending on the degree of openness of the following sound) and moving away immediately to the position of the following sound” (Gimson, 2008: 191)

Thanks to its sharing many features with a vowel (in the case of palatal approximant it is /i/), Ogden (2009: 79) remarks that some phoneticians actually do treat it as a consonantal equivalent to it. Nevertheless, the palatal approximant is treated in the majority of cases as a consonant, one that is generally voiced, however, as was stated at the introductory paragraph for approximants, it can be subjected to devoicing. Regarding its distribution, it appears exclusively pre-vocalically (Ogden, 2009: 79).

In English is /j/ also used as a transient [j], which functions as a glide between vowels, such as in *Yes, he is*. ESL speakers should be encouraged to use it, as it makes the speech more continuous (Volín, 2003: 66).

Getting back to the status of palatal approximant /j/ in Czech, its acoustics draws near to a vowel /i/. As a member of a larger group of sonorants, it is the only one labeled as an approximant. It is never subjected to devoicing and does not form pair with a voiceless consonant. Its pronunciation is greatly dependent on surrounding sounds. (Palková, 1994: 211-233).

Consequently, the English /j/ differs then from the Czech /j/ in the fact that it only appears in a pre-vocalic position and can be subjected to devoicing. Skaličková (1979: 127) also says, that in English is its quality slightly more vocalic and requires a lesser amount of noise. What should be encouraged is the usage of transient [j], a phenomenon appearing in the

English language. Other than that, no significant differences were found and palatal approximant can be regarded as a rather non-problematic sound.

#### 5.1.5.4. Labiovelar Approximant /w/

The labiovelar approximant /w/ is, similarly to the previous phoneme labeled as a semivowel. If the palatal approximant was by some phoneticians treated as a consonantal equivalent of /i/, then the labiovelar approximant is in English by some treated as a consonantal equivalent of /u/ (Ogden, 2009: 81).

Its articulation is, unsurprisingly, similar to /j/, as “the tongue (is) assuming the position for a back close-mid to close vowel, and moving away immediately to the position of the following sound” (Gimson, 2008: 194).

What Gimson stresses to be an important part of articulation is the labialization, such as when articulating the labiovelar approximant, lips are always rounded, no matter what sound follows.

The labiovelar approximant is inherently voiced, however can also be devoiced. Additionally, /w/ also has a voiceless counterpart, and that is the voiceless labiovelar approximant [ʍ], which is found in words, where ‘w’ happens to be in a close approximation with ‘h’, such as in *which*. However, as Ladefoged (2006) says, differentiation between this pair of phonemes is gradually disappearing and traces of it can be now found only in dialects and therefore should not be of particular concern to ESL speakers.

That however cannot be said about another opposition of /w/, and that is the opposition of /w/ to /v/, which according to Gimson (2008: 196) should most learners pay great attention to.

In standard Czech, there is no labiovelar approximant. Yet such sound does appear in Czech dialects, and is categorized as voiced bilabial approximant /w/. Palková (1994: 237) explains that it appears in some north-east areas, as a regional variety of /v/ in words as *děvče* [ɟɛwʦ̥ɛ] or *zrovna* [zrowna].

Along with the fact that the only version of ‘w’ in Czech is not a labiovelar but bilabial approximant and it only appears in a dialect, the main stumbling-stone is that Czech speakers do not differentiate between /w/ and /v/. Therefore, they freely interchange these sounds, not keeping in mind that in English /w/ and /v/ represent two distinct phonemes, and are able to differentiate meaning. A Czech speaker can easily turn the word *veal* [vil] into *wheel* [wil], which could have a significant impact on intelligibility (Skaličková, 1979: 185).

In English, similarly to intrusive [r], linking [r] and transient [j], labiovelar approximant also represents a linking phenomenon, in the form of transient [w]. It helps to link a low back vowel to a following one, such as in *Sue asked me*. In Czech it is not used, but Volín (2003: 66) suggests that its usage should be supported, such as it could eliminate the application of word-initial pre-vocalic glottal stops, usage of which is considered negatively.

To conclude, labiovelar approximant /w/ represents in English an established semi-vowel that has its devoiced and completely voiceless variations. On the other hand, in Czech it only appears in dialects and unlike English does not have a meaning-distinguishing ability. Since Czech ‘w’ does not form a minimal pair with ‘v’, Czech ESL speakers pronounce both sounds in the same way and create confusion between words such as *wheel* and *veal*. In terms of transient [w], in English it represents a linking phenomenon, a use of which should be encouraged in order to increase overall fluency of speech.

#### 5.1.6. ENGLISH AND CZECH CONSONANTS – SUMMARY

This last chapter related to consonants will serve as a short summary of what has been discussed. When it comes to the consonant phonemes of Czech and English, considerable differences are found, be it different articulation, distribution or non-existence of certain sounds in either language. Most of the issues encountered by Czech speakers are related to application of L1 phonemic patterns to English, which not only results in a marked foreign accent but frequently creates confusion.

In terms of English and Czech owning a different inventory, the most problematic appear to be dental fricatives. Since the sounds /θ/ and /ð/ do not appear in Czech at all, Czech ESL speakers try to replace them with the sounds that they perceive as closest to them, mostly /z/ and /d/ for voiceless and voiced dental fricatives, respectively. An especially tricky situation arises when dental fricatives appear along with sibilants, in words like *this* or *those*. Czech ESL speakers also might view them as interchangeable, due to its low formant quality and correspondence to the same combination of graphemes.

Apart from the sounds that do not exist in the Czech system of phonemes, there are also sounds that only appear in Czech dialects. That is the case of /w/ and [ɫ]. Czech ESL speakers should learn to differentiate between clear and dark lateral liquid. Regarding the labio-velar approximant, Czech ESL speakers should take into account the fact that it can in

English distinguish meanings, and differentiate its pronunciation from /v/. Not doing so, can lead to considerable misunderstandings.

In terms of Affricates, should Czech ESL speakers be warned not to apply them to consonant clusters 'tr' and 'dr'.

Difficulties are also related to /h/ and /ŋ/. While Czech speakers pronounce a fully voiced /h/ every time and at every word-position, English speakers sometimes devoice it, or omit completely, as in the word *honesty*. As for the velar nasal, it is in Czech treated as an allophone of /n/, a usage of which is restricted to a single word-position, unlike from English where it appears in all word-positions and all linguistic environments. Czech ESL speakers then either do not pronounce it at all, or apply it to all phonetic situations. They should also be instructed about dropping of following /g/.

Then comes the notoriously problematic rhotic liquid, a production as well as distribution of which, could not be more different in these two languages. In Czech is the sound produced with the tongue vibrating against the alveolar ridge, which itself creates a powerfully strong accent, since in RP is tongue vibration not involved in any stage of the process. On top of that, thanks to the fact that standard Czech is a rhotic and RP is a non-rhotic dialect, a Czech speaker often incorrectly pronounces rhotic liquids in all word-positions, not only pre-vocalically, which is a correct RP pronunciation.

There are three types of secondary articulation that were either found to be missing, or treated differently in Czech. The two of them, labialization and palatalization were here not found to significantly contribute to degree of foreign accent.

Aspiration however appeared to be a lot more significant. In Standard Czech language it does not exist at all, whereas in English it affects all voiceless plosives. Czech speakers either do not perform it at all, or they overuse it, and pronounce /x/. Correct application of aspiration should be focused on.

Then there were instances that increase overall fluency and continuity of speech. First of them was assimilation of voice, which appeared to be hugely problematic. Whereas in English it is rare and greatly restricted, in Czech it is deep-rooted, and affects the majority of consonantal pairs. If Czech ESL speakers apply it to English consonants, not only they create a foreign accent, but sometimes cause a confusion of meanings.

What is also related to connected speech are the linking phenomena: the glottal stop, intrusive/linking [r], transient [j], and transient [w]. In English is glottal stop used mainly as an allophone of consonant, often /t/, and it is, as a rule, not used before word-initial vocals.

However in Czech it is used before word-initial vowels regularly, which, when applied to English, creates a highly discontinuous impression.

As for the intrusive [r], linking [r], transient [j] and [w], they represent linking phenomena that are in English used very frequently. However, Czech does not, for linking purposes, use any of the above, and therefore Czech ESL speakers are not sensitive enough for their usage. Their application should however be greatly encouraged, in order to make the speech sound more fluent and continuous.

## 5.2. ENGLISH AND CZECH VOWELS – INTRODUCTION

In the following sections I will turn my attention to English and Czech vowel phonemes. I will compare and contrast them and try to pinpoint the greatest difficulties a Czech ESL speaker could face. As referential dialects I will again use the Received Pronunciation and Standard Czech.

Unlike from consonants, vowels are generally more challenging to describe. They are produced with free air-stream and no contraction in vocal tract. Therefore, whereas in previous chapters it was possible to give a detailed description of articulation; the production of vowels is opaque and to fully determine their articulation is problematic, as there are no sharp boundaries between vowels. In Ladefoged's (2006: 85) words, "it is perfectly possible to make a vowel that is halfway between a high vowel and a mid vowel".

In English, according to Ogden (2009: 56), vowels play a crucial role, such as there are words that consist solely of them, and it is mostly a vowel phoneme that influences neighboring sounds, rather than the other way round. He also says that English vowels vary extensively and play vital role in distinguishing individual dialects.

In terms of English vowel inventory, there are twelve monophthongs: ten sounds representing full vowels /i, ɪ, e, æ, ɑ, ɒ, ɔ, u, ʊ, ʌ /, and two sounds representing reduced vowels /ə, ɜ/, which in English serve as universal sounds appearing mostly in unstressed syllables. Monophthongs are placed into categories according to two tongue-related aspects. Firstly its approximate position in the oral cavity, dividing them into front, central and back vowels; and secondly according to its height in the oral cavity, sorting vowels into high, mid-high, mid-low and low.

English inventory is very rich in diphthongs, of which there are nine /aɪ, eɪ, oɪ, aʊ, əʊ, ɪə, eə, ʊə, ju/. Three /ɪə, eə, ʊə/ are labeled as centering diphthongs, and /ju/ is a diphthong,

status of which has been doubted. As for vowel length, it is a very complicated feature, so it will be discussed in an individual chapter.

In Czech vowel phonemes also represent one of the most significant areas of phonetics. However, their classification, distribution and articulation are a lot less complicated and varied than in English. Their inventory is considerably smaller; vowels are fully articulated in all word positions and are never reduced. They are rarely influenced by surrounding sounds, and even in those cases it is hardly noticeable.

In terms of quality, there are only five vowel phonemes, /i/, /ɛ/, /ɛ/, /o/, /u/. Most of them have long variants, which are represented either by monophthongs /i:/, /e:/, /a:/, /u:/, or diphthongs; of which there is only one original one, and that is /ou/. There are indeed two more diphthongs and one additional long vowel; however they only appear in loan words and will not be considered as part of the original phonemic inventory. Vowel length represents in Czech a seemingly less complicated feature, as all the short vowel phonemes have a grammaticalized long variant. Unlike from English, is vowel length a quantitative, rather than qualitative feature (Palková, 1994: 170).

In terms of classification, there are, similarly to English, three groups related to tongue position, the front /i, i: ɛ, ɛ:/, middle /a, a:/ and back /o, o:, u, u:/ categories of vowels. However, regarding the tongue height, there are also only three classes, the high /i, i:, u, u:/, middle /e, ɛ:, o, o:/ and low /a, a:/, unlike from English, which features two additional categories. Similarly, vowels also differ in roundness, and can be either rounded /o, o:, u, u:/ or unrounded /i, i:, ɛ, ɛ:, a, a:/.

All Czech vowels are produced in the oral cavity, none of them is nasal. Even though a vowel can be influenced by a nasal sound standing in a close proximity, however even in that case is a nasal vowel is mostly considered negatively and is perceived as a careless pronunciation (Palková, 1994: 171-172).

From the paragraphs above it is clear that English and Czech vowels differ in a number of aspects. I will now try to describe the most important differences in both vowel systems, and I will be comparing them in terms of contrastive pairs. However, first I will discuss the phenomena of vowel length in both languages.

### 5.2.1. VOWEL LENGTH

According to what was stated above, in Czech represents vowel length a fairly stable feature, which is affected neither by neighboring sounds nor word-position, and represents a segmental rather than supra-segmental feature. In Standard Czech it is important that all Czech vowels are carefully pronounced and their length is strictly adhered to. As I have already mentioned in the section about plosives, what Czech speakers often use to strengthen the intelligibility of their speech are glottal stops, placed before words beginning with a vowel. Every shortening or lengthening of originally long or short vowels is considered to be a non-literary and neglect speech, which often assigns a negative characteristic to its speaker.

In terms of dialects and vowel length, I have already said that in English it plays a crucial role; however in Czech it does not, exceptional being only the small region of Lašsko, where the difference in vowel length is completely ignored and only short vowels are used (Palková, 1994: 187-188, 287).

Every Czech vowel has its long variant, which can either be represented by a long monophthong, a diphthong, or a combination of both. Regarding the former, it is achieved with the help of diacritical mark *´*. If it is placed above a short vowel, it changes it into a long vowel, and together they then form a contrastive vowel pair, their length ratio being 2:1 (Palková, 1994: 179). Thus /a/ turns into *´a*, /a:/, and similarly /u, i, ε/ change into *´u, ´i, ´e*, /u:, i:, ε:/. As for the back, rounded vowel /o/, its long monophthongal variant only appears in loan words. Vowel length is thus in Czech a clearly quantitative feature. If a diacritical mark is added, the quality of minimal pair constituents stays the same, unlike from quantity, which differs (Skaličková, 1979: 180).

Palková (1994: 175) supports that by explaining that in Czech is vowel quality generally not considered as being either open or close, but neutral. It means that timbre within a contrastive pair does not significantly change, and remains almost identical for both. There is one single exception, and that is the contrastive vowel pair /i/ and /i:/, where the former is slightly more open than the latter. However, the overall conclusion is that the main difference between members of contrastive vowel pair resides in length, not in timbre, presence or absence of certain sounds, or vowel location in word.

On the other hand, English vowel length is generally not a matter of quantity, but quality<sup>8</sup>. There are essentially five contrastive vowel pairs, former of which is fully long and

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<sup>8</sup> Gimson says that quantity also plays a role in distinguishing contrastive vowel pairs in English, however it is the quality/timbre that is the most important (2008, p. 92)

latter of which is fully short: /i/ and /ɪ/, /u / and /ʊ/, /æ/ and /ɑ/, /ɒ/ and /ɔ/ and finally /ə/ and /ɜ/. The fact that these vowels contrast in quality, not quantity, is also reflected in orthography, such as the majority of phoneticians choose to use two different vowel symbols (to accentuate different qualities), rather than one symbol, which could be distinguished diacritically (Gimson, 2008: 94). Therefore, if vowel quality/timbre played only a secondary role in vowel length in Czech; it undoubtedly plays a crucial one in English (Skaličková, 1979: 26).

While Czech recognizes two kinds of length (fully long and fully short), English recognizes three kinds of length (Skaličková, 1979: 180-181). It seems to be a direct outcome of English vowels being easily influenced by surrounding sounds. While in Czech is length a highly stable and constant feature, in English it often changes with every word. Therefore, a vowel that is fully long in one word, can find itself to be only semi-long in another.

Vowel length is especially strongly linked with the consonant feature of voicing, as I have already mentioned in the section about consonants. Vowels that are perceived as longest are followed by a voiced consonant, and it is actually the length of the voiced consonant that creates an impression of the preceding vowel to be long. English vowels are shortest in monosyllabic words while preceding a voiceless consonant, such as in *bit*, are semi-long in words like *beat and bid*, and longest in *bead*. Skaličková (1979: 180) stresses the vital importance of following the rules of vowel length, since it also foreshadows the following consonant.

Length of a vowel in English does not only depend on voicing of the consonant, but also on type of the syllable it appears in, such as vowels are longer when appearing in stressed syllables, than when they appear in unstressed syllables. To make things even more complicated, longest vowels appear in monosyllabic words, and their length decreases with every additional syllable (Ladefoged, 2006: 98).

From the paragraphs above it is clear that in terms of vowel length there are many significant differences. In Czech is vowel length a quantitative feature, it is not influenced by surrounding sounds or type of syllable, or word it appears in, and there are only two length oppositions. On the other hand in English it represents a very unstable and changeable feature, degree of which is greatly influenced by type of environment it occurs in; namely the voicing of the following consonant, number of syllables in word and presence or absence of syllable stress.

Skaličková (1994: 180) explains that since influence of surrounding sounds on Czech vowels is minimal, Czech ESL speakers tend not to make a sufficient difference between

vowels preceding voiced and voiceless consonants in English. Thus they pronounce *bit* and *bid* “with the same short duration”. She illustrates it with an example of the verb *send*, which creates its past tense by changing the voiced consonant into voiceless, which should be rightly accompanied by a change in the vowel duration. Another problem arises with the fact that Czech ESL speakers do not sufficiently distinguish different timbres within minimal pairs, and if they distinguish them, then they primarily do so quantitatively.

### 5.2.2. REDUCED VOWELS

Reduction of a vowel is a phonemic change, which witnesses the qualitative or quantitative aspect of a vowel being significantly weakened. Palková (1994: 146) labels it as a dissimilative process, during which two phonemes in close proximity become more contrastive; contrary to assimilation, during which two phonemes become more similar and harmonious.

She explains that a process of reduction does not take place in any area of Standard Czech dialect, and only appears in non-literary area of language, occurring mostly during neglect and fast speech, such as at *materiál*, which is then pronounced as [matrija:l], (1994: 146).

In English, on the other hand, represents reduction a deep-rooted phonemic process, dating back to the Old English (Gimson, 2008: 118). Reduced vowels appear in unstressed syllables, and the most frequent are the schwa /ə/, along with /ɜ/, an open mid-central vowel. Among others it occurs in all grammatical function words, as for instance in the articles and prepositions like *at* [ət]. Apart from schwa, a reduced vowel can be represented by /ɪ/ or possibly /i/, in words like *wanted* [wɒntɪd] (Ogden, 2009: 74).

However, it is important to note that even though all English vowels can become reduced in unstressed syllables, it does not mean that if a vowel appears in an unstressed syllable, it is automatically reduced, such as it can remain in its full form, like /ɛ/ in *tem'pestuous* (Ladefoged, 2006: 94).

It is a common practice that an L2 phoneme, nonexistent in L1, is in the target language replaced by either a similar L1 sound, or a sound from some other known foreign language (Ondráčková & Romportl, 1975). Therefore, since Czech has no vowels that could be used in place of a full vowel occurring in an unstressed syllable, Czech ESL speakers have to find other ways how to cope with pronunciation of some particular sounds. Palková (1994:

342) says that the most frequent sound replacing English schwa is the vowel ‘e’, pronouncing thus *sprinter* as [sprɪntɛr]. Volín (2003: 39) additionally explains that Czech ESL speakers either ignore vowel reduction overall, or they use schwa in all cases.

#### 5.2.2.1. Devoicing of Vowels

There is one more phonemic process linked to unstressed English vowels, and that is devoicing of vowels, sounds that are inherently voiced. Vowels that occur in unstressed syllables can not only be reduced, but also devoiced, particularly if they follow or precede a voiceless plosive (Ladefoged, 2006: 99).

However, Czech vowels do not generally become subjects neither to the influence of surrounding sounds, nor the position or presence of stress. Feature of reduction therefore feels greatly unnatural, and is a source of frequent problems, as they often pronounce all English vowels as fully voiced.

#### 5.2.3. RHOTICITY

As I have mentioned in chapter about rhotic liquid, a major distinction between Czech and English consists in pronunciation of it. Whereas Received Pronunciation is classified as a non-rhotic dialect and does not permit post-vocalic pronunciation of it, Standard Czech, as a rhotic dialect, pronounces /r/ in every word position.

Therefore, a Czech ESL speaker either fully pronounces the post-alveolar approximant, or he adds r-coloring to a vowel, turning it into a rhotacized vowel. According to Ladefoged, is the r-colored articulation of various kinds; the tongue can be raised towards the alveolar ridge, representing the most common pronunciation, or it could be bunched up. Even though either of the articulation may be acceptable in North American English and other dialects, it is completely unacceptable in present day Received Pronunciation (Ladefoged 2006: 230).

R-coloring has a special IPA symbol [ɻ], which is added to a particular vowel, especially to mid-central vowels, /ə/ and /ɜ/, which turns them into a rhotacized schwa [əɻ] and a rhotacized open mid-central vowel [ɜɻ]. Czech ESL speakers would apply these rhotacized vowels to words like *farmer* or *bird*, pronouncing them incorrectly as [faməɻ] and [bɜɻd]; or pronouncing them with full /r/ sound. Both variants are perceived as unacceptable and instantly create a distinct foreign accent.

However, r-coloring does not cover only monophthongs, but also diphthongs, and namely centering diphthongs, gliding towards central vowels /ɪə/, /eə/ and /ʊə/ represented in words like *dear*, *rare*, and *poor*, respectively. Skaličková (1979: 181) does not mention the fact that these vowels could be pronounced as r-colored, but instead claims that Czech ESL speakers often pronounce them with a full /r/ sound at the end, namely as [dir], [rer] and [por], which is not in RP allowed. I will now begin to discuss vowel inventories, grouping vowels in contrastive vowel pairs, beginning with the high front vowels.

#### 5.2.4. *CONTRASTIVE VOWEL PAIRS: ENGLISH /i/ AND /ɪ/; CZECH /i:/ AND /ɪ/*

Even though comparing Czech and English vowel inventory is slightly challenging in view of the various significant differences, I will try to uncover the most problematic areas. I will not label English vowels as lax or tense, but will for the purposes of simplification, use the Czech terminology of long and short. Vowels I will discuss first are Czech /i/ and English /ɪ/.

Regarding its articulation in Czech, the tongue rises towards the transition between alveolar ridge and hard palate; while tip of the tongue is leaning against lower teeth and the lips are only slightly open (Palková, 1994: 181). On the other hand when speaking English, the tongue is rising towards the center of the hard palate and lips are spread (Gimson, 2008: 99). That means that both the height of the tongue and the position of the lips differ.

Skaličková (1979: 36). draws attention to the fact that since short duration of Czech /i/ is very stable, the English /ɪ/ can be either very short, or semi-long in, which a Czech ESL speaker finds challenging to identify and differentiate.

Now I will discuss Czech /i:/ and English /i/.

Articulation of /i/ is similar to the articulation of high front short vowels. Acoustically, whereas English /ɪ/ that sounded lower than Czech /i/, it is now Czech /i:/ that sounds lower than its English counterpart (Skaličková, 1979: 31).

In Czech the contrastive pair follows ratio of 2:1, meaning that the duration of /i:/ is at all circumstances twice as long as the one of /i/. However, in English is the length of /i/ tremendously influenced by its surrounding phonemes, and /ɪ/ represents a fully long counterpart of /i/ only when preceding a voiced plosive or when in a final word-position (Skaličková, 1979: 33).

To conclude, the contrastive pair of Czech and English high front vowels differs in all aspects: in articulation, quality, and duration. However, the difference is not as striking as in other contrastive vowel pairs.

#### 5.2.5. *CONTRASTIVE VOWEL PAIRS: ENGLISH /æ/ AND /ɛ/; CZECH /ɛ:/ AND /ɛ/*

I will begin again with short constituents of the pair. In terms of their articulation, in Czech the dorsum rises towards the front of hard palate, while the gap between lips remains narrow (Palková, 1994: 182). On the other hand in English the dorsum moves towards the center of the hard palate and the lips are loosely spread (Gimson, 2008: 101).

In terms of quantity, Czech /ɛ/ is approximately twice as short as its long partner, and is always pronounced with a fully short duration. However, in English duration of /ɛ/, it is again dependent upon the following sound; and therefore the application of the fully short Czech /ɛ/ could create minor accent (Skaličková, 1979: 37).

Nevertheless it is the remaining pair of phonemes that causes significant problems. As for the articulation of Czech /ɛ:/, it is nearly identical to Czech /ɛ/, due to the dorsum rising towards the center of the hard palate, while the mouth gap stays narrow. Its duration again follows the 2:1 rule, making /ɛ:/ approximately twice as long as /ɛ/.

Regarding /æ/, Gimson explains that during its articulation, lips are more open than while articulating English /ɛ/. He also claims that even though /æ/ is classified as a short vowel, its duration is considerably long, especially before voiced consonants (Gimson, 2008:103) and therefore is considered to be a counterpart to /ɛ/. However, since Czech /ɛ:/ is fully long in all circumstances, its application to situations where /æ/ should be used could potentially create an unnatural accent. In addition to that, /æ/ is considerably more open than the Czech /ɛ:/ (Skaličková, 1979: 39).

That being said, even though the right counterpart for the English /æ/ should be Czech /ɛ:/, Palková (1994: 342) says, that it is not /ɛ:/, but /ɛ/ that is regularly substituted for it. She explains it by theory that /æ/ is alien to the Czech language and therefore needs to be replaced.

To conclude, out of this pair of vowels, it is long /ɛ:/and its English variant /æ/ that seems to be more problematic, such as the latter is completely unfamiliar to the Czech ESL

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<sup>9</sup> Gimson (2008: 103), describes /æ/ as a “traditionally short vowel”, however Skaličková (1979: 38) doubts this status, explaining that it has features of both short and long vowels and places it in the opposition with Czech /ɛ/, which is a theory that I will follow as well.

speakers. If it was substituted with /ɛ:/, mainly out of length-related reasons, it would still create a noticeable foreign accent, however, it is regularly substituted by /ɛ/, which has both different timbre and length, and therefore pronouncing words like *badminton* not as [bædmɪntn] but [bɛdmɪntn] creates a distinct foreign accent.

#### 5.2.6. *CONTRASTIVE VOWEL PAIRS: ENGLISH /ʌ/ AND /ɑ/; CZECH /a/ AND /a:/*

In the introductory chapter about vowels was, as one of the most significant differences listed the different role of vowel quality, which may be the crucial factor for vowel length in English, but is only secondary in Czech. The abovementioned pair of vowels serves as a perfect example of it. In Czech is /a/ fully short and /a:/ fully long. In all word positions and all phonetic environments both vowels keep the same timbre. On the other hand, in English their length differs considerably with every word, and /ʌ/ has a different timbre than /ɑ/.

Czech and English /a/ and /ʌ/ are, apart from very subtle differences, articulated in the same way. Skaličková (1979: 40) identifies it as one of the few instances where can a Czech vowel phoneme freely replace the English one. Therefore the substitution of /ʌ/ with /a/ would not create any significant accent.

As for the remaining phonemes /a/ and /a:/, they differ in more than one aspect. In terms of articulation is English /ɑ/ articulated further back in the oral cavity, with lips being spread open and relaxed (Ogden, 2008: 57). As for Czech /a:/ it is not articulated as far back in the oral cavity, which according to Skaličková (1979: 42), causes the fact that its tone is considerably higher.

In terms of their length, the situation is the same as with other English and Czech vowels. Czech /a:/ is fully long and English /ɑ/ is semi-long, long or relatively short, depending on the following sound and other supra-segmental conditions such as the presence or absence of stress.

To conclude, shorter members of these two contrastive vowel pairs do not seem to be problematic and are easily replaceable. In terms of remaining two phonemes, they are articulated differently, resulting in the English /ɑ/ being of a lower tone. Another problematic aspect is again found in the changeable length, which in Czech is very stable.

### 5.2.7. *CONTRASTIVE VOWEL PAIRS: ENGLISH /ɒ/ AND /ɔ/; CZECH /o/ AND /o:/'*

In terms of articulation is the English /ɒ/ characterized with the highest degree of lip-rounding (Ogden, 2008, p. 60) and it of „extremely open nature” (Gimson, 2008: 111). On the other hand while articulating Czech vowel /o/, lips are spread apart only slightly, and its character is overall more closed. Skaličková (1979: 43) explains that despite all that, are these sounds qualitatively very similar. Regarding their length, the rule that applies is the same as the one concerning other vowels, and so whereas /o/ is always fully short, the duration of /ɒ/ ranges from fully short to semi-long, depending on the phonetic context.

The English vowel /ɔ/ is on the other hand created with a lesser degree of lip rounding, and is less open than /ɒ/, and the back of the tongue is raised (Gimson, 2008: 110). Whereas the Czech /o:/ is articulated with the center of the tongue rising towards the hard palate (Palková, 1994: 184), and apart from bigger lip-rounding and backer pronunciation, the English /ɔ/ sounds lower than the Czech /o:/ (Skaličková, 1979: 45).

In terms of duration, in English it again depends greatly on the following sound and overall phonemic environment. Orthographically often the English /ɔ/ appears along with the grapheme ‘r’, which should in no circumstances be pronounced (Gimson, 2008: 111).

Taking these points into consideration, two main differences were detected. Firstly, the difference in articulation, which is more prevalent in the case of /ɔ/ and /o:/. Timbres of shorter elements of the pair were found to be very similar. The second difference applies to duration of both sounds, which follows different rules in both languages. Gimson (2006) also draws attention to rhotic liquid, which often occurs along with the phoneme and should never be pronounced.

### 5.2.8. *CONTRASTIVE VOWEL PAIRS: ENGLISH /ʊ/ AND /u/; CZECH /u/ AND /u:/'*

Regarding the articulation of English vowel /ʊ/, it is created with the dorsum rising towards the centre of the hard palate, while lips are closely rounded (Gimson, 2006: 112). On the other hand in Czech the corresponding sound /u/ is created with dorsum rising towards the back part of the hard palate, while lips are rounded and distinctly pouted (Palková, 1994: 185). Therefore, both English sounds /ʊ/ and /u/ are pronounced closer to the front part of the

oral cavity and therefore sound higher (Skaličková, 1979: 46-48). In other words, /ʊ/ and /u/ have different timbres than Czech /u/ and /u:/.

In terms of quantity, the same rules apply to both abovementioned sets of phonemes, such as in Czech is /u/ fully short and /u:/fully long, as the position of the word as well as following sounds are negligible. On the other hand length of /ʊ/ and /u/ are again governed by word position, presence of stress and voicing of the following sound.

Orthographically, both /ʊ/ and /u/ correspond to spelling 'oo' in roughly thirty percent of lexical cases, in words like *good* and *food* respectively (Gimson, 2008: 112-113). And since the grapheme combination of 'oo' can be pronounced both with long and short duration, it is essential that ESL speakers learn carefully what words require short or long duration.

English /ʊ/ and /u/, and Czech /u/ and /u:/differ in all aspects, in quality, and quantity. In terms of quality they have different timbres, the English ones sounding slightly higher than the Czech ones. Concerning quantity, the situation is similar to all the previous contrastive pairs and that the Czech vowels are either fully short or fully long, whereas the duration of the English ones varies. In terms of orthography, a case of orthographical combination of 'oo' in words like *food* or *foot*, could potentially present problems, especially to beginners. Nevertheless, both abovementioned Czech vowels can replace the corresponding English ones.

So far I have been discussing, comparing and describing English and Czech monophthongs, and this following and last section dedicated to vowels, I will discuss English and Czech diphthongs.

### 5.2.9. ENGLISH AND CZECH DIPHTHONGS

As I have already mentioned in the introduction to vowels, a diphthong is a change of quality within one segment. In Czech there is only one original diphthong and that is /ou/. It creates a minimal pair with its individual constituents, being the long variant of /o/ as well as /u/, but also contrasting with /o:/and /u:/, such as in following words: *kouli*, *koly*, *kuli*, *kól* and *kůly*. As for the two other diphthongs that are used, the /au/ and /eu/, they are perceived as a sign of foreign-accentedness (Palková, 1994: 192).

Some of rules that were applied to monophthongs hold true for diphthongs as well. Skaličková says that duration of the only original Czech diphthong /ou/ is equal to duration of its constituents /o/ and /u/. In Czech it is easily measurable, since Czech vowels keep stable

duration at all times. However, in English not only monophthongs, but also diphthongs are subjected to the influence of the following sound, which results their length being highly changeable. What is also variable is the timbre of the first part of the diphthong (Skaličková, 1979: 54).

Whereas Czech diphthong constitutes of two distinct vowels, total duration of which equals to both constituents when pronounced individually (and together reaching the length of a fully long vowel), according to Skaličková (1979: 59) is the approximate ratio of an English diphthong 2/3 : 1/3. Gimson (2008: 119) however says that an English diphthong takes the same amount of time as a pure long vowel.

According to Ladefoged (2006: 92), what matters most in English diphthong is the initial timbre, its first part, such as the second part is traditionally barely noticeable. It is often reflected in orthography, such as “it is also common among phoneticians to use another method to mark diphthongs: with the nonsyllabic element printed as a superscript letter“.

Whereas there is only one original diphthong in Czech, there are six original diphthongs in English.<sup>10</sup> None of English diphthongs finds an equal counterpart within the Czech inventory, and therefore Czech ESL speakers have to again replace them with familiar sounds that are closest in timbre and duration. I will now discuss all six English diphthongs, three diphthongs final part of which is the vowel /ɪ/, two diphthongs final part of which is the short vowel /ʊ/ and a special diphthong /ju/. For each of them I will try to find the most common and suitable substitution, used by the Czech ESL speakers.

#### **5.2.9.1. Diphthongs Ending in /ɪ/**

First of the three diphthongs moving towards to vowel /ɪ/ is the diphthong /aɪ/. It is a rising diphthong, such as it starts with a low vowel and ends with a higher one, and appears in words such as *high*, or *buy* (Ladefoged, 2006: 93). It also occurs in its reduced form, such as in *fight* or *like*, while the reduction concerns mainly the first part of it (Gimson, 2008: 122). Closest to /aɪ/ are the Czech combinations ‘aj’ or ‘áj’, while ‘áj’ seems to be the best replacement<sup>11</sup>. In terms of articulation, quality and quantity is ‘aj’ naturally different from /aɪ/, however it appears to be the most suitable choice (Skaličková, 1979: 61-63).

Diphthong /eɪ/ as in *hay*, varies considerably throughout English dialects (Ladefoged, 2006: 93). It starts with /ɛ/ and rises towards the high front vowel, and Gimson (2008: 121)

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<sup>10</sup> I am not taking into account the centering (falling) diphthongs ending in schwa.

<sup>11</sup> If the diphthong appears in its retracted form, then then best replacement would be /a-tj/ (Skaličková, 1979: 61-63).

advises that all foreign learners should pay a special attention to the length of the first element, and on the other hand only hint the second element. Long form appears in a *day*, whereas reduced form appears in *face* or *safe*. Czech ESL speakers again replace /ɪ/ with palatal 'j', in consonant cluster 'ej' appearing in *jej*, which is audibly the closest possible choice (Skaličková, 1979: 63-64). This replacement however presents several difficulties. Firstly that the sound /ɛ/ is in English much more open than in Czech. Secondly that both parts of Czech 'ej' are traditionally pronounced as equal, whereas as Gimson (2008) states, the second part of the English /eɪ/ should only be hinted at, and never be pronounced fully.

The last of English diphthongs ending in high front /ɪ/, is /ɔɪ/. Apart from the two previous diphthongs, is this one lexically transparent, appearing either as 'oi' in *noise*, or 'oy' in *boy*. It again occurs in both forms, full and reduced, such as in *voice* (Gimson, 2008: 123). Czech ESL speakers regularly replace it with 'oj'. Skaličková (1979: 64-65) repeats Gimson's words, saying that the greatest problem is that Czech ESL speakers always pronounce the second part fully and distinctly, which is in English considered to be a wrong pronunciation.

#### **5.2.9.2. Diphthongs Ending in /ʊ/**

The first of diphthongs ending in /ʊ/ is transcribed either as /əʊ/, starting in schwa in British English, or /oʊ/, being typical for American English (Ladefoged, 2006: 93). Either way, the first part of this diphthong has a character of a mixed vowel, which starts as open, and then slightly closes and rounds as it transgresses to the next element (Gimson, 2008: 125). The close back rounded vowel /ʊ/ is unsurprisingly replaced by /u/. Since the Czech vowel inventory does not contain any reduced vowels, this diphthong is replaced by vowel combination of 'ou', representing the only original Czech diphthong. Skaličková (1979: 66) explains that even though this replacement might seem ideal, the resemblance is only graphic, such as the Czech vowel /o/ is strongly rounded and closed since its very beginning, contrary to the English mixed vowel, which only rounds and closes as it moves to the following element.

The second diphthong ending in the short back rounded vowel is /aʊ/ as in *how*. Regarding the quality of this diphthong, Ladefoged (2006: 93) says that its timbre varies extensively, ranging from /æ/ to /ʌ/, even /ɛ/ and then /u/. Gimson (2008: 127) adds that glide within this diphthong is significantly extensive. Given the complexity of the sound, Skaličková (1979: 62) admits that its Czech substitution with /au/ is fairly acceptable. The most prominent should be the first element while the second should be given less emphasis,

and reduction concerns the first element (in words like *shout* or *mouth*). Its length varies according to voicing of the following sound and word-position (Gimson, 2008: 126-128). Similarly to previous cases, both reduction and variation in length are for Czech ESL speaker unnatural and both elements of the diphthong are traditionally pronounced in their full, unreduced form.

### **5.2.9.3. Diphthong /ju/**

The last English diphthong is the diphthong /ju/ as in *queue*, which only appears in Ladefoged (2006: 93). Thorum (2013: 96). explains that many phoneticians do not consider it a diphthong, such as it firstly does not constitute of two vowels, but of a vowel combined with consonant, and secondly, contrary to all previous diphthongs its prominent part is at the end, not the beginning. Skaličková (1979) does not consider it as a diphthong either. The last part of the discussion about Czech and English diphthongs will address the phenomenon of centering diphthongs.

### **5.2.9.4. Centering Diphthongs**

Regarding all three English centering diphthongs /ɪə, eə, uə/ ending in the obscure sound schwa, in words *here*, *care* and *poor* respectively (Gimson, 2008: 131-134), it is fair to say that they present a highly challenging problem for all ESL English speakers.

Skaličková (1979: 67-69) claims that sounds of this type find no equivalent in Czech language and are highly problematic. As was mentioned during the discussion about schwa, which is either used in place of a reduced vowel or a rhotic liquid, Czech ESL speakers firstly do not have a reduced vowel in their native vowel inventory, and secondly do not need to substitute the rhotic liquid with any sound, such as Czech language a rhotic dialect.

Therefore, since all these diphthongs often appear in phonetic environments along with the rhotic liquid, Czech ESL speakers would often ignore the diphthong and pronounce the rhotic liquid instead. Thus, they would not make any difference between *real* and *reel* (Skaličková, 1979: 67), and pronounce *poor* not as [pʊə] but simply as [pur].

I am now going to close the section about English and Czech segmentals, with a summary about English and Czech vowel phonemes.

### 5.2.11. *ENGLISH AND CZECH VOWELS - SUMMARY*

If English consonants presented Czech ESL speakers with considerable difficulties, the area of vowels is even more problematic. English and Czech vowels differ in numerous aspects, as was demonstrated in previous pages. Some differences consist in a different vowel inventory, other in different treatment of existing vowels.

Studies still disagree in conclusions whether consonants are more important in speech-processing, than vowels or vice versa (Munro & Derwing, 199: 287). However I believe that degree of foreign-accent caused by wrong treatment of vowels is very high, and perhaps higher than in terms of consonants.

The largest issue concerning English and Czech vowels seems to consist in vowel length. Vowel length that is in English predominantly a qualitative feature represents in Czech a quantitative feature, which means that speakers of Czech language are used to differentiating individual vowels in terms of their duration; whereas speakers of English language differentiate them mainly in terms of their timbre. In English, vowel timbre is highly variable, especially when it comes to length, and vowels can range from fully open to mid-open, to fully close; whereas Czech vowels are neutral, not reaching to the extreme positions.

The length of English vowels varies according to voicing of the following consonant, and the presence of stress and number of syllables. Therefore, even though in theory they are members of a contrastive vowel pair long and short, in reality they can both become short, long, or mid-long as English recognizes three degrees of length. On the other hand, in Czech vowel length remains a fixed feature; vowels of a contrastive vowel pair are either fully long or fully short, regardless of any suprasegmental circumstances or voicing.

Therefore, not only does a Czech ESL speaker not pay enough attention to the timbre nuances in English contrastive vowels, he also applies only two kinds of length. That, along with lack of sensitivity towards the phonetic environment influencing the length of English vowels, has a potential for creating a very distinct foreign accent.

The second most important difference that is concerning both vowels as well as consonants is rhoticity. Czech, as a rhotic dialect permits pronunciation of rhotic liquid in both pre-vocalic and post-vocalic positions, whereas English only permits it pre-vocalically. Therefore, Czech ESL speakers either turns the respective vowel into a rhotacized vowel (a rhotacized schwa), or pronounces rhotic liquid itself, which is in RP considered illegal.

Rhoticity is directly connected with reduction of vowels, a common practice in English. Czech vowels are in literal pronunciation never reduced, which naturally makes

Czech ESL speakers less sensitive to it in English. Universal reduced vowel is in English represented by schwa, which Czech ESL speakers commonly replace by /ɛ/. Schwa also appears in centering diphthongs, commonly used in place of a vowel and following rhotic liquid. Centering diphthongs do not find any corresponding Czech sounds, and Czech ESL speakers often opt for pronunciation of a vowel and rhotic liquid instead.

Monophthongs were contrasted in groups based on contrastive pairs. These pairs were further compared in three areas: area of articulation, duration, and area of quality/timbre.

The analysis of articulation showed that the majority of Czech vowels are articulated differently; mostly did the difference concern the position of dorsum and tip of the tongue. The only contrastive pair that was found to be highly similar in terms of articulation was Czech /a/ and English /ʌ/.

Thanks to the diametrically different rules for vowel length concerning English and Czech vowels, was the area of duration almost impossible to compare. In English it changes with every word, thus sufficient materials that would provide me with English and Czech pronunciation of identical pairs of words were not available.

Vowel timbre, or quality, was again found to differ in the majority of vowel phonemes, with an exception of /ɒ/ and /o/, and /a/ and /ʌ/, timbres of which are highly similar.

In terms of monophthongs, the English inventory contains two phonemes that are completely alien to the Czech inventory, and that is schwa, which is commonly replaced with /ɛ/ and then /æ/, which is also replaced with /ɛ/, which Czech ESL speakers regard as being the closest sound.

Czech speakers always try to pronounce their vowels as carefully and intelligibly as possible. For that purpose they frequently use glottal stops, which they place before a word-initial vowel. However a glottal stop is not in English used to increase intelligibility, and therefore Czech ESL speakers should avoid that, such as it make the speech sound highly discontinuous.

English is richer primarily in the inventory of diphthongs, and therefore contrasting of diphthongs proved to be highly problematic, such as Czech diphthong inventory contains only one original phoneme, and that is /ou/; whereas on the other hand English contains five original diphthongs, the obscure diphthong /ju/, and three centering diphthongs ending in schwa.

In terms of /aɪ, eɪ, oɪ/, Czech ESL speakers replace /ɪ/ with palatal approximant 'j', which naturally creates a foreign accent. As for the remaining two diphthongs /aʊ, əʊ/, the

former is pronounced as /au/, and the latter, which also in English exists as /oo/, serves as a counterpart to the Czech diphthong /ou/. However, even then is the substitution not ideal, such as the Czech sound is a lot more rounded. Generally a problem arises with the second part of the diphthong, which should in English only be hinted at. However in Czech are all parts of the diphthongs realized in their full forms.

Diphthong /ju/ has a very obscure status even in English, such as many phoneticians do not classify it as a diphthong, because it does not consist of two vowels but a vowel and a consonant, and therefore it was not contrasted.

The last three diphthongs of English, the centering diphthongs /ɪə, eə, ʊə/ might as well be the most problematic of all. They mostly appear in an environment of a vowel following with rhotic liquid, which in non-rhotic English environment is replaced by schwa. As Czech does not have a sound that would come at least close to these three diphthongs, ESL speakers choose to pronounce the rhotic liquid instead, which is in the target language considered as a significant mistake. Having discussed all the segmental features of a language, I will now turn my attention to the supra-segmental features of language.

## 6. OVERVIEW OF PHONOLOGICAL FEATURES OF CZECH ACCENT IN ENGLISH – SUPRASEGMENTALS

So far I have been discussing segmentals of both languages, such as without learning the sounds of a target language, it is naturally impossible to master it. However, what I am going to discuss now are the suprasegmental features, and namely the stress, intonation and rhythm of both languages. So far has stress been mentioned in relation to English reduced vowels; rhythm was linked with the aspect of vowel duration; and another example of suprasegmental feature represents lip-rounding, which was mentioned during the analysis of vowels (Ogden, 2008: 23).

While the importance of correct execution of segmentals is undisputable, the role that suprasegmentals play in creation of a foreign accent should not be underestimated. J.D. O'Connor says that even though many students do master the pronunciation of individual sounds, native speakers still often evaluate their speech as unintelligible; which he assigns to wrong rhythm and intonation (Skaličková, 1979: 153). A research, featured at the linguistic conference at Université de Genève supports the abovementioned, by claiming that:

“...segmental errors have a less detrimental effect on listeners’ judgement of comprehensibility and accentedness of L2 speech, than prosodic errors” (Rasier & Hiligsmann, 2007: 43)

Similarly, Munro & Derwing (1999: 285) revealed that „prosodic errors appear to be a more potent force in the loss of intelligibility than phonetic errors“. The fact that suprasegmental features are very important in speech processing is demonstrated already when learning the mother tongue. Infants pick up prosodic elements of a language faster and earlier than segmental elements (Mehler et al, 1993: 152 – 153).

This, along with numerous other studies, stresses the importance of focusing on prosodic elements of language, which greatly contributes to intelligibility and overall approximation to native-like speech. A study in the *Modern Language Journal* assesses that “suprasegmental features account to about 50% of the variance in proficiency” (Kong et al, 2010: 564).

Following this section, I will now compare and contrast both Czech and English in terms of their prosodic features: stress, rhythm and intonation.

## 6.1. SUPRASEGMENTAL FEATURE OF STRESS IN ENGLISH AND CZECH

In this section, dedicated to the suprasegmental feature of stress in both languages, I will firstly discuss the word stress, and later the sentence stress. Word stress is produced by either an increased activity of respiratory muscles, which consequently produces a greater loudness. Greater loudness is achieved by amplifying properties of both vowels and consonants; or by exaggerating both higher and lower pitch (Ladefoged, 2006: 23). On the other hand, regarding Czech word-stress, Palková values (1994: 278) emphasizes that its basic function resides in contrasting of individual syllables, rather than in creating absolute acoustic.

Both languages make use of more levels of word stress. The most prominent is main stress, marked with the upper hyphen, followed by a secondary stress of a lesser intensity, marked with the lower hyphen. Daniel Jones mentions also a tertiary stress, but simultaneously adds that it only makes the issue more complicated (Jones, 2006).

It is fair to say that the phenomenon of stress differs significantly in both languages, and the most striking difference is related to its function. In English, which is a language with

a minimal use of inflection, obtains main word-stress a grammatical function, having the ability to turn a word of one part of speech into another; such as in the instance of a noun *an 'insult* and a verb *to in'sult* where the main word stress moves from first syllable to the last, respectively (Ladefoged, 2006: 23).

In Czech, on the other hand, is word stress unable to distinguish individual words according to their parts of speech, which there is, thanks to excessive use of inflection, no need for. Its main function resides thus in distinguishing individual words in speech flow, marking the beginning of each of them, as for instance differentiating *'tabulka* from *ta 'bulka* (Palková, 1994: 277).

Having this important ability, main word-stress is in English mobile, and can reside on the first syllable, as well as on the second, third, or even the last one, such as in the abovementioned example. Skaličková (1979: 147-149) explains that usage of English word stress is influenced predominantly by the word's origin and structure, which is reflected for instance in compound nouns and adjectives, making use of a double main stress, as in *'inex'perienced*, *'discon'ected*, *'good'looking*, or in the familiar example of a *'black,bird*, which is not just any kind of *'black 'bird* (Veselovská, 2009: 38).

On the other hand in Czech the word stress represents a fixed feature, and resides exclusively with the first word syllable (Palková, 1994: 277). Main word stress, being the most significant in terms of its acoustic and contrastive properties is therefore always a feature assigned to the first word syllable. Similarly to English, a Czech word can also have a secondary stress, however, it is not obligatory and is characteristic of a slow speech. Again it concerns compound words, such as *'politicko,ekonomický*, where is secondary stress placed on the second part of the compound, while all vowels are pronounced in their full form. Overall is Czech language considered as weakly accented (Krčmová, 2008), contrary to English, which is strongly accented, and acoustic differences between stressed and unstressed syllables are vigorous.

To conclude, English is a strongly accented language, whereas Czech is a weakly accented language. English makes distinct differences between stressed and unstressed syllables, unstressed syllables being of different length and prominence. English uses more degrees of word stress, while Czech primarily uses only main word-stress. In Czech words stress always falls on the first syllable of the word and distinguishes individual words in speech flow. In English it changes with every word and stress has an ability to differentiate meaning. Stressed syllable is in English characterized by an amplified pitch and loudness,

which contrasts with unstressed syllable, which is characterized by a lower pitch, smaller loudness and perhaps also a reduced vowel.

### 6.1.1. *SENTENCE STRESS IN ENGLISH AND CZECH*

While word stress is vital for distinguishing parts of speech and word boundaries, sentence stress is significant in terms of functional sentence perspective and is very closely related to the area of intonation, which is to be discussed later.

Functional sentence perspective, or FSP, theoretically divides a sentence into two parts containing old and new information. In English unmarked speech is new information in a second part of the sentence, which contains a word with a distinctly contrasted syllable (Veselovská, 2007).

Despite this, Czech is a weakly accented language as stated earlier, which is a quality that infiltrates the area of sentence stress, as Czech unmarked speech is generally mildly accented (Krčmová, 2008). On the other hand, Volín & Skarnitzl (2010) say that English is, unlike Czech, a very dynamic and contrastive language and they explain that:

“Czech speakers are often unable to convey the proper prominence of stressed syllables and suppress the prominence of unstressed syllables in terms of their relative loudness.”

This can then result in Czech ESL speaker's speech being perceived as monotonous, while not paying enough attention to distinctly contrast rheme of an English sentence by earmarking the respective syllable.

## 6.2. *SUPRASEGMENTAL FEATURE OF RHYTHM IN ENGLISH AND CZECH*

What is further connected with both word stress and sentence stress (and therefore intonation) is rhythm of speech. Rhythm can be perceived as a unit that periodically repeats and therefore creates a rhythmic pattern. What is important to note is that English belongs to group of stress-timed languages, which means that the rhythmic pattern is perceived through repetition of stressed and unstressed syllables. These stressed and unstressed syllables then

create a metrical foot, which begins with and stretches over “one strong-stressed syllable, followed by lightly stressed and unstressed ones” (Celce-Murcia et al, 2010: 208).

English is a strongly rhythmic language, and correct rhythm is one of the most important ways of achieving coherence. Related to speech rhythm, Gimson (2008: 227) features the Borrowing Rule<sup>12</sup>:

“By the predictions of the Borrowing Rule, full-vowelled syllables each take an approximately equal amount of time ... each syllable containing a reduced vowel is much shorter, and by Borrowing Rule a full-vowelled syllable is itself shortened, if immediately followed by a syllable with a reduced vowel.”

Skaličková (1979: 153) quotes Gimson who says that stressed vowels “follow each other as nearly as possible, and at equal distances”. It is thus clear that rhythm represents in English a fairly regular prosodic feature, and greatly benefits perceived speech pattern. Recognition and correct execution of stressed and unstressed syllables is therefore vital.

Rhythmic pattern of speech is in Czech on the other hand perceived through syllables; and impression of periodicity and repetition is understood through their quantity within one rhythmic unit. What matters the most is therefore the number of syllables, not degrees of stress or vowel length, which in Czech represents a segmental, rather than suprasegmental feature (Palková, 1994: 285-286).

To conclude, the very natures of both languages disagree in terms of rhythm, such as Czech is a syllable-time language and English is a stress-time language. Czech does not feature any reduced vowels and prominence of syllables does not generally depend on stress. Conversely in English, rhythm depends on prominent stressed syllables alternating suppressed unstressed syllables. Czech ESL speakers might then find the rhythm of English very challenging. This is supported by a quotation by Volín & Skarnitzl (2010) featured in previous chapter, which reads that Czech English speakers find it hard to accentuate stressed syllables and suppress unstressed syllables, which naturally makes the rhythm sound less native-like.

Czech English speakers should then be encouraged to pay attention to vowel duration, distribution of main and secondary stress, and to their distinct executions, which is an effective way of achieving correct rhythm.

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<sup>12</sup> A syllable containing a reduced vowel borrows time from syllable that contains a full vowel (Gimson, 2008, p. 227).

The last suprasegmental feature that I am going to discuss is the feature of intonation.

### 6.3. SUPRASEGMENTAL FEATURE OF INTONATION IN ENGLISH AND CZECH

As Ladefoged (2006: 116) explains, while listening to someone's spoken speech, the listener notices a continuous change of voice pitch. Intonation is therefore "the pattern of pitch changes that occurs".

Pitch changes further divide an utterance into chunks, called intonational phrases, which more or less correspond to clauses in an utterance. Borders between individual intonational phrases are perceived mainly thanks to pauses. Correct execution of pauses is of equal importance as the execution of the phrases themselves, such as wrong pausing would make the utterance less coherent. Within an intonational phrase there is a nuclear tone, which begins with first primary accent and ends simultaneously with the ending of the phrase. Syllable with the first primary accent possesses the highest degree of pitch change (Gimson, 2008: 231-232) and Ladefoged (2006: 117) labels it as a 'tonic syllable'. Krčmová (2008) claims that these examples are typical for languages with a distinct difference between full and reduced syllables.

According to Ogden there are five fundamental contours: fall, rise, rise-fall, fall-rise and level (2008: 46). Rising intonation is characteristic for a special type of questions, an expected answer of which is either yes or no, such as in *Do you want a tea?* Its first part is in British English characteristic by a steady pitch, which only rises at the end, while most of the pitch-change occurs during the last word. A falling type of intonation is apart from declaratives used for another kind of question, one that begins with a wh-word (*who, when, why, where, what*), such as in *What do you want to drink?* Intonation is very sensitive to extra-linguistic influences and reflects various attitudes and moods of the speaker. Certain utterances require the intonation to be combined, such as fall-rise, which is a change stretching over the tonic syllable. It expresses, for instance a surprise, as in *You really want a tea?* (Ladefoged, 2006: 118-124).

In Czech, the sentence melody represents a fixed feature, which varies mainly with respect to sentence types. The inventory of intonational phrases is similar to English, there is a falling intonation, rising intonation, fall-rise and rise-fall. Even though the inventory of intonational phrases is the same, according to a study their occurrence is different, falling

tones prevail in English and rising tones prevail in Czech. For instance declarative sentences in English are mostly of a falling tone, whereas Czech declarative sentences are mostly characterized with a rising tone (Chlamonikolasová, 2007: 66). Generally English intonation patterns are more varied and contrastive, which Volín & Skarnitzl (2010) identified as one of the main contributors to a foreign accent.

Due to Czech being a weakly accented language, the tonic syllable is not as salient, and the difference between stressed and unstressed syllable is not as distinct as in heavily accented English (Krčmová, 2008), which is again supported by Volín & Skarnitzl (2010).

Additionally, one of the most prominent differences between English and Czech is the fact that English is an analytic and Czech is a synthetic language, which has a direct impact on tone units<sup>13</sup>. According to a study, English tone units prove to be “on average longer, than the Czech tone units” (Chamonikolasová, 2007: 64).

Under first examination it might seem that intonation represents a relatively non-problematic suprasegmental feature, such as the inventory of intonational phrases is in both languages similar. However, their application differs, such as falling tones prevail in English, whereas rising tones prevail in Czech, and Czech tone units are overall shorter. English intonation is more varied, dynamic and contrastive, which should Czech ESL speakers try to imitate. Skaličková (1979) also says that English pitch-variation is much more distinct, and Czech ESL speakers should focus on making difference between the lowest and highest pitch sufficiently audible.

#### 6.4. SUPRASEGMENTALS IN ENGLISH AND CZECH – SUMMARY

Suprasegmental features represent one of the earliest acquired phonetic skills, and are greatly important in terms of speech processing. I have tried to compare and contrast three most important suprasegmental features, the stress, rhythm and intonation, and I found that English and Czech differ significantly in all three phenomena.

Stress functions in both languages differently. In English is stress a complex as well as mobile feature, which in some ways compensates for the lack of inflection, helping to differentiate individual parts of speech. There are up to three degrees of stress, two of which, the main and secondary stress is featured in most words. Both main and secondary stress can

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<sup>13</sup> Tone units are comparable to intonational phrases.

fall at any syllable, and these syllables then differ in length, intensity and general prominence. English is, as a language, strongly accented.

Contrastingly, in Czech stress is a fixed phonetic feature, which falls exclusively on the first word syllable. Secondary stress is facultative. Presence and position of main stress does not influence remaining vowels, and they all keep their full and regular forms. Czech is a weakly accented language and stress is not used to create absolute pitch values, but only to contrast individual syllables.

A factor closely connected with stress is rhythm of speech. English is a stress-timed language, which means that rhythm is perceived through regular occurrence of stressed syllables, weakly stressed syllables and reduced syllables, which are distinctly differentiated by loudness, intensity, pitch and length.

Czech is conversely a syllable-time language, which means that the rhythm is perceived through number of syllables within a rhythmic unit. Czech ESL speakers are therefore used to a different kind of rhythm, which is based on different phonetic features, and in English they find it difficult to suppress unstressed syllables and accentuate stressed syllables.

The last phenomenon that was discussed was intonation. Despite the fact that inventory of intonation phrases is similar, their application differs. Most frequent intonation phrase is in English the falling one, whereas in Czech it is the rising one. Tone units are in English longer than in Czech. English intonation is more dynamic and contrastive; tone units are singled out more distinctly.

English pitch changes are very distinct, and their greatest degree is often accumulated into a single syllable. On the other hand, Czech is a weakly accented language. Pitch changes are not so prominent, and the difference between the highest and lowest pitch is less perceptible than in English. Auditorily is tonic syllable not as distinct as in English.

At the end of the day it seems that nature and usage of English prosody breaks down to stress and namely its correct placement and execution. That is directly connected with correct execution of vowels. Wrong treatment of stress consequently influences both rhythm and intonation, such as these three features are highly connected.

#### 6.4.1 INSTRUCTION OF PROSODY AT LEARNING INSTITUTIONS

A full understanding of suprasegmentals and their correct execution and application have a direct impact on intelligibility and degree of proficiency in target language.

However, since prosody of a native language (L1) is a phonetic skill that is learned as earliest, it becomes deep-rooted, and its inference into L2 is unavoidable. It becomes an issue, if prosody of languages in question differs as greatly, as in the case of English and Czech. Therefore, focus on its correct instruction at schooling institutions is vital, and teaching of suprasegmentals should be at least as intense as teaching of segmentals.

Research studies conducted nearly two decades ago implied that in general English prosody had been, in terms of teaching, receiving very little attention (Els & Bot, 1987: 148). Current researches however show that only little has changed, and English stress, rhythm and intonation are still fairly neglected; and what is preferred is the instruction of segmentals:

“Phonetics instruction in the FL<sup>14</sup> classroom typically emphasizes the differences between learners’ L1 and L2 phonological systems with regards to phonemic inventories, articulation of analogous phones, grapheme–phoneme correspondences, and phonological processes” (Kissling, 2013: 721)

Another research, carried by Munro & Derwing (2005) implies that what is deficient is actual teaching of pronunciation itself; while at the same time it stresses the importance of suprasegmentals regarding speech intelligibility.

Since teaching prosody is so significant, what presents itself is a question of why is its instruction inefficient. Kissling (2013: 720) argues that the instruction of segmentals is preferred mainly because they are “easier to teach”. Reed (2012) offers another explanation, claiming that as long as international intelligibility is achieved, native-like accuracy is actually not necessary.

Another theory claims that insufficient instruction is due partly to its underestimated importance, and partly to “unavailability of concise, salient, practical and workable framework” (Meenakshi, 2004: 27). This is however contrasted by Florez (2001: 255), whose research claims that deficient teaching of suprasegmentals is not caused by poor teaching resources, but rather by problems that teachers face, when teaching such complex issues as rhythm and intonation.

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<sup>14</sup> FL – Foreign Language

Regarding the instruction of English suprasegmentals in Czech primary and secondary schools, there is unfortunately very little research available. Even though teaching of suprasegmentals is included in majority of syllabuses, its actual implementation is not well mapped. What is however definite, is the fact that instruction of suprasegmentals should be encouraged, because it greatly benefits approximation to a native-like proficiency.

## 7. CONCLUSIONS DRAWN FROM THE THEORETICAL PART

In this thesis I focused on the phenomenon of Czech accent in English. I used the method of contrastive analysis, which helped me to give a detailed description of both phonologies. I tried to highlight every possible instance that could potentially result in a negative transfer from Czech to English and create a foreign accent. I will now give a summary of issues that I regard as to be the most important, starting with consonants.

A problem concerning most consonants is voicing assimilation of obstruents. Whereas in Czech it is a regular practice, its application to English should be generally avoided. A different situation concerns aspiration of voiceless plosives. In Czech it is not used; however in English it represents a highly important secondary articulation and should be implemented as often as possible.

Dental fricatives have, according to expectations, proven to be highly problematic. Since Czech language does not feature them at all, students find their execution and application difficult. They should be careful not to substitute them with plosives or sibilants, and try to avoid any interdental articulation.

However, the majority of issues were related to category of approximants. Approximants that showed to be the most problematic were velar nasal and velarised alveolar approximant, along with rhotic liquid and labiovelar approximant.

Even though velar nasal features in Standard Czech, its biggest problem seems to consist in its distribution in English, as well as in dropping of following velar plosive.

Velarised alveolar approximant is, on the other hand, not used in Standard Czech, and students should thus be instructed about its ‘dark’, nearly vocalic articulation, as well as about its distribution.

The most problematic of the category was unsurprisingly the rhotic liquid. Students should remember to reduce tongue vibration, which is involved in its Czech articulation. In Received Pronunciation it should never be pronounced post-vocalically.

In terms of labiovelar approximant, not occurring in Standard Czech, as the largest difficulty I evaluated the recognition between /w/ and /v/. Czech ESL speakers should remember that these phonemes are not exchangeable, and aim to distinguish them correctly.

Another issue has arisen with linking devices, namely with transient [j] and [w], intrusive and linking [r], which in English contribute to overall fluency of speech, and English students should learn to apply them. What they should on the other hand reduce is usage of glottal stops before word-initial vowels. Transfer of this habit from Czech to English is negative and contributes to the overall discontinuity of speech.

Vowels have shown to be equally, if not more problematic. The most significant difference was related to their length and timbre. Czech ESL speakers should pay enough attention to differentiating timbres of vowels in English contrastive pairs, and avoid distinguishing them solely by duration. In terms of length they should realize its great dependency on consonant voicing as well as on certain suprasegmental features, such as word stress. This should help to prevent pronouncing *food* and *foot* with the same duration.

Problematic has shown to be reduction of unstressed vowels, a phonetic habit non-existent in Czech. Students must be able to recognize vowels that need to be reduced, and try to replace them not only with the traditional schwa, but also with /ɪ/.

Negative transfer stemming from rhoticity distinction of English and Czech was reflected in r-coloring of central and mid-central vowels. R-coloring should be, along with pronunciation of post-vocalic rhotic liquid, consistently avoided.

The fact that inventory of diphthongs is in these languages diametrically different, equals to the amount of problems encountered. Czech ESL speakers should generally try to reduce prominence of second part of each diphthong, which is regularly substituted either by Czech /j/ or /u/. Students should remember that rules concerning length of monophthongs apply also to diphthongs, and should try to reduce them accordingly. In terms of centering diphthongs, speakers of Czech English should avoid using rhotic liquid and remember to use schwa every time.

As is clear from the paragraphs above, segmental features play an important role in creation of a foreign accent and negative transfer from Czech to English should not be underestimated. I will now move on to suprasegmentals.

Treatment and execution of prosody differs significantly in both languages, which tremendously increases the chance for a potential negative transfer, and therefore a creation of foreign accent. I believe that students of English should primarily pay attention to word-stress. I recommend focusing on it while learning every new English word and paying sufficient attention to accommodating main and secondary stresses in a speech flow. Stressed and unstressed syllables should be differentiated with greater intensity, changes in pitch and duration, than is customary in Czech.

Correct distribution and performance of stress will be directly reflected in the feature of rhythm. English is a rhythmic language and occurrence of stressed syllables should be relatively regular. In order to achieve correct rhythmic pattern, students should focus on correct distribution of reduced vowels, stressed, weakly stressed and unstressed syllables. This might be achieved by a frequent exposure to unedited recordings of English, which should be included into instruction from the very beginning.

Correct performance of stress and rhythm will greatly benefit general intonation. English intonation is dynamic and greatly contrastive, pitch-changes are bigger. Students should try to focus on making the tonic syllable sufficiently salient. The gap between English and Czech intonation should be successfully bridged once again with intense exposure to unedited speech recordings.

Even though I realize that more space was given to discussing segmentals (such as segments have to be analyzed individually), I strongly believe that it is suprasegmentals that play a vital role in creation of foreign accent. Such theory is supported by many studies, considering correct stress, rhythm and intonation as vital in reaching a level of proficiency in L2; or on the other hand making target language distinctly foreign-accented. I was surprised to find out what little focus institutions place on teaching prosody in general. In order to reduce foreign accent in English I therefore highly recommend giving greater attention to effective teaching of prosody, which should ideally start at an early age, during primary school at latest.

## **8. RESEARCH FOCUSING ON RECOGNIZING CZECH-ACCENTED FEATURES OF SPOKEN ENGLISH**

This experiment was carried out with a tremendous help by Václav Jonáš Podlipský and Šárka Šimáčková, who presented it at an international conference. The main aim of this

study was to find out what features of Czech accent are by native speakers regarded to be most prominent, and also to find out how much time every participant needed to recognize targeted features, and whether the time taken to decide corresponds to the accent rating.

The main aim was to compare findings of this experiment with conclusions drawn from the theoretical part.

## 8.1. PARTICIPANTS

Sixteen native speakers took part in this experiment. At the time of the experiment all of them were studying at Durham University. Even though majority of them were from The United Kingdom, three named Hong Kong, Singapore and Malaysia as country of permanent residence. All participants were native speakers of British English.

Their overall knowledge of any other language was relatively low, most participants listing beginners French as a second language. Nevertheless, all participants have had experience with foreign-accented English, which they encountered mostly at University.

All participants enrolled in the experiment on their own will, being informed about its nature, which was foreign-accented English. None of the participants was told either about the origin of the foreign-accent, what the target features were, or whether some sentences were completely accent-free.

## 8.2. MATERIALS

The experiment consisted of two individual parts. Each part further consisted of 36 individual trials, based on recognizing and judging accentedness of the recorded sentences. There were six pairs of simple sentences, all of them recorded by a Czech female phonetician. Each pair of sentences for listeners to compare was created by editing and resynthesizing the natural recordings in Praat (Boersma and Weenink, 2013) so that in the end they were the exact same recording, apart from a target accented feature. Each pair of sentences was repeated three times in random order during each part of the experiment.

Target features of Czech accent that were included in the recordings were: trilled /r/, fully back /u/, non-reduction of vowels, pre-vocalic glottalization and voicing assimilation of

obstruents. Table 1 below depicts distribution of above-mentioned features in recorded sentences.

Table 1: Recorded sentences

	<b>either:</b>	<b>or:</b>
<i>Write to me soon.</i>	[ <b>r</b> aɪt]	[s <b>u</b> n]
<i>He read it again.</i>	[ <b>r</b> ɛd]	[ʔɛ'gɛn]
<i>This boy reads well.</i>	[ <b>r</b> ɪdz]	[ðɪz bɔɪ]
<i>Avoid the move.</i>	[m <b>u</b> v]	[ʔɛ'vɔɪd]
<i>A much better mood.</i>	[m <b>u</b> d]	[mʌʃ bɛtə]
<i>It's about zero outside.</i>	[ʔɛ'baut]	[ə'baud zɪə.ɪəʊ]

### 8.3. PROCEDURE

Both tasks were conducted using Praat (Boersma and Weenink, 2013). In the first task, labeled ‘Pairs’ below, every participant listened to the pairs of sentences which differed in the two target features, each unaccented in one and accented in the other. Participants could then choose from the following answers, displayed as buttons on a computer screen: 1. *First more accented*, 2. *Second more accented*, 3. *Both accented*, or 4. *Neither accented*. They also had the possibility of replaying the recordings, three times at most per each trial. What was measured was the ‘Total Accent Score’ as well as ‘Reaction Times’. The response a listener gave to a particular feature on each trial was converted into the feature’s score as follows: it was 2 if the sentence containing the feature was marked by the listener as more accented, it was 0 if it was marked as less accented, and it was 1 if the participant responded ‘both accented’ or ‘neither accented’. The Total Accent Score for that participant was then computed by averaging the scores of the feature from all the trials it occurred in.

During second task, referred to as ‘Single’ below, participants were deciding about the degree of foreign accent they heard using a 7-point scale going from ‘not accented’ to ‘accented’. The stimuli were all the sentences used in the Pairs task, except that they were presented separately, not in pairs. Again, they were allowed to replay each recording three times at most. Measured were the ‘Mean Accent Rating’ as well as the ‘Reaction Times’.

At the beginning of the experiment every participant was explained the procedure. Prior to each part they were given the choice of running mock tests to make sure that they understood the method and procedure. Participants were given sufficient time to complete each task, as well as an opportunity to take a short break between parts.

At the end was each participant asked to complete a short questionnaire about their personal history, linguistic experience (knowledge of other languages) and experience with foreign-accented speech. They were also asked to evaluate the difficulty of the experiment and try to describe the accent they heard.

## 8.4. RESULTS

According to questionnaires, some participants found the second part of the experiment more difficult than the first one, one participant assessing that the accent scale was too broad. The majority found the accent to be mild, two participants identifying it as “Eastern-European”, one as “Ukrainian”, one as “Slightly Spanish”. Two participants identified it as “Czech”. The rest of participants did not include it in their answers.

Total Accent Score and Reaction Times (RT) from the ‘Pairs’ task, as well as the Mean Accent Rating and Reaction Times from the ‘Scale’ task, were each submitted to a separate repeated-measures analysis of variance (RM ANOVA), with ‘Feature’ (4 levels: trilled /r/, fully back /u/, non-reduction of vowels, voicing assimilation), and subsequent post-hoc Tukey tests.

Figure 1 in the appendix shows the mean Total Accent Score for all participants and each feature. The RM ANOVA found a significant main effect of Feature on the Total Accent Score ( $F[3, 42] = 21.22, p < .001$ ). The post-hoc Tukey test (see Table 2 in the appendix) showed that the score for trilled /r/ was significantly higher than that for all the three remaining features ( $p < .001$ ). No other pairwise comparisons revealed significant difference, apart from the difference between fully back /u/ and voicing assimilation, which approached significance ( $p = .0997$ ).

Figure 2 in the appendix shows the RT in the Pairs task. Again, a RM ANOVA found a significant main effect of Feature ( $F[3, 42] = 3.39, p < .027$ ). Table 3 in the appendix depicts the post-hoc test concerning Reaction Times of ‘Pairs’, it has shown that RT for voicing assimilation were distinctly higher than for the rest of features. The most significant

difference occurred between voicing assimilation and trilled /r/ ( $p < .018$ ). It was followed by the difference concerning voicing assimilation and non-reduction of vowels ( $p < .154$ ).

Figure 3 in the appendix shows the Mean Accent Rating. RM ANOVA again showed that the factor of Feature significantly affected the Mean Accent Rating in the Single task ( $F[3, 42] = 16.75, p < .001$ ). Table 4 in the appendix depicts the Post-hoc test, which showed that the trilled /r/ was rated as the highest accented. The largest difference appeared to be between trilled /r/ and non-reduction of vowels ( $p < .00017$ ). However the gap between trilled /r/ and voicing assimilation was almost identical ( $p < .00018$ ).

Figure 4 in the appendix shows RT in the 'Single' task. This time, RM ANOVA suggested that the factor of Feature did not have a significant effect on the RTs in the 'Single' task ( $F[3, 42] = 1.70, p < .182$ ). In terms of 'Single' RT, there was no need to carry out the Post-hoc Tukey test.

## 8.5. DISCUSSION

Features of Czech accent analysed in this experiment were the trilled /r/, fully back /u/, non-reduction of vowels and voicing assimilation of obstruents.

As expected, trilled /r/ received in both parts of experiment the highest accent ratings. In both tasks (Total Accent Score as well as Mean Accent Rating) there were significant gaps between trilled /r/ and other features, which received significantly lower ratings. Differences among the rest of features were small in both cases.

While trilled /r/ received the highest accent ratings in both parts, the lowest ratings were not received by identical feature, but by voicing assimilation in Total Accent Score, and by non-reduction of vowels in Mean Accent Rating. The remaining feature, fully back /u/ received in both parts of experiment the second highest degree of accent, always following trilled /r/.

In terms of the Reaction Times in both tasks, it mostly corresponded with the degree of perceived accent. Trilled /r/, being perceived as most accented in both tasks, would always receive the lowest Reaction Times, which means that its high degree of accent makes it the easiest to recognize. In terms of voicing assimilation, which received the lowest degree of accent in Total Accent Score, it correspondingly received the longest Reaction Time, its assigned low accent making it challenging to recognize. However, non-reduction of vowels,

which received the lowest ratings in Mean Accent Rating, only received the second highest Reaction Time.

## 9. THEORETICAL CONCLUSIONS COMPARED WITH EXPERIMENT RESULTS

The experiment focused on four segmental features of Czech accent in English. Namely it was pronunciation of trilled /r/, pronunciation of fully back /u/, voicing assimilation of obstruents, and non-reduction of vowels.

In the theoretical part I identified Czech pronunciation of rhotic liquid, which involves an intense tongue vibration, as one of the most distinct and perceivable segmental features of Czech accent. Findings of this experiment supported it, such as trilled /r/ was evaluated as the most accented in both parts, which, accordingly, took participants the least amount of time to decide.

I also highlighted the importance of reduction of unstressed vowels. I claimed that it is in the long run connected with rhythm and intonation of speech, and therefore I considered it to be very important. Non-reduction of vowels was however in this experiment not identified as a significant contributor to perceived Czech accent, which was rather surprising.

Voicing assimilation of obstruents was in the theoretical part evaluated as a feature that greatly contributes to overall Czech accent, such as assimilation of voice is in English rather rare. Surprisingly, however, neither part of this experiment evaluated it as strongly accented. Accordingly, participants took longer to decide about it. It might be explained by existing versatility of native speech.

As for the fully back /u/ pronounced in words as *soon*, *mood* or *move*, it was rated as more accented than both voicing assimilation and non-reduction of vowels. In the theoretical part I have identified correct execution of vowels as highly significant, and therefore this finding can be considered to be in accordance with it.

Therefore, the findings of theoretical part were, by results of this experiment, supported in the case of trilled /r/ and fully back /u/, but converged in terms of voicing assimilation of obstruents, as well as non-reduction of vowels, which were both evaluated as highly significant in the theoretical part, but received lower accent ratings in the experiment.

## 10. SHRNU TÍ (SUMMARY)

Tématem diplomové práce je český přízvuk v angličtině. V této práci, která se skládá z částí teoretické a praktické, jsem se snažila o vyhodnocení nejmarkantnějších prvků českého přízvuku.

Podnětem pro napsání této práce je fakt, že cizí přízvuk v rodilých mluvčích velice často vzbuzuje negativní emoce. Takovéto emoce mohou být založeny na předsudcích, jež jsou spojeny s národností, kulturou, či zemí původu mluvčího (Nesdale & Rooney, 1996). Dalším vysvětlením je názor, že lidé celkově hodnotí pozitivněji mluvčí, jež mluví jasně a srozumitelně, a akcent často dělá řeč nesrozumitelnou, či složitější na pochopení (Munro & Derwing, 1995: 286). Takovéto negativní hodnocení může mít obzvlášť velký dopad například na pracovní pohovor (Deprez-Sims & Morris, 2010).

I když rozhodně není pravidlem, že rodilý mluvčí hodnotí negativně ty, kteří hovoří s cizím přízvukem, myslím si, že redukce českého přízvuku je právě v angličtině, která se stala mezinárodním jazykem, velice důležitá.

Vzhledem k tomu, že názory na teorii kritického věku v rámci učení cizího jazyka se rozcházejí (Ritchie & Bhatia, 2009: 239), jsem přesvědčená, že cizí jazyk včetně přízvuku, se lze dobře naučit i v pozdějším věku. V tom případě však musí být proces učení intenzivní, důsledný a efektivní, a žák by měl věnovat zvýšenou pozornost oblastem, které jsou náchylné k negativnímu přesunu lingvistického znaku z mateřského jazyka do jazyka cizího (Nunan & Carter, 2001: 87-88).

Rozhodla jsem se je zmapovat. Použila jsem metodu kontrastivní analýzy, jíž jsem podrobila českou a anglickou fonetiku a fonologii. Jako referenční dialekty jsem použila britskou Received Pronunciation a spisovnou češtinu. Jako první jsem analyzovala kategorii souhlásek. Souhlásky jsem porovnávala v oblastech artikulace, distribuce, hláskových změn (například spodoba znělosti) a hláskových modifikací (například aspirace), a u každého případu jsem se snažila přijít na nejvíce problemtický rys, a nejmarkantnější chyby, kterých se čeští mluvčí v rámci jednotlivých hlásek dopouštějí.

Nejvíce problémovými se ukázaly být dentální frikativy, hláska /r/, hláska /w/, velární [ɫ], dále ráz, neboli glotální ploziva [ʔ], a celkové nedostatečné používání anglických vázacích elementů. Co se týče hláskových změn a modifikací, nejproblémovějšími se zdají být anglická aspirace a spodoba znělosti.

Dentální frikativy jsou specialitou anglického jazyka. Čeští mluvčí mají často s jejich dentální výslovností nemalé potíže. Možná i proto často dentální frikativy zaměňují jinými hláskami, buď plozivy, nebo sibilanty, což samozřejmě vede k vytvoření cizího přízvuku. Měli by proto věnovat více pozornosti správné artikulaci a snažit se hlásky nezaměňovat jinými. Dodatečně by se měli také zaměřit na jejich správnou distribuci.

V rámci hlásky /r/ se nejproblémovějším ukázala být její odlišná artikulace a distribuce. Zatímco v češtině vzniká hláska /r/ distinktivní vibrací špičky jazyka, v Received Pronunciation (RP) je tato artikulace nepřipustná a čeští mluvčí by se měli snažit tuto vibraci redukovat. S touto hláskou také souvisí rhoticita, jež rozděluje jazyky na ty, jež dovolují výslovnost hlásky /r/ po samohlásce (čeština) a ty, které to nedovolují (RP). Studenti anglického jazyka by měli mít tuto odlišnost na paměti, a post-vokalicky hlásku /r/ vyslovovat alespoň redukovane.

Co se týče hlásky /w/, na rozdíl od češtiny tvoří v angličtině minimální pár s hláskou /v/, což znamená, že má schopnost rozlišovat význam. Problémem však je, že v češtině se nerozlišuje výslovnost /w/ a /v/, což může v angličtině dokonce způsobit záměnu významu. Je tedy vhodné, aby si čeští mluvčí právě na to dávali pozor a naučili se odlišovat výslovnost /w/ od /v/.

Velární [ɫ] představuje v angličtině alofon fonému /l/. V češtině se vyskytuje pouze v nářečí a tak nejsou čeští mluvčí na jeho používání v angličtině dosti citliví. Pokud se však snaží o co největší přiblížení ke správnému přízvuku, je jeho používání nezbytné.

Glotální ploziva se v angličtině používá z největší části jako alofon fonému /t/, což obecně způsobuje českým mluvčím problémy a je potřeba se na tuto problematiku zaměřit. Větším prohřeškem se však zdá být fakt, že glotální ploziva se v češtině používá před samohláskou na počátku slova (případně mezi samohláskami uvnitř slova) pro zvýšení srozumitelnosti a vytvoření dojmu pečlivé výslovnosti. Používání rázu tohoto typu má však v angličtině opačné důsledky a dělá řeč nesouvislou, nespojitou, což znamená, že na používání českého rázu v angličtině by si mluvčí měli dát pozor. Naopak by měli začít používat vázací elementy jako transient [j] and [w], intrusive a linking [r], které naopak souvislost anglické mluvy podporují.

Co se týče aspirace ploziv, v angličtině představuje hojně používanou sekundární artikulaci, kterou by se čeští mluvčí měli naučit používat, vzhledem k tomu, že v češtině nefiguruje. Důraz by měl být kladem na použití aspirace ve správné míře a správném fonetickém kontextu. Spodoba znělosti naopak v češtině představuje jednou z hlavních

hláskových změn, postihující všechny znělé a neznělé souhlásky. V angličtině se však používá velice omezeně, což by měli mít mluvčí na paměti.

Další kategorii, kterou jsem podrobila kontrastivní analýze byly samohlásky. Aspekty, které jsem zohledňovala, byla jejich artikulace, kvalita, kvantita a v některých případech i distribuce. Nejvíce problémovými se zdála být kvantita, tedy délka samohlásek, dále rhoticita a redukce. Inventář anglických samohlásek (obzvláště v kategorii dvojhlásek) je značně větší, než v češtině.

Délka samohlásek představuje v češtině kvantitativní rys. Každá česká krátká samohláska má svou dlouhou variantu, jež má přibližně dvakrát tak dlouhé trvání. Na délku nemají vliv sousední hlásky, ani suprasegmentální rysy. Délka se v češtině označuje diakriticky, jak v písmu, tak ve fonetickém přepisu. V angličtině je však především kvalitativním rysem, což znamená, že kvalita samohlásek v samohláskovém páru se odlišuje. Možná právě díky tomu není délka ve fonetickém přepisu většinou označována diakriticky. Obecně má délka anglických samohlásek tři, ne pouze dva stupně, jak je tomu v češtině. Dále se také anglická délka mění v závislosti na znělosti následující hlásky, na počtu slabik ve slově a v neposlední řadě v závislosti na slovním a větném přízvuku. Je tedy velice důležité, aby čeští mluvčí začali v angličtině rozlišovat různé stupně délky a dále aby délku přizpůsobovali fonetickému prostředí.

Rhoticita samohlásek, je velice úzce spojena s distribucí hlásky /r/, která, jak jsem již uvedla dříve, se v RP nesmí vyslovovat po samohlásce. Pokud ji čeští mluvčí v angličtině po samohlásce plně vysloví, vytvoří tím dojem silného přízvuku. Rhoticitními samohláskami mohou být v angličtině především [ɜ] nebo [ə]. V RP se však neobjevují, a tak by i ony měly být redukovány.

Co se týče redukování samohlásek, je to v angličtině běžný proces. Anglické samohlásky jsou modifikovány slovním přízvukem, což znamená, že přízvučná samohláska bude dlouhá, a nepřízvučná samohláska může být dokonce redukována do podoby schwy [ə], nebo /ɪ/. V češtině však slovní přízvuk nemá na podobu samohlásky téměř žádný vliv, a samohlásky tak nejsou redukovány ani v nepřízvučných slabikách. Čeští mluvčí by si tedy v angličtině měli dát pozor na distribuci plných a redukováných samohlásek a tu dodržovat i vzhledem k tomu, že redukce samohlásek má vliv i na celkový rytmus řeči.

Na začátku jsem zmínila, že angličtina má větší inventář dvojhlásek. Čeština disponuje pouze jednou původní dvojhláskou a tou je /ou/, zatímco angličtina devíti, a čeští mluvčí angličtiny jsou nuceni hojně improvizovat. Anglická dvojhláska se skládá ze dvou částí,

z nichž ta v pořadí druhá (kromě schwy) je vyslovena jen zlehka. Čeští mluvčí by se tedy měli naučit nevyslovovat obě poloviny anglického diftongu plně, tak, jak na to jsou zvyklí v mateřském jazyce.

V češtině se délka a kvalita dvojhlásky rovná délce a kvalitě samohlásek, ze kterých se skládá, a nepodléhá redukci. V angličtině se na dvojhlásky vztahují ta samá pravidla, jako na jednoduché samohlásky, takže podléhají redukci a jejich délka závisí na mnoha faktorech, na což by každý student anglického jazyka měl pamatovat.

Za samostatnou skupinu lze pokládat skupinu anglických dvojhlásek označovaných jako 'centering diphthongs', kde figuruje jako konečná hláska anglická schwa. Tyto dvojhlásky se aplikují na případy, kdy je samohláska následována hláskou /r/, jako například ve slově *poor*. Důležité je, aby čeští mluvčí hlásku /r/ nevyslovovali, a namísto toho se snažili zvuk anglické dvojhlásky napodobit.

Po analýze české a anglické segmentální roviny, jsem se zaměřila na suprasegmentální rovinu, tedy na slovní/větný přízvuk, rytmus řeči a intonaci. I když suprasegmentální rovině bylo věnováno méně prostoru, jsem v rámci důležitosti přesvědčena o tom, že poněkud převažuje důležitost roviny segmentální. To je potvrzeno mnoha studii, které uvádí, že student nesníží míru svého přízvuku, dokud nezdokonalí svou znalost prozodie (viz. kapitola č. 6).

Slovní přízvuk je v češtině situován vždy na první slabice slova. Někdy, avšak velice výjimečně, je hlavní přízvuk provázen i přízvukem vedlejším. Ani hlavní, ani vedlejší přízvuk však nemají vliv na kvalitu, či délku samohlásek. V angličtině je však přízvuk mobilním rysem a může spadat jak na první, tak na druhou, či poslední slabiku slova, což je ovlivněno jeho strukturou ale i původem. Čeští mluvčí se tak musí naučit jak správné distribuci a provedení anglického slovního přízvuku, tak jeho vlivu na ostatní samohlásky, zejména na jejich redukci. Měli by také mít na paměti to, že angličtina vyděluje přízvučné samohlásky nejen intenzitou a délkou, ale také změnou v hlasové výšce.

Co se týče řečového rytmu, vychází angličtina převážně ze slovního přízvuku. Zatímco čeština vnímá rytmus řeči počtem slabik v rytmické jednotce, angličtina ho vnímá skrz přízvučné slabiky. Přízvučné slabiky by se měly v angličtině objevovat značně pravidelně. Na rozdíl od češtiny, je anglický rytmus velice dynamický, provázený změnami v hlasové výšce a v intenzitě, takže čeština může vedle angličtiny znít značně monotónně. Je tedy velice důležité, aby čeští mluvčí věnovali dostatek pozornosti dynamice a pravidelnosti týkající se střídání anglických přízvučných a nepřízvučných slabik.

Poslední z prozodických prvků je intonace. Hlavním rysem anglické intonace je její vysoký kontrast a dynamika. Výškové rozdíly hlasu jsou značně markantní, a často jsou situovány převážně do jedné slabiky, která přestavuje tónovou slabiku. Česká intonace je značně volnější a plynulejší, intonační jednotky jsou kratší a méně výrazné. O co by se tedy měli čeští mluvčí angličtiny snažit je zvýšená dynamika a kontrast, která však nesmí být přehnaná.

I když prozodie hraje v síle cizího přízvuku velice důležitou roli, její výuka bývá ve školách většinou zanedbávána (Kissling, 2013: 721). Doporučovala bych tedy, aby se výuce slovního přízvuku, řečového rytmu a intonace dostalo ve školách více prostoru a aby důraz na ni byl alespoň tak velký, jako na výuku segmentálních řečových elementů.

Suprasegmentální rovinou skončila teoretická část této práce. Praktická část se skládala z fonetického experimentu, který měl za úkol identifikovat nejvýraznější elementy českého přízvuku z pohledu rodilého mluvčího. Tyto poznatky jsem dále porovnála s poznatky z teoretické části.

Experimentu se zúčastnilo celkem šestnáct rodilých mluvčích britské angličtiny, kteří měli za úkol ohodnotit cizí přízvuk nahrávek, které poslouchali. Nahrávky, které měly podobu jednoduchých vět, obsahovaly několik znaků českého přízvuku: hlásku /r/, hlásku /u/, nulovou redukci samohlásek a podobu znělosti.

V první části experimentu dobrovolníci poslouchali identické věty, které však kontrastovaly ve výše uvedených elementech. Měli za úkol označit větu, která obsahovala cizí přízvuk. Kromě markantnosti přízvuku jednotlivých elementů se měřil i čas, který dobrovolníci potřebovali k odpovědi. Nejméně času potřebovali k vyhodnocení hlásky /r/, kterou označili za nejvíce přízvuknou. Naopak nejvíce času potřebovali k rozpoznání asimilace znělosti, která byla vyhodnocena jako nejméně přízvukná.

Ve druhé části experimentu už neposlouchali větné páry, pouze samostatné věty. Tyto věty buď obsahovaly, nebo neobsahovaly jeden z výše uvedených přízvukových elementů. Dobrovolníci měli za úkol přidělit k přízvuku číslo z přízvukové stupnice: čím nižší číslo, tím nižší přízvuk. Nejsilnější přízvuk byl udělen opět hlásce /r/, na což dobrovolníci potřebovali opět nejméně času. Nejslabší přízvuk byl přidělen nulové redukci samohlásek, k čemuž potřebovali značně více času, než k označení hlásky /r/.

Poznatky z teoretické části se s poznatky z experimentu shodovaly v rámci hlásky /r/ a dále samohlásky /u/, které byly oběma metodami označeny jako vysoce důležité. Překvapivě však praktická část neprokázala zásadní důležitost správného provedení redukce samohlásek a

správné aplikace spodoby znělosti. Co se týče spodoby znělosti, je možným vysvětlením variabilita řeči rodilých mluvčích.

## 11. APPENDIX – THEORETICAL PART

TABLE SUMMARIZING ENGLISH AND CZECH CONSONANTS

Consonants	English (occurrence)	Czech (occurrence)	Notes Regarding its Usage in Czech
<b>Bilabial Plosives</b>	Yes	Yes	Aspiration and Voice Assimilation wrongly executed
<b>Alveolar Plosives</b>	Yes	Yes	<b>Aspiration and Voice<sup>15</sup></b> <b>Assimilation wrongly executed</b>
<b>Velar Plosives</b>	Yes	Yes	Aspiration and Voice Assimilation wrongly executed
<b>Glottal Plosive</b>	Yes	Yes	<b>Wrong placement of glottal stop, wrong usage in terms of its linking function</b>
<b>Affricates</b>	Yes	Yes	Confusion of their application
<b>Labiodental Fricatives</b>	Yes	Yes	Wrongly executed assimilation of voice
<b>Dental Fricatives</b>	Yes	<b>No<sup>16</sup></b>	Interdental instead of dental pronunciation, their overall replacement with other phonemes, difficulty of pronunciation in certain words, and their overall interchangability

<sup>15</sup> Notes Regarding Its Usage In Czech: bold script signifies its importance.

<sup>16</sup> Yellow filling marks phonemes non-existent in the respective language.

<b>Alveolar Fricatives</b>	Yes	Yes	Without major <sup>17</sup> problems
<b>Palato-Alveolar Fricatives</b>	Yes	Yes	Neither difference in secondary articulation or assimilation of voice was found significant
<b>Glottal Fricative</b>	Yes	Yes	Confusion between voiced and voiceless quality and its application in all words
<b>Velar Fricatives</b>	No	Yes	No major implications stemming from its non-existence in English
<b>Bilabial Nasals</b>	Yes	Yes	No major issues detected
<b>Velar Nasal and alveolar /n/</b>	Yes	Yes	<b>Velar nasal: Different treatment, insufficient application, wrong dropping of following /g/</b>
<b>Alveolar Approximant</b>	Yes	Yes	<b>Insufficient sensitivity towards different variants of alveolar approximant</b>
<b>Post Alveolar Approximant</b>	Yes	Yes	<b>Different articulation, different distribution, and insensitivity towards its linking function</b>
<b>Palatal Approximant</b>	Yes	Yes	No significant differences detected, however its usage as a linking device should be paid attention to.
<b>Labiovelar Approximant</b>	Yes	No	<b>Insufficient sensitivity towards differentiating between /v/ and /w/, insensitivity of its usage as a linking device</b>

<sup>17</sup> Red filling signifies categories that were found to be relatively non-problematic.

TABLE SUMMARIZING THE SIMILARITIES AND DIFFERENCES BETWEEN CORRESPONDING MEMBERS OF CZECH AND ENGLISH CONTRASTIVE PAIRS

<b>Contrastive Pairs (Cz and En)</b>	<b>Articulation</b>	<b>Duration</b>	<b>Timbre</b>
<b>/i/ and /ɪ/</b>	different	different	different
<b>/i:/ and /i/</b>	different	different	different
<b>/ɛ/ and /ɛ/</b>	different	different	N/A <sup>18</sup>
<b>/ɛ:/ and /æ/</b>	different	different	different
<b>/a/ and /ʌ/<sup>19</sup></b>	similar	different	similar
<b>/a:/ and /ɑ/</b>	different	different	different
<b>/o/ and /ɒ/<sup>20</sup></b>	similar	different	similar
<b>/o:/ and /ɔ/</b>	different	different	different
<b>/u/ and /ʊ/</b>	different	different	different
<b>/u:/ and /u/</b>	different	different	different

<sup>18</sup> Timbre of /ɛ/ and /ɛ/ was not mentioned in texts I have been using.

<sup>19</sup> Vowels /a/ and /ʌ/ were identified as being replaceable without creation of a distinct foreign accent.

<sup>20</sup> Vowels /ɒ/ and /o/ were found to be relatively similar, yet not entirely replaceable.

TABLE SUMMARIZING SUPRASEGMENTAL FEATURES OF ENGLISH AND CZECH

Suprasegmental Feature	English	Czech
Word Stress	<p><b>Mobile feature</b><sup>21</sup>, frequent use of secondary stress, main-stress</p> <p><b>influencing the</b><sup>22</sup> <b>pitch/quality/quantity of other syllables</b></p>	<p>Fixed feature, secondary stress only facultative, no change of quality/quantity/pitch of unstressed vowels</p>
Rhythm	<p><b>Stress-time language.</b> rhythm perceived through occurrence of stressed, weakly stressed and unstressed syllables, <b>large auditory differences</b> between stressed and unstressed syllables</p>	<p>Syllable-time language, rhythm perceived through number of syllables, stressed and unstressed syllables not differentiated as distinctly</p>
Intonation	<p>Most frequent is the falling tone, tone units are longer, <b>very distinct changes of pitch in a tone unit, salient tonic syllable, intonational phrases very varied and contrastive,</b> <b>intonation overall dynamic</b></p>	<p>Most frequent is the rising tone, tone units are shorter, changes of pitch in a tone unit are not as distinct, tonic syllable is not as salient</p>

<sup>21</sup> Bold font marks features of English suprasegmentals that are distinctly different in Czech.

<sup>22</sup> Yellow filling identifies features that I find as most significant in terms of negative transfer.

## 11. APPENDIX – PRACTICAL PART

FIGURE 1. REGARDING TOTAL ACCENT SCORE

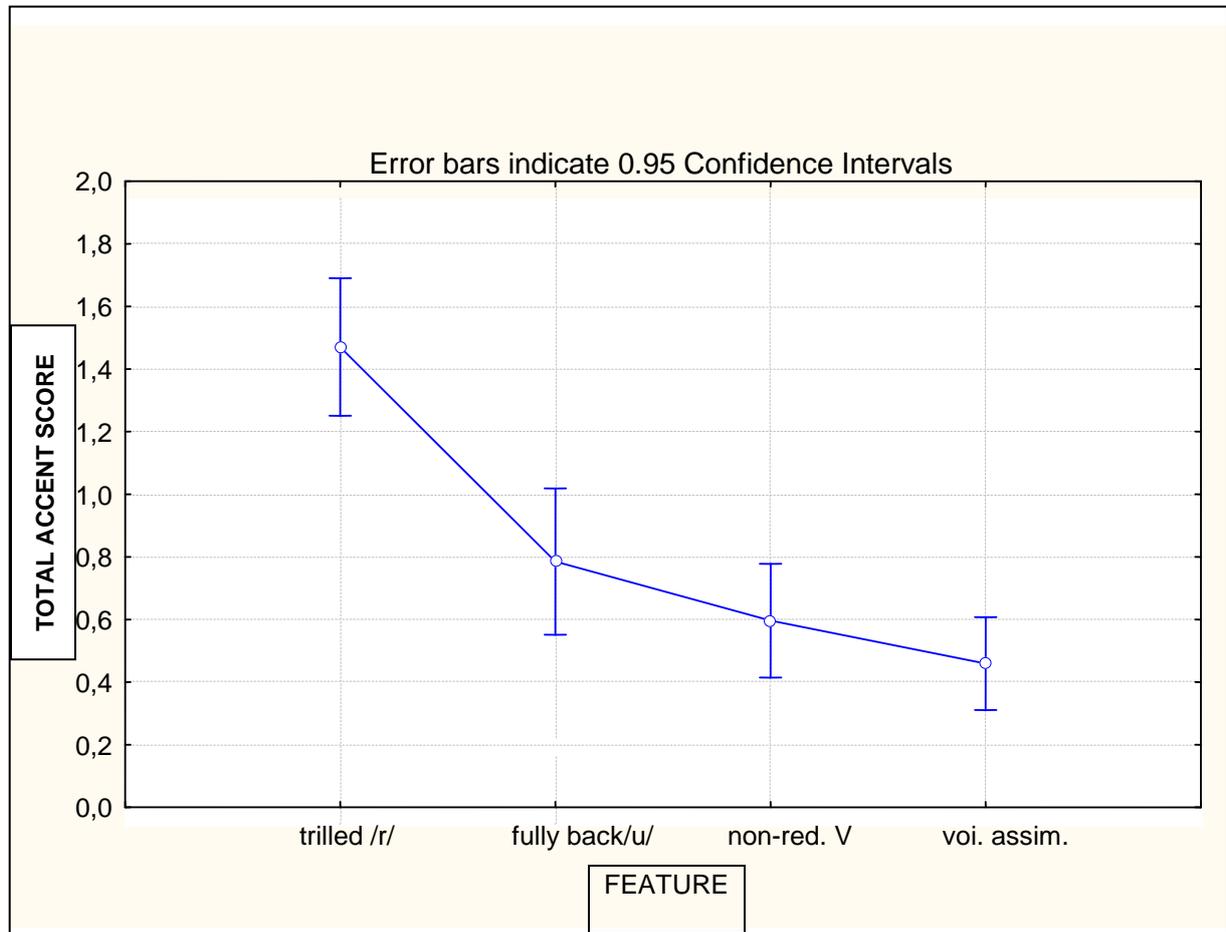


TABLE 2: POST-HOC TEST REGARDING TOTAL ACCENT SCORE

	FEATURE	{1}	{2}	{3}	{4}
1.	trilled /r/		0.000227	0.000172	0.000171 <sup>23</sup>
2.	fully back /u/	0.000227		0.524147	0.099694 <sup>24</sup>
3.	non-reduction of vowels	0.000172	0.524147		0.753270
4.	voicing assimilation	0.000171	0.099694	0.753270	

<sup>23</sup> Yellow filling highlights  $p < .05$ .

<sup>24</sup> Red colored font identifies figures approaching significance.

FIGURE 2 REGARDING 'PAIRS' REACTION TIMES

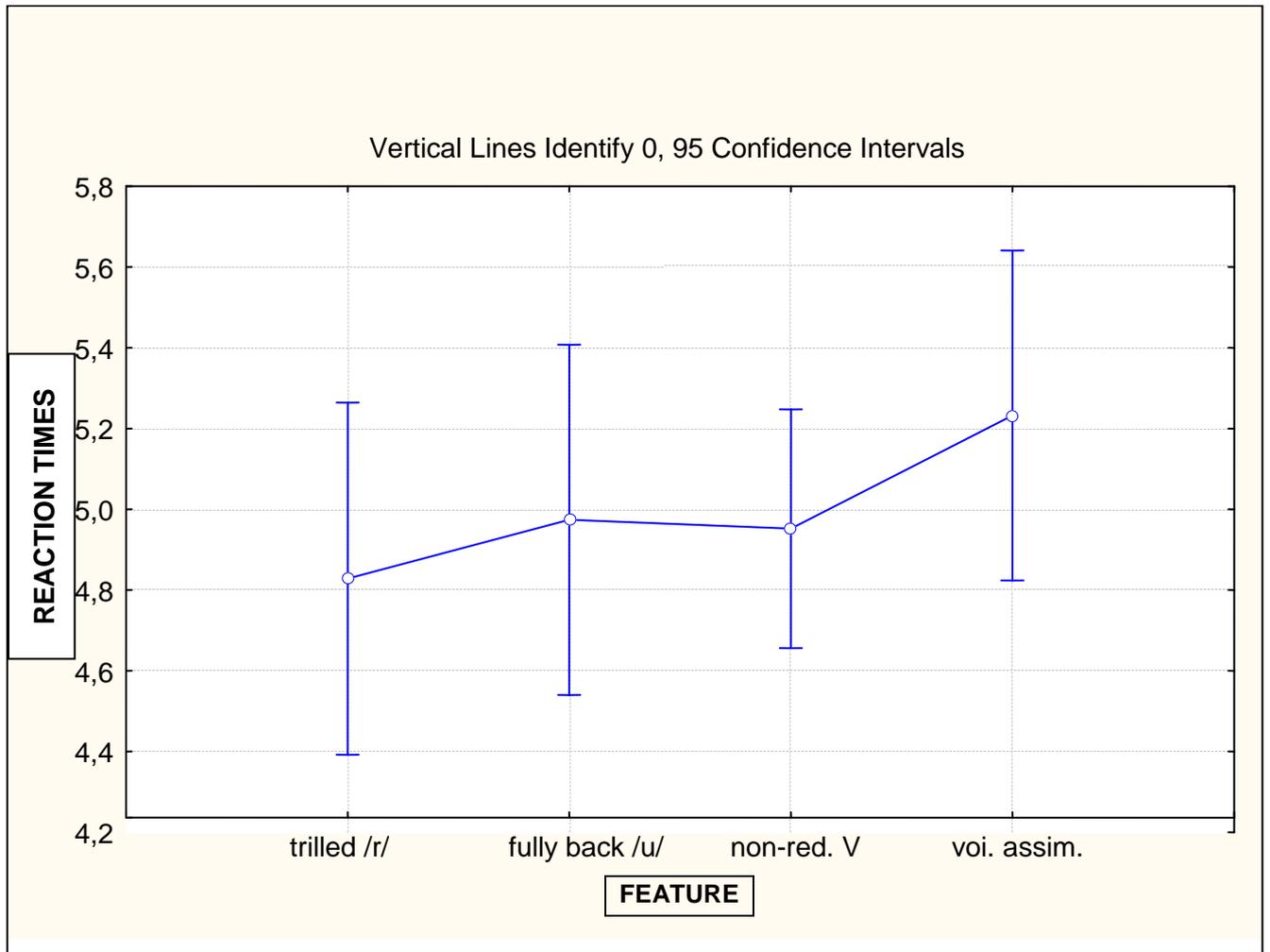


TABLE 3: POST-HOC TEST REGARDING 'PAIRS' RT

	FEATURE	{1}	{2}	{3}	{4}
1.	trilled /r/		0.681738	0.778734	0.017539 <sup>25</sup>
2.	fully back /u/	0.681738		0.998373	0.210265
3.	non-reduction of vowels	0.778734	0.998373		0.153969
4.	voicing assimilation	0.017539	0.210265	0.153969	

<sup>25</sup> Yellow filling identifies figures of most significant difference.

FIGURE 3 REGARDING MEAN ACCENT RATING

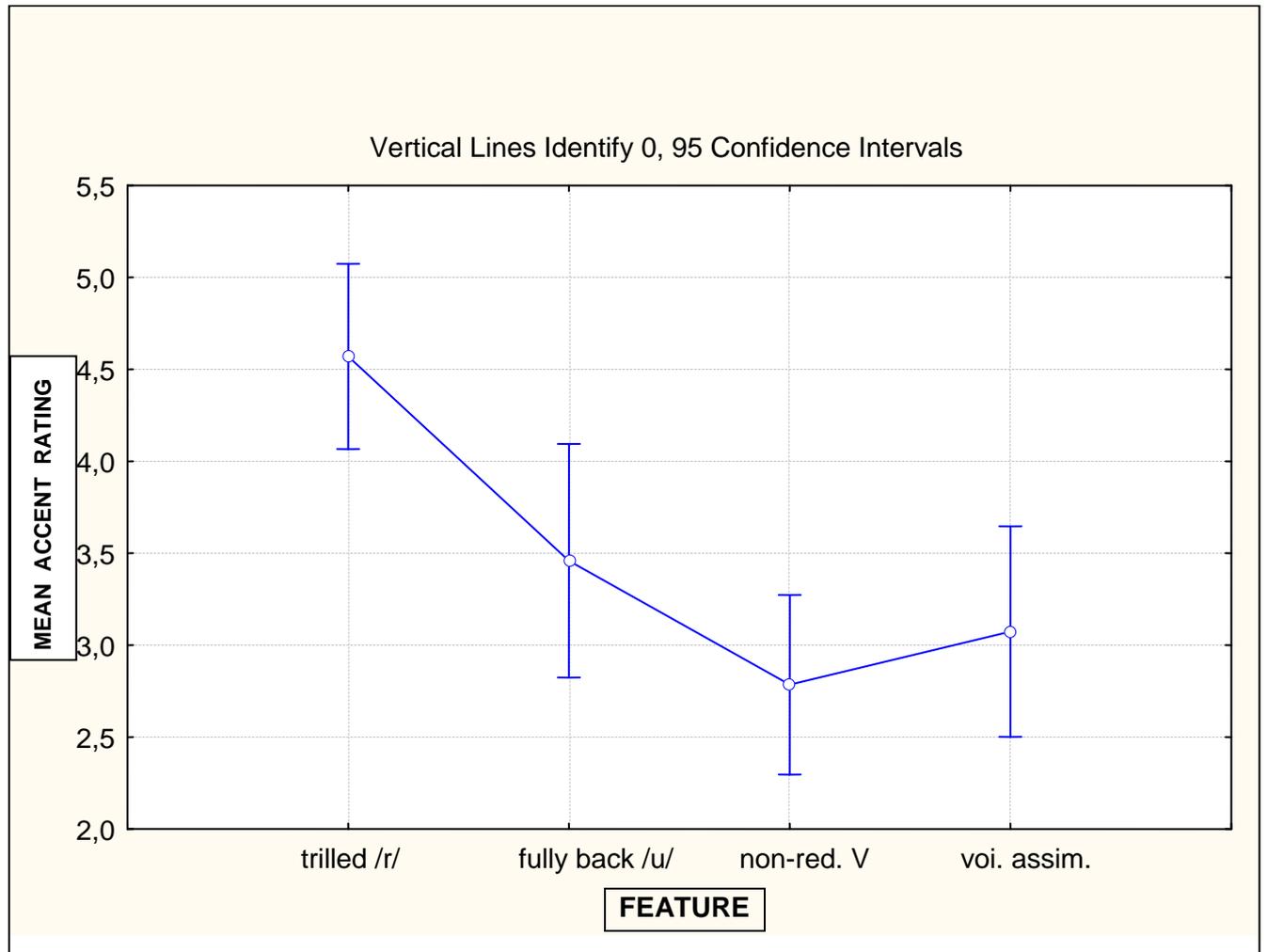


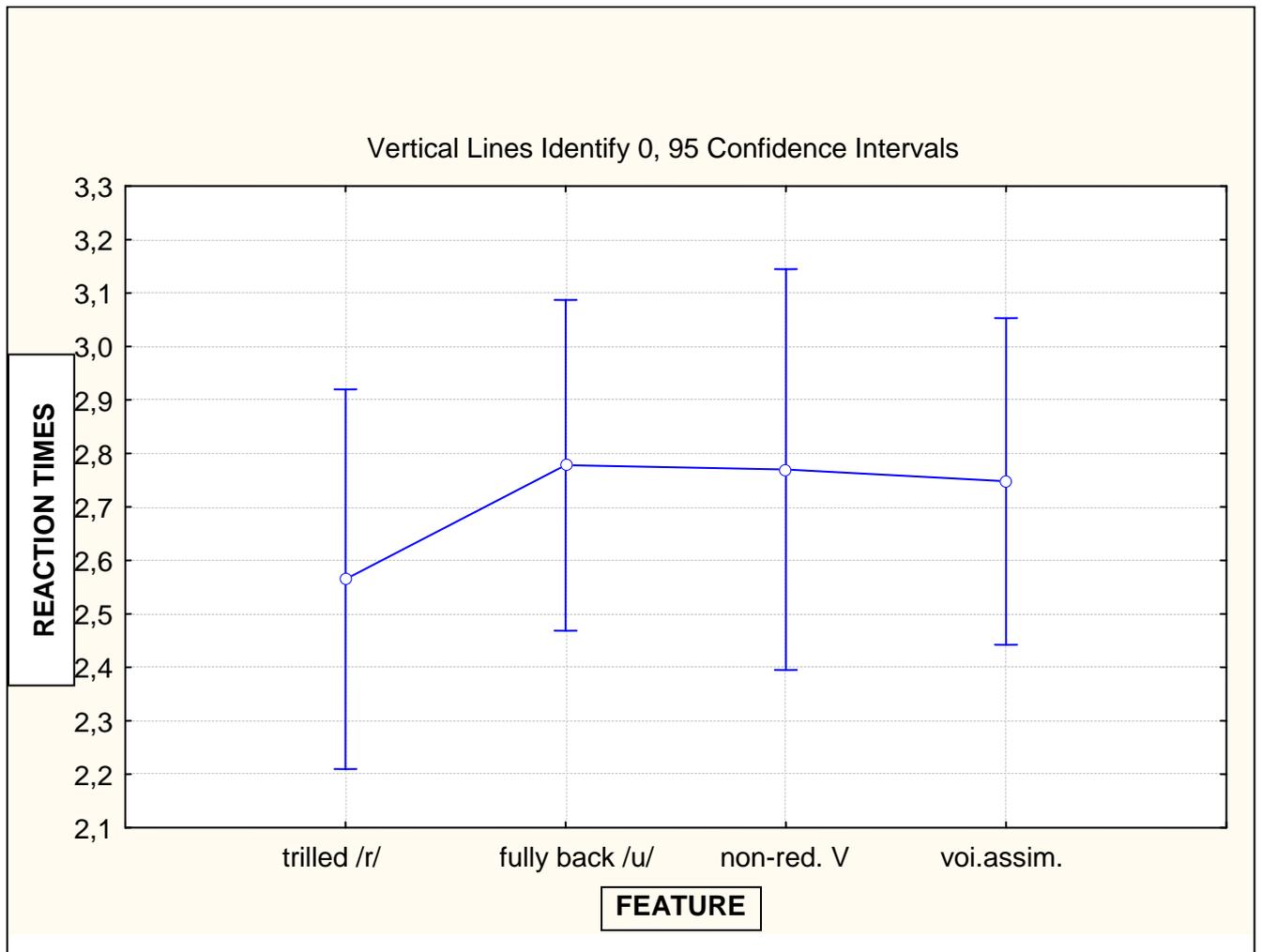
TABLE 4: POST-HOC TEST REGARDING MEAN ACCENT RATING

	FEATURE	{1}	{2}	{3}	{4}
1.	trilled /r/		0.001124 <sup>26</sup>	0.000171	0.000179 <sup>27</sup>
2.	fully back /u/	0.001124		0.075694	0.491415
3.	non-reduction of vowels	0.000171	0.075694		0.710351
4.	voicing assimilation	0.000179	0.491415	0.710351	

<sup>26</sup> Red colored font identifies figures approaching significance.

<sup>27</sup> Yellow filling identifies figures with most significant difference.

FIGURE 4 REGARDING 'SINGLE' REACTION TIMES



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## 13. ANNOTATION

Author's first name and surname:	Radomíra Koudelková
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Department:	Department of English and American Studies
Title of the thesis:	Importance of Individual Features of Czech Accent in English for Perceived Foreign-accentedness
Supervisor:	Mgr. <b>Václav Jonáš Podlipský</b> , Ph.D.
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### Key words:

foreign accent, Czech, English, stigma, social evaluation, negative transfer, contrastive analysis, feature, consonant, vowel, diphthong, stress, rhythm, intonation, native speaker, Czech speaker of English.

### Abstract:

This thesis focuses on Czech accent in English. It is divided into two parts. First part analyses the segmentals of Czech and English phonetics and phonology, while using contrastive analysis. The second part of this thesis is represented by a phonetic experiment, which had to identify elements of Czech accent in English that are perceived as strongest by a native speaker. The aim of this thesis is to help to reduce Czech accent in English and thus prevent negative social evaluation that could be based on it.

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## 14. ANOTACE

Jméno a příjmení autora:	Radomíra Koudelková
Fakulta:	Filozofická Fakulta
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Název diplomové práce:	Význam jednotlivých znaků českého přízvuku v angličtině, a jejich vliv na vnímání cizího přízvuku
Vedoucí diplomové práce:	Mgr. <b>Václav Jonáš Podlipský</b> , Ph.D.
Rok obhajoby diplomové práce:	2014
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### Klíčová slova:

cizí přízvuk, čeština, angličtina, stigma, sociální hodnocení, negativní přenos, kontrastivní analýza, prvek, souhláska, samohláska, dvojhláska, přízvuk, rytmus, intonace, rodilý mluvčí, český mluvčí angličtiny.

### Resumé:

Tato práce se zabývá českým přízvukem v angličtině. Je rozdělena na dvě části. První část analyzuje segmentální rovinu české a anglické fonetiky a fonologie, k čemuž je použita kontrastivní analýza. Druhou část představuje fonetický experiment, který sloužil k vydělení nejmarkantnějších prvků českého přízvuku, z pohledu rodilých mluvčích. Smyslem této práce je redukce českého přízvuku v angličtině, a tudíž prevence negativního společenského hodnocení.

Souhlasím s půjčováním diplomové práce v rámci knihovních služeb.