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Exploring the International Intelligibility of the Czech Accent and Pointing out Common Pronunciation Problems of Czech Learners of English Language

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**Universiteit
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The Netherlands

**Exploring the International Intelligibility of the Czech Accent
and
Pointing out Common Pronunciation Problems of Czech Learners of
English Language**

Master's Thesis

Linguistics: Modern Languages

By

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1 July 2022 in Leiden

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Second Reader: Dr. E.D. Botma

“Accent is the soul of language; it gives to it both feeling and truth.”

— Jean Jacques Rousseau

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Abstract

This thesis explores how intelligible Czech accented English is to foreign speakers and what pronunciation issues Czech learners of English have. With English language becoming the world's lingua franca, there has been a significant change in the attitude towards English pronunciation teaching over the years. This paper introduces the change from the Nativeness Principle, that focused on sounding native-like, to the Intelligibility Principle, the goal of which is to have a clear pronunciation enough to converse comfortably with other speakers of English. This paper's focus is particularly on the Czech accented English and its understandability in conversation. Mutual intelligibility is what Jenkins (2000; 2002) aimed at when putting together a list of core pronunciation features one should focus on when learning English. This Lingua Franca Core (LFC), as she named it, serves as a base for this paper. In this study, recordings of less advanced Czech learners of English were collected and analysed, in order to pinpoint the main pronunciation mistakes. These were compared to Jenkins' LFC to establish how intelligible the Czech accent is. Selected bits of the recordings were also sent to responders through a survey, to find out what their opinion on the Czech accent is. The main findings of the analysis showed that less advanced Czech learners substitute English vowels with Czech ones, they put stress on the first syllable in every word and pronounce English weak vowel forms as full ones. They also struggle with the pronunciation of voiced and voiceless dental fricatives, and they insert a glottal stop in between words, creating clear boundaries. The survey results showed that these aspects of Czech English mainly constitute a problem in isolated words. When context is provided, the Czech accent proved to be quite intelligible and some of the pronunciation features even helped with intelligibility. The study concluded with pronunciation tips for English learners.

Keywords: Intelligibility, Nativeness, Pronunciation, L1 Czech, L2 English, Accents, Czech English, Lingua Franca Core, Speech recordings, Tips

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List of Abbreviations

L1	First Language
L2	Second Language
LFC	Lingua Franca Core
IPA	The International Phonetic Alphabet
AmE	American English
BrE	British English
Cz	Czech
F1	First Formant
F2	Second Formant

1. Introduction

1.1. Overview

Over the years, English language came to be recognised as the global language, the tool for international communication. English is the language speakers of different nationalities and cultural backgrounds chose as their ‘lingua franca’ (Seidlhofer, 2005; Jenkins, 2009). When compared to other languages, the speed with which the English language spread across the world is unprecedented. English language is now considered an international language and it is no longer solely a property of English-speaking countries (Widdowson, 1994; Jenkins, 1998). Consequently, there is now more non-native speakers of English than native ones (Crystal, 1997; Jenkins, 2002). This growing amount of people using English also brought about a change of the attitude towards pronunciation teaching (Jenkins, 1998; Levis, 2005). Sounding native-like is no longer the ultimate goal; what is desired is for one to be able to carry a successful conversation with both native and non-native speakers of English.

It is very common that a foreign speaker’s speech is to a degree influenced by their native tongue (L1). Having an accent is not as issue as long as the speaker’s pronunciation is intelligible enough for the listener to comprehend the message comfortably (Kenworthy, 1997; Kaur and Raman, 2014; Skarnitzl and Rumlová, 2019). As Kenworthy (1997) stated, the more differences there are between one’s L1 and English, the more difficulties will said speaker have with English pronunciation.

When it comes to Czech speakers, there is several features of their native language that they transfer onto their English speech. This paper thus focuses on how understandable the Czech accent is to a foreign listener. It presents an evaluation of the pronunciation of Czech English speakers and points out common problem areas. Tips for the Czech learners of English are proposed based on the pronunciation mistakes that were found.

1.2. Literature Review

1.2.1. Nativeness and Intelligibility Principles

When analysing foreign, accented speech, the deviations from the native-like pronunciation can be referred to as *Accentedness* (Skarnitzl and Rumlová, 2019). However, not all deviations are equally heavy in that that not all affect the flow of the communication the same way. Two other aspects were thus introduced when it comes to foreign accent evaluation. *Comprehensibility* refers to the “subjective ease of processing of foreign-accented speech”, which means that one can understand the other speaker due to their “high cognitive effort” (Skarnitzl and Rumlová, 2019: 110). *Intelligibility* on the other hand refers to the objective ability of listeners to understand given speaker even if said speaker has a strong accent. And it is intelligibility rather than sounding native-like what has been foregrounded in pronunciation teaching, for even very strong accents can be classified as fully intelligible (Skarnitzl and Rumlová, 2019).

This is something that Levis proposed in 2005. He described two conflicting approaches to pronunciation teaching: the Nativeness and Intelligibility principles. As Levis et al. noted, each principle prioritizes different features, and they also differ in how each principle evaluates students’ success (2020). The nativeness principle holds that it is “both possible and desirable to achieve native-like pronunciation in a foreign language” (Levis, 2005: 370). It is built on an assumption that there are “ideal and deficient ways to pronounce a language”, and these deficient ways ought not to be tolerated (Levis et al., 2020: 5). Not mastering all pronunciation aspects of the language is thus taken for a failure. This principle was in the forefront up to the 1960s’, then it started to be slowly replaced by the Intelligibility principle. The main issue with the Nativeness principle, as Levis pointed out, is the fact that it had been proven that the critical period for acquiring native-like pronunciation occurs before adulthood (2005). The ‘Critical

Period' in language learning is a time window during which one can learn a new language very easily and without much effort (Penfield and Roberts, 1959; Lenneberg, 1967; Kenworthy, 1997). The time span of the Critical Period differs from person to person, however the general consensus states that this period begins at a very young age and continues up until the teenage years of each individual. After this period, when one reaches adulthood, it becomes much more difficult to learn a new language and one will "have an accent" or "sound foreign" (Smakman 2018: 117). This is because when one reaches puberty, the two hemispheres of their brain go through a process called lateralisation; during this process only one of the hemispheres takes over the control of the functions of language while the other stops being involved in language production (Lanneberg, 1967). After this process is finished, learning new language becomes quite challenging. Sounding native-like is then an unrealistic goal for the adult learner to reach. There are other factors such as motivation, positive attitude towards the language, or the amount of pronunciation training received that correlate with having native-like pronunciation, all of which however do not come close to having as big of an effect on pronunciation as the age factor (Levis, 2005).

According to Levis, teachers who are not familiar with pronunciation teaching practices still aim at eliminating the "foreign accent" of their students, and what is more, it is common for students to feel the need to "get rid of" their accents (2005: 370). As Levis pointed out, the desire to sound native comes from beliefs that are long ingrained in our society. These beliefs hold that nativeness not only ensures successful communication, but it also provides the speaker with better opportunities for professional advancement, for as Levis et al. pointed out, there were instances of teachers being considered ill-suited for their job for their lack of "nativeness" (2020: 13).

Nativeness should not be required of neither students nor teachers. This approach is, as Levis et al. put it, "deeply faulty" and discriminatory and should not be used in pronunciation

teaching (2020: 2). That is not to say that one should cease trying to sound native-like, if they wish to, it only means that in pronunciation teaching, the goals set should be within reason (Levis et al., 2020). The Intelligibility principle, on the other hand, holds that communication can be very successful even when one has a strong accent, as long as the speaker's speech is understandable (Levis, 2005). In pronunciation instruction, the focus should thus be placed on those pronunciation features that are crucial for the attainment of intelligibility, for not all pronunciation aspects are equally important in order for the learner to achieve communicative success. According to Levis et al., important pronunciation aspects are those that carry high functional load (2020). As some segments of language carry bigger functional load than others, if a speaker makes pronunciation errors in those specific segments, the comprehensibility of their speech will be affected.

1.2.2. Why Accents Should Not Matter

Having an accent is an inevitable, expected, and natural element of language use (Waniek-Klimczak, 2020). As stated, English language is the world's lingua franca, which ultimately means that people encounter many foreign, non-native accents. Accents are closely related to one's personal identity, nationality, and group affiliation (Jenkins, 2000). While in previous decades it was a matter of having either 'bad' or 'good' accent, nowadays, the consensus is that what matters the most is whether the accent is intelligible (Jenkins, 2000; Kaur and Raman, 2014).

Volín and Poesová (2016) pointed at the notion of 'comfortable intelligibility' (Abercrombie, 1956; Kenworthy, 1997; Derwing and Munro, 2011). Comfortable intelligibility arises when one's pronunciation is understood with ease and not too much effort is needed on the listener's side for them to be able to understand the message (Abercrombie, 1956). As Kenworthy (1997: 13) noted, "the more words a listener is able to identify accurately when said by a particular speaker, the more intelligible that speaker is". Intelligibility can be

affected when a foreign speaker for example replaces one sound with another, which can cause the listener to understand a different word than what the speaker intended to communicate. However, if a speaker substitutes one sound for another and still the listener can understand the words, this speaker's speech can be then considered intelligible (Kenworthy, 1997). A speech that is not intelligible enough may prevent the listener from following the conversation as they need to focus more on trying to comprehend what the speaker is saying (Volín and Poesová, 2016). As Kenworthy (1997) stated, if someone needs to be asked to repeat themselves, then their speech is most likely not intelligible enough for the listener to be able to comfortably listen without much effort. The listener may even become discouraged or disinterested in continuing the conversation and might avoid further interactions with said speaker (Volín and Poesová, 2016). Mutual, comfortable intelligibility is thus what is considered to be the core challenge that learners face and should focus on (Smakman, 2019). As Levis et al. noted, "intelligibility is the ultimate goal in oral communication, and it affects both listening and speaking in every communicative context" (2020: 10).

In pronunciation teaching, one should thus not have to preoccupy themselves with the non-native-like sounding features of their accent if it does not cause misunderstandings. As Jenkins pointed out, sounding native-like and erasing signs of having a foreign accent is a very outdated and unrealistic goal (1998). According to Jenkins (2000; 2002), speakers of different languages mostly use English to communicate with other non-native speakers of English. It is thus crucial that in pronunciation teaching one focuses on those features of English that are necessary for mutual, international intelligibility (Seidlhofer, 2005). This is why Jenkins (2000; 2002) proposed a 'Lingua Franca Core' (LFC) where she presented a list of core pronunciation features a learner of English should focus on in order to attain intelligibility. She came up with these core features by observing communication between non-native speakers of English and noting down instances where the communication between them failed (Levis, 2018). She then

wrote a list of those features that were wrongly pronounced and thus responsible for the miscommunication. Jenkins (2000; 2002) also presented those features where speakers often do make mistakes however which do not affect the communication. What Jenkins focused on is the question of what is acceptable and realistic to demand of non-native speakers of English. The summary of Jenkins' LFC will be described in the methodology part of this thesis, as it will serve as a base for the evaluation of the accent Czech learners of English have.

1.2.3. Having a Czech Accent

As Crystal (2003) noted, within countries previously belonging to the former Soviet Union, including satellite states such as what used to be Czechoslovakia, Russian used to be the preferred language to learn. Indeed, learning Russian was mandatory in Czechoslovakia up until the 1989 Velvet Revolution. It was only after Czechoslovakia transformed from a communist regime to a democratic system, the Czech Republic was established, and the educational system started to undergo a change, that Russian lost its position as the first foreign language and people were able to choose their second language (L2). During the 1990s, German took on the role of being the most learned L2 up until the end of the 20th century when "Czechs fully realized the actual global role of English as the key international language" (Hnízdo 2016; 29). The joining of the EU by Czechs in 2004 only accentuated this.

This might, among other things, be the reason why older generations of Czech learners of English find it challenging to improve their English skills, for most of them started learning the language later in their life. The age at which one starts to learn a second language is crucial as it has a direct effect on how successful they will be. Another aspect that might contribute to the struggle of these generations to improve their English is the amount of exposure they receive to the language (Kenworthy, 1997). Apart from conscious learning, one might improve their language skills outside of a classroom by for example watching movies in the original version. This is however something that is more easily said than done in the Czech Republic

as Czechia belongs to the so-called “dubbing countries” (Sherman 2013; Kaderka and Prošek, 2014). In contrast to “subtitling countries”, which add subtitles to foreign movies, series, and other TV production, the main Czech TV stations (ČT1, Nova, Prima) dub everything into Czech. The exception is the national station ČT2 which often offers foreign documents, art films and concerts, all of which is usually broadcasted in the original language with subtitles or dubbed over (Kaderka and Prošek, 2014). The dual broadcasting system that is for example available on Czech HBO stations and which allows the viewer to choose between the original and the dubbed version is unfortunately not used by the mainstream Czech stations. Czech viewers are thus barely ever exposed to foreign languages when it comes to TV watching, unless they own a Netflix account or watch other foreign stations such as the already mentioned HBO stations. As Kaderka and Prošek pointed out, the only time a Czech viewer can hear a foreign language on the main stations is thus in interviews or speeches of foreign politicians, public personas, and other speakers of different nationalities. These are usually subtitled, dubbed over or translated afterwards by a Czech reporter.

An average Czech speaker that started to learn English after the critical period can thus be expected to have a Czech accent when speaking English. Having an accent means that one deviates from the ‘native-like’ pronunciation (Skarnitzl and Rumlová, 2019). It can also be perceived as something bad or incorrect. This might be why the older generations of Czech learners of English feel hesitant to speak English or they state that ‘they cannot speak English very well’ ahead of a conversation. This usually stems from the fear of being judged by the listener. As Smakman (2019: 8) noted, there is a great deal of “potential judges” who evaluate the speaker’s pronunciation choices. Apart from pronunciation being related to articulation, mouth shaping, intonation, or stress positioning, it also functions as a personality marker, for listeners might make judgements about one’s personality, professionalism, or image, based on their pronunciation ability (Smakman, 2019). A learner of an English language might use

correct grammatical constructions and choose the right words, but it is the pronunciation aspect that poses difficulties for L2 speakers in a communicative setting.

1.2.4. Czech English

Based on Skarnitzl and Rumlová's (2019) comparison of Czech and English sound patterns, one can assess where do the common pronunciation problems of Czech speakers of English stem from. It is likely that the most problematic features for the Czech speaker will be those that differ from the Czech language the most.

Vocalic System

The English vocalic system when compared to the Czech one is much more complex. The figure presented below, as Skarnitzl and Rumlová pointed out, clearly shows that there is higher diversity of vowels in British English than in Czech (English vowels are marked in black and Czech vowels in grey). This difference is noticeable especially in the open region and it is exactly this region of vowels that poses most problems for Czech learners of English.

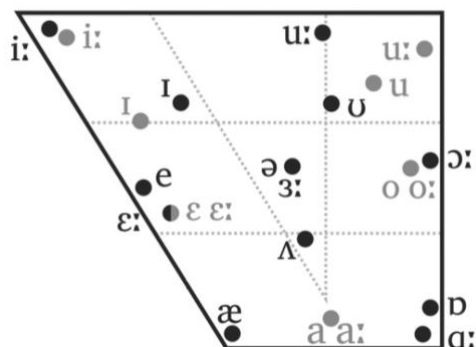


Figure 1.1 (Skarnitzl and Rumlová, 2019: 111)

This figure presents a chart of British vowels (in black) and Czech vowels (in grey).

While English has 12 monophthongs, Czech language has only five (every Czech short vowel has its long counterpart). There are four vowels in the open mouth region in English /æ ʌ ɑ: ɒ/, and only two in the Czech open mouth region /a a:/. Šimáčková (2003) found that Czech speakers of English would often in their speech replace English open-front /æ/ for open-mid

/ɛ/. As Šimáčková explained, Czech speakers would pronounce ‘bad’ and ‘bed’ as [bɛ:d] and [bɛd], with vowel length being the distinctive aspect, the same way as it is in the Czech language (Skarnitzl and Rumlová, 2019). No other study regarding the pronunciation of the remaining vowels in the open region by Czech speakers has been carried out, however as Skarnitzl and Rumlová suggested, there might be a tendency of the Czech speakers pronouncing the short-open English /ɒ/ as Czech mid /o/ and replacing English vowels /ʌ/ and /ɑ:/ with the Czech open central /a/ and /a:/ vowels. According to Skarnitzl and Rumlová, mispronouncing the /æ/ vowel will affect the intelligibility of Czech speakers’ speech considerably more than the mispronunciation of the latter open vowels.

Furthermore, Czechs are not used to vowel sounds not corresponding to their letters; as Poesová and Weingartová (2018) pointed out, Czech is a phonemic language and Czechs thus rely on the written representation of words being in accordance with its sound. When less advanced Czechs speak English, they might expect the same from English graphemic representation of words. Thus, a Czech speaker might have the tendency to pronounce the English vowel and other letters the way they are written.

Consonants

When it comes to consonants, there are some that constitute a problem for Czech learners of English. Skarnitzl and Rumlová (2019) mention the dental fricatives /θ/ and /ð/ which do not exist in Czech language. According to Skarnitzl and Rumlová Czech speakers thus usually pronounce /θ/ as [f], [s] or [t] and /ð/ as [d] or [z]. While these typical English consonants are regarded as very difficult, mispronouncing them will not affect the intelligibility of one’s speech (Jenkins, 2000; Munro et al. 2006). Another tricky consonant for Czech speakers is the labiovelar approximant /w/ as Czech language only uses the labiodental fricative /v/ (Skarnitzl and Rumlová 2019). In regard to word-initial voiceless stops /p/, /t/ and /k/, Czech speakers of English tend to pronounce them unaspirated (Pospíšilová, 2011; Skarnitzl and Rumlová, 2019).

Stress Positioning

Another aspect where Czech and English differ is the placement of lexical stress. Whereas stress in Czech language sets on the first syllable of a prosodic word and carries solely a delimitative function, English stress carries a contrastive function and many rules with it (Skarnitzl and Rumlová, 2019). What is more, changing the position of a stress in an English word can change the meaning of that word /'es.kɔ:t/ vs. /ɪ'skɔ:t/; /'prɒdʒ.u:s/ vs. /prə'dʒu:s/, which is a concept that one will not find in the Czech language.

In English, one must pay attention not only to the stress placement but also to the unstressed syllables, as those are generally reduced in English. This vowel reduction in unstressed positions contributes to what Poesová and Weingartová described as “the specific sound of native English” (2018, 97). Unstressed syllables are shorter than stressed syllables and they tend to be centralized “towards the mid-central vowel *schwa* /ə/ (as in *together* /tə'geðə/)” (Skarnitzl and Rumlová, 2019). It is precisely this reduction of syllables that Czech speakers tend to have problems with. As Skarnitzl and Rumlová noted, less advanced Czech speakers of English will usually pronounce these syllables with bigger prominence and longer duration than there should be. As Poesová and Weingartová (2018: 99) stated, Czech speakers of English “demonstrate a weakened perceptual sensitivity to English vowel reductions”. This is due to the fact that in Czech, the nucleus of a word is not more prominent than the rest of the syllables in that word and all vowels (stressed and unstressed) are pronounced fully. Thus, when speaking English, Czechs tend to insert one of the five vowels (a, ε, ɪ, o, u) of the Czech vocalic system in place of a schwa. The speakers will choose the vowel that is in accordance with the graphemic representation of that specific word (Poesová and Weingartová, 2018).

According to Skarnitzl and Rumlová (2019), reduced syllables, among other factors, contribute to the typical English speech rhythm. It is related to ‘connected speech processes’, the function of which is to “promote the regularity of English rhythm by compressing syllables

between stressed elements and facilitating their articulation” (Skarnitzl and Rumlová, 2019: 114). As Poesová and Weingartová stated, positioning schwa in unstressed syllables makes the stressed syllables stand out and “thus create clear prominence contrasts essential for the natural flow of English rhythm” (2018, 97). A stressed English vowel is “longer, louder, higher and less reduced than the neighbouring unstressed ones” (Poesová and Weingartová: 2018, 98). As Kenworthy (1997) noted, English speech rhythm resembles a music beat; strong beats represent stressed words that carry meaning such as nouns, verbs, adjectives, or adverbs, while weak beats are represented by grammatical words (articles, prepositions or pronouns).

In contrast to pronunciation issues, however, stress and intonation that differ from the native English one should not pose a great problem when it comes to comprehensibility (Levis, 2020). As Jenkins’ (2002) stated, pronouncing full vowel sound instead of schwa sound might actually help with intelligibility. Poesová and Weingartová (2018) however argued that insufficient vowel reduction or misplaced stress might cause confusion on the listener’s side due to his expectations of what a certain word’s stress distribution should be. This might lead to wrong word recognition, which then leads to lower comprehensibility.

Intonation

It has been pointed out by native speakers of English that due to the Czech speakers inserting prominence on both stressed and unstressed syllables, their speech might come across as monotonous, “disinterested” or “bored” (Volín and Skarnitzl 2010; 1012). Another reason the Czech language might sound flat to the native speaker is because compared to English and its fixed word order, Czech language has a relatively free word order and so it does not have to rely on “melodic cues” like English does (Skarnitzl and Rumlová 2019; 114). This is why the English language has considerably wider pitch range compared to Czech (Skarnitzl and Rumlová, 2019). While English uses intonation and sentence stress to express prominence and pragmatic meanings, Czech language uses a theme-rheme structure, where the rheme stands at

the end as the carrier of the important part of the utterance. The intonation of Czech sentences is thus always more or less the same (depending on the type of the sentence).

Linking vs. Glottalization

Another factor that contributes to the typical English rhythm is linking of words. Native English speakers do not make distinct boundaries in between words and instead they “slide” from one word to another (Kenworthy, 1997). Skarnitzl and Rumlová (2019: 114) give examples of such linking in English, such as “*in the* [ɪn̩nə], *did you* [dɪd̩ʒə], *make it* [meɪk̩ɪt], *see it* [si:(j)ɪt], and *did he* [dɪd̩i]” (2019: 114). Bissiri and Volín (2010) found that speakers with strong Czech accent are less likely to link words in English. Instead, they insert a glottal stop in-between words.

While the use of a glottal stop is not uncommon in English, it is much more widely distributed in the Czech language, which makes it difficult for the Czech learners to get used to the linking of words aspect in English. Glottalization is thus very common in Czech-accented English, as Šimáčková et al. (2014) stated. It has been argued that while some pronunciation mistakes that Czech people make might affect the intelligibility of their English, glottalization in contrast may add more clarity to their speech, as it makes the boundaries between words more distinct (Bissiri et al. 2011). The amount of glottalization less advanced Czech speakers of English transfer onto their English speech might be excessive, which will affect the natural rhythm of English. This might be confusing to the native listeners as it interferes with their “rhythmical expectations of stress-timing” (Šimáčková et al. 2014; 679).

1.3. Research Questions

The aim of this thesis is to find out how intelligible the Czech accent is to foreign speakers. This paper will thus shed light on the common pronunciation mistakes that Czech learners of English language make. The research question will thus be two-fold:

1. What can we find out about the international intelligibility of the Czech accent?
2. What are some of the main pronunciation mistakes that Czech learners of English language make?

2. Methodology

2.1. Overview

For this study, eleven recordings of native Czech people speaking English were collected on an iPhone in in-person interviews over a period of one week. Participants (7 females and 4 males) were instructed to speak about any topic of their choosing for approximately one minute. The age of the speakers ranged between 13-19 years (1 speaker), 20-39 years (4 speakers) and 40-59 years (6 speakers). When asked about their English proficiency, the speakers' answers ranged from stating A2 to B2 level.

The approximately 1-minute-long speeches were transcribed (see appendix A) and evaluated. The audios were slowed down in order for the evaluation to be made accurately. The recordings were assessed based on the following: Jenkins' (2000; 2002) Lingua Franca Core, Skarnitzl and Rumlová's (2019) notes and my native intuition. Further, the Praat program was used for visualised vowel analysis and glottalization observation. The outcome of the evaluation of the recordings consists of a summary of common pronunciation mistakes that the responders made. The results show whether the findings coincide with Skarnitzl and Rumlová's (2019) expectations. Considering Jenkins' (2000; 2002) LFC, the results report which of the pronunciation mistakes that Czech speakers make affect intelligibility.

In order to explore the intelligibility of the Czech accent, a survey was conducted. This questionnaire involved isolated sounds as well as selected sentences from the collected recordings. Based on the answers of the responders, it can be concluded how intelligible the Czech English accent is to foreign speakers and whether the answers correspond to Jenkins' (2000; 2002) LFC predictions.

2.2. Procedure

2.2.1. Recordings' Evaluation

In order to carry out an evaluation of the collected recordings, it might be useful to first establish what pronunciation features Jenkins considered important enough to include in her list of core features that are crucial for mutual intelligibility. Considering Jenkins' LFC is helpful for the later assessment of Czech English pronunciation problem areas and for weighing up the severity of them.

LFC

Based on the analysis of her data, Jenkins (2000; 2002) came up with a Lingua Franca Core, which she built for learners of English in order for them to reach mutual intelligibility more easily. As she noted, when learning English, it is more effective to pay attention to specific and crucial features of the language rather than focusing on every detail of it. The summary of Jenkins' (2000; 2002) LFC pronunciation features is as follows:

- Substituting /θ/ and /ð/ with other consonants is acceptable, i.e., it does not affect intelligibility.
- Rhotic 'r' is preferred for intelligibility (as in AmE) over non-rhotic 'r' (as in BrE).
- /t/ in between vowels should be pronounced as in BrE., it should not be substituted by AmE. flapped [ɾ] (in words such as 'latter' and 'water').
- Jenkins allows for allophonic variation within phonemes as long as phonemic distinctions are maintained. (Spanish speakers' pronunciation of /v/ as /b/ may cause confusion on the listener's side - E.g., pronouncing 'vowels' as 'bowels').
- Jenkins calls for aspiration of word-initial voiceless stops /p/, /t/ and /k/ to avoid pronouncing them as their voiced counterparts /b/, /d/ and /g/. (E.g., 'pin' without aspiration sounds like 'bin').

- Distinguishing between short and long vowels (E.g., ‘live’ x ‘leave’, ‘pill’ x ‘peel’).
- Maintaining the length of vowels before consonants is important – such as shortening of vowel sound before voiceless consonants and lengthening before voiced consonants (short /æ/ in ‘sat’ versus longer /æ/ in ‘sad’).
- Consonant sounds in word-initial clusters should not be omitted (as in ‘promise’, ‘string’).
- Omitting consonants in middle or final clusters is permissible only in accordance with English syllable structure rules (E.g., ‘factsheet’ may be pronounced as ‘facsheet’ but not ‘fatsheet’ nor ‘facteet’).
- /nt/ in between vowels as in ‘winter’ should be pronounced as in BrE. rather than AmE. where the /t/ is deleted.
- Addition of sounds is preferable to omission.
- Nuclear stress (contrastive stress) should be placed accurately to signal meaning.

This list presents all the pronunciation features Jenkins considered important for the attainment of intelligibility. Below is the summary of features she classified as not being crucial for mutual intelligibility and thus not required of English learners. These pronunciation features will cause one to have an accent, meaning one will incorporate their L1 pronunciation habits, therefore preserving some part of their L1 identity. Jenkins pointed these out for learners of English for they might benefit from knowing what the different nuances of pronunciation in their native language and English are. Non-core pronunciation features thus are:

- Pronouncing /θ/ and /ð/ sounds incorrectly is not an issue.
- Pronouncing weak forms (using schwa) as full vowel sounds is not an issue, it might actually help with intelligibility.
- When it comes to vowel quality, pronouncing for example /bʌs/ as /bʊs/ is not an issue.

- Features of speech connectedness are unnecessary for intelligibility.
- The placement of word stress together with stress-timed rhythm is not a core feature that is necessary for intelligibility.

Czech English Sound Patterns According to Skarnitzl and Rumlová

Apart from considering Jenkins' (2000; 2002) LFC, the evaluation of the recordings was also based on Skarnitzl and Rumlová's (2019) suggestions regarding the Czech English pronunciation aspects. The summary of their findings is as follows:

- Czech speakers tend to pronounce all syllables with the same prominence, disregarding the unstressed syllables.
- Czech speakers tend to place the stress on the first syllable in each word.
- Czech learners of English tend to pronounce the BrE open-front /æ/ as open-mid /ɛ/.
- There is a tendency of the Czech speakers to pronounce the short-open English /ɒ/ as Czech mid /o/.
- Replacing BrE vowels /ʌ/ and /ɑ:/ with the Czech open central /a/ and /a:/ vowels in Czech English.
- Czech speakers might pronounce /θ/ as [f], [s] or [t] and /ð/ as [d] or [z].
- Czech speakers might pronounce /w/ consonant as [v] as Czech language only uses this variant.
- Czech learners of English generally pronounce the voiceless stops /p/, /t/ and /k/ unaspirated.
- Czech speakers have a tendency of inserting a glottal stop in-between words instead of using linking.

Skarnitzl and Rumlová's (2019) notes will be taken into account when evaluating the recordings. The results of the evaluation of the data should show whether the findings coincide with their expectations.

2.2.2. Observation in Praat

The Praat program (Boersma and Weenink 1992 - 2022) was used to observe two things: glottalization in Czech English speech and to either confirm or refute one of the claims that was proposed in this paper, which is that Czech speakers pronounce Czech vowels instead of the English ones.

Glottalization

As stated earlier in this study, Czech speakers will often use a glottal stop in between words instead of linking in their English speech, by which they insert distinct boundaries in between words. This can be clearly observed in a Praat spectrogram. For the purpose of this study, a native English speaker was asked to read a few of the same sentences that were collected from the Czech speakers and a comparison of their speeches was made, the results of which will be presented in the next chapter.

Vowel Formants

Two measurements are necessary in order for one to establish which vowel is being pronounced – formant 1 (F1) and formant 2 (F2) values. The formants of each vowel are determined by the positioning of the tongue in a person's mouth. F1 frequency represents the height of the tongue in a mouth while F2 frequency shows whether the tongue is positioned in the front or in the back (Podesva and Sharma, 2013). The frequencies of each vowel differ with each speaker, depending on the size of their vocal tract. However, there is an average number of frequencies each vowel must have in order to be classified as a specific vowel. By comparing the formant values of the two tables below (2.1. and 2.2.), one can make an assessment of what vowel is being pronounced in each recording. The following table 2.1. presents the average

formant frequencies of the Czech vowels (Dedouch et al., 2002: 16). For the purposes of this study only F1 and F2 values will be paid attention to in this paper.

Table 2.1. (Dedouch et al., 2002: 16) This table presents F1, F2 and F3 frequency values of the Czech vowels.

Czech vowels	Frequency intervals for formant frequencies [Hz]		
	F 1	F 2	F 3
/ a /	700 – 1 100	1 100 – 1 500	2 500 – 3 500
/ e /	480 – 700	1 560 – 2 100	2 500 – 3 500
/ i /	300 – 500	2 000 – 2 800	2 500 – 3 500
/ o /	500 – 700	850 – 1 200	2 500 – 3 500
/ u /	300 – 500	600 – 1 000	2 500 – 3 500

Table 2.2. presents the formant frequencies of the British English vowels collected by Deterding (1997: 49).

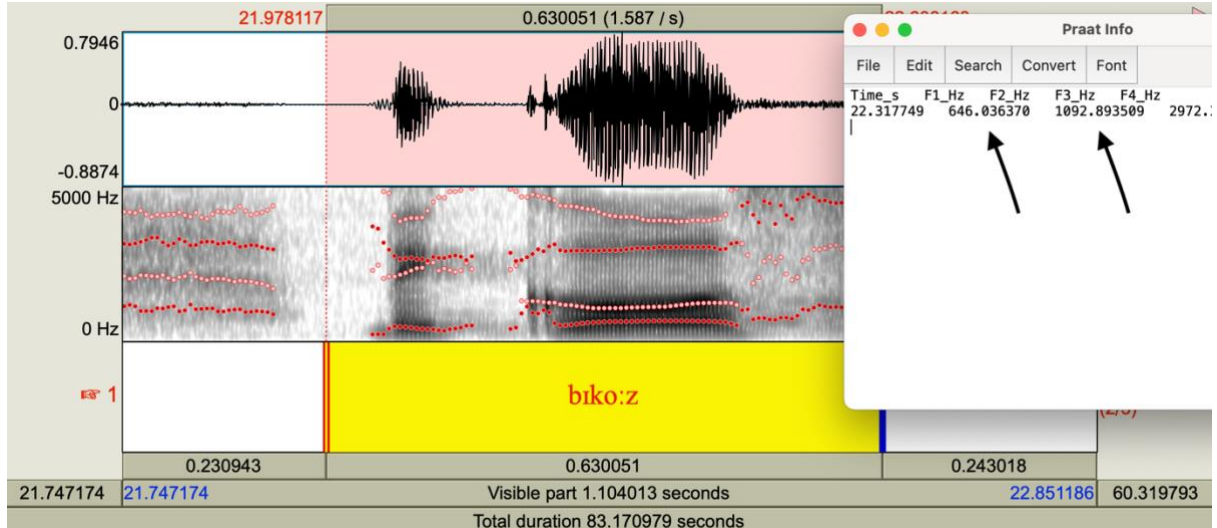
Table 2.2. (Deterding, 1997: 49) This table presents F1, F2 and F3 values of male and female British English vowel frequencies.

	Male			Female		
	F ₁	F ₂	F ₃	F ₁	F ₂	F ₃
i:	280	2249	2765	303	2654	3203
ɪ	367	1757	2556	384	2174	2962
e	494	1650	2547	719	2063	2997
æ	690	1550	2463	1018	1799	2869
ʌ	644	1259	2551	914	1459	2831
ɑ:	646	1155	2490	910	1316	2841
ɒ	558	1047	2481	751	1215	2790
ɔ:	415	828	2619	389	888	2796
ʊ	379	1173	2445	410	1340	2697
u:	316	1191	2408	328	1437	2674
ɜ:	478	1436	2488	606	1695	2839

The necessary measurements for this study were collected by choosing a particular word from the collected recordings, selecting a vowel in that word, and viewing its formant frequencies on a speech spectrogram. Below, figure 2.1. presents a spectrogram of the word ‘because’. The red dots represent the formants, and the pop-up window shows the values of the formant frequencies of a selected vowel sound. Because the rounded off F1 value is 646 and the F2

value is 1092, by taking into account tables 2.1. and 2.2. above, one can see that the selected vowel in the spectrogram is a Czech vowel [o:].

Figure 2.1. Praat program showing a spectrogram of the word ‘because’ together with the formant frequencies of the Czech vowel [o:].



The results chapter will present a list of English words uttered by Czech speakers and their vowel formants values, which were collected in this exact manner.

2.2.3. Questionnaire

The Survey

To explore the intelligibility of the Czech accent in English, a questionnaire was conducted. The survey was created through the surveymonkey.com website and included audio recordings of native Czech speakers speaking English, that were added to the survey through the soundcloud.com website. The estimated time for filling out the questionnaire was five minutes. The purpose of the survey was to find how intelligible the Czech accent is to foreign speakers. The concept of intelligibility was explained to the responders, stating that it means how clearly a person speaks, so that his or her speech is comprehensible to a listener.

The Task

In this anonymous survey the responders were first asked to answer a few demographic questions to get a general picture of the factors that may influence their answers. These included questions about age, nationality, highest level of education attained, and the number of languages they speak. The responders were then presented with selected parts of the previously collected recordings of Czech speakers speaking English. They were instructed to listen to these and answer several straightforward questions.

The Responders

The questionnaire reached 80 people in total. These were made up of over 30 nationalities, the full list of which can be seen in the appendix B. To reach this wide international audience, the survey was posted to several Facebook groups such as the Linguistics group; Leiden University 2022 – International and Erasmus Students group; Leiden Expats and Expats – Foreigners in The Netherlands groups. The survey was further sent out to students of Leiden University, foreign friends and classmates, who were also asked to share the survey with their friends and family. The responders were informed that the questionnaire is anonymous, and that all data collected would be used solely for academic purposes. If at any point the responders felt like not answering any given question, they could choose to skip it and proceed to the next one. This option ensured that the responders would finish filling out the questionnaire, even if not answering all the questions, instead of quitting the questionnaire all together because they did not wish to answer some of the questions.

Bigger portion of the responders (65%) was represented by the female audience (see figure B.1. regarding the gender of the participants in appendix B). From 80 responders, 68 stated that they speak at least two languages, nine responders decided to skip this question and three responders stated that they speak only one language, however these responders' nationality was either British or American. This information is important, as it shows that the responders are

used to encountering different accents other than their own and thus are familiar with the different nuances of other languages, which might make it easier for them to understand the Czech accent.

Two demographic questions were regarding the age range and highest reached education of the responders (see appendix B). These are factors that might have had a great impact on the responders' answers, as the largest number of responders were young adults with a university degree who presumably encounter foreign speakers quite often (through travelling, university, or social media) and thus, they might be familiar with different types of accents. What is more, they themselves are learners of English and are used to communicating with foreign speakers. If what they hear is easy for them to understand, then the speech can be proclaimed intelligible.

The Recordings

The survey included nine isolated words and five 10 - 20 seconds long full sentence audios that were extracted from the full collected recordings. The responders were asked to evaluate the intelligibility of four sentence recordings on a scale from "very intelligible", to "moderately intelligible" to "not at all intelligible". With five of the isolated word recordings, they were asked to write down the word they hear. With the other four isolated words recordings, they were given two options they could choose from based on what word they think they heard. The last sentence recording included two of the isolated words they heard. They were presented with a question asking them if hearing the isolated words in context helped them recognize the words they heard. They were asked not to go back and change their answers regarding the two isolated words they heard in the full context sentence. The final question of the survey was an open question where they could write any comments they had regarding the Czech accent.

2.3. Conclusion

This chapter presented the plan for acquiring the results of this study. The first part of the next chapter deals with the English pronunciation of the Czech speakers. The collected recordings will be evaluated considering Skarnitzl and Rumlová's (2019) propositions and Jenkins' (2000, 2002) LFC. The vowels uttered by Czech speakers of English will be evaluated using the Praat program. This will establish whether Czech learners substitute the English vowels with the Czech ones. Then an evaluation of the Czech pronunciation of the English consonants will follow. The collected recordings of the Czech speakers speaking English will further be evaluated in Praat to observe the amount of glottalization there is in the Czech accented speech. The second part of the chapter focuses not only on pronunciation mistakes of the Czech speakers but also on establishing whether the Czech accent is intelligible to foreign speakers. The results of the questionnaire are presented in this section.

3. Results

3.1. Overview

This chapter presents the findings of the study. English vowel and consonant pronunciations in the Czech speakers' recordings are discussed first, followed by presenting the questionnaire results and dealing with the question of intelligibility. Each section is followed by a summary of the main findings. Praat spectrograms are provided for the purpose of observing glottalization in the Czech accented English speech.

3.2. Findings

Vowel Pronunciation

As Kenworthy (1997) pointed out, speakers are often aware that their pronunciation is not the same as the one of native speakers, and so they try to “imitate” it. Often their efforts are however misplaced as they cannot pinpoint what exactly about their pronunciation is faulty. As Kenworthy further noted, when non-native speakers of English encounter sounds that they do not know, they will either read it how they see it, or they often try and guess the pronunciation. Another way of coping with foreign sounds is using the sounds of one's native tongue instead of the English ones that are unknown to them. Less advanced Czech learners of English use the Czech vocalic inventory when pronouncing English words, which can be observed in table 3.1. below. The table presents formant frequencies of the vowel sounds of randomly selected words from the collected recordings of the Czech speakers. When compared to the average formant frequencies of Czech and English vowels, the tables of which can be seen in the previous chapter (tables 2.1. and 2.2.), the results show that the selected words all include a Czech vowel as a substitution to the English one.

Table 3.1. F1 and F2 frequencies of selected words from the collected recordings.

Word	F1_Hz	F2_Hz	Vowel Pronounced
Republic	694	1948	Czech ε
Republic	787	1453	Czech a
Republic	571	2188	Czech ɪ
Many	773	1581	Czech a
Many	486	2765	Czech ɪ
Lover	769	1514	Czech a
Books	362	866	Czech u
Autumn	775	1051	Czech o:
Country	973	1555	Czech a:
There	685	2083	Czech ε
Hundreds	967	1517	Czech a
Hundreds	537	2248	Czech ɪ
School	398	877	Czech u:
Bad	569	1654	Czech ε
Was	502	1076	Czech o
That	461	1786	Czech ε
Birth	461	2005	Czech ɪ
Stay	480	1869	Czech ε
Born	539	897	Czech o

On	632	895	Czech o
Has	668	1998	Czech ε
Because	447	2296	Czech ɪ
Because	646	1092	Czech o:
Almost	682	1102	Czech o
Funny	840	1417	Czech a
Cat	585	1772	Czech ε
Spring	419	2766	Czech ɪ
Only	636	1191	Czech o
Events	463	2396	Czech ɪ
Events	652	1844	Czech ε
After	1014	1437	Czech a:

To summarize this list, the vowel pronunciation tendencies in English of the Czech speakers seem to be as follows:

1. BrE /æ/ = Cz /ε/
2. BrE /ɔ:/ and /ɒ/ = Cz /o/ and /o:/
3. BrE /ʌ/ and /ɑ:/= Cz /a/ and /a:/
4. BrE /ɪ/ = Cz /ɪ/
5. BrE /e/ = Cz /ε/
6. BrE /ʊ/ and /u:/ = Cz /u/ and /u:/
7. BrE /ɜ:/ = Cz /ɪ/

The reason for pointing out that Czech speakers pronounce the English phoneme /ɪ/ like /ɪ/ is because the Czech pronunciation of this vowel requires slightly different positioning of the tongue than the English one (see figure 1.1. for comparison), and after checking the formant

frequencies in Praat, the values showed that Czech speakers pronounce the Czech /ɪ/ in place of the English one.

Consonants

Another thing non-native speakers of English do is avoiding sounds the pronunciation of which they struggle with (Kenworthy 1997). For Czech speakers, these represent the dental fricatives /θ/ and /ð/ and the labiovelar approximant /w/, as these phonemes do not appear in Czech words. In the collected recordings, Czech speakers pronounced the dental fricatives in several ways:

- The voiced dental fricative /ð/ appeared 88 times, the majority of which were grammatical words such as ‘the’, ‘there’, or ‘then’. In almost each instance, the consonant was pronounced as [d]. There were few exceptions such as the word ‘southern’ where the consonant was pronounced as [t], or the plural word ‘paths’ where the consonant was pronounced as [s].
- There were 17 appearances of the word ‘with’, which will be treated separately, as the pronunciation of this word differed greatly among the Czech speakers. There were only four instances where the voiced dental fricative /ð/ was pronounced correctly. In seven instances the final consonant was pronounced as [t], three times as [f], two times as [d] and one time as [z].
- The voiceless dental fricative /θ/ appeared 17 times. Nine times the unvoiced consonant was pronounced correctly. In words ‘everything’, ‘worth’, ‘third’ and ‘south’, the consonant was pronounced as [s]. In two instances the phoneme was pronounced as [t] followed by an audible [h] sound (‘thing’ and ‘thousand’). In the word ‘three’ the pronunciation was [t] and in ‘birth’ the pronunciation was [d].

When it comes to labiovelar approximant /w/ and the labiodental fricative /v/, Czech speakers seem to alternate between these two. Sometimes they pronounce the /v/ and /w/ sound in the right place and sometimes they switch them. In one instance, the Czech speaker pronounced the /w/ sound as [f]. Instances where Czech speakers pronounced the /w/ phoneme wrongly are pointed out later in this chapter in ‘Questionnaire Findings: Full Sentence Recordings’. Less advanced Czech learners might lack the knowledge of the pronunciation rules of these two phonemes, and the times when they pronounce /w/ correctly may be because they heard the specific word many times and they know how it should sound. Pronouncing one instead of the other however does not affect intelligibility to a great degree as listeners will understand what someone is saying if they utter ‘I wanted to go swimming’.

Glottalization

According to Šimáčková et al. (2014), glottalization is very common in Czech-accented English. Czech speakers will often enunciate every word and every letter, and they insert a glottal stop in between words instead of connecting them. The spectrograms below show a Czech and an English speaker pronouncing the exact same sentence. In figure 3.1. there are clear vertical lines that represent glottal stops. When compared to the figure 3.2. of an English speaker’s sentence, one can observe that the words are being linked to each other instead. More spectrograms depicting glottalization in Czech English speech compared to an English speaker’s speech can be seen in appendix C.

Figure 3.1. A spectrogram of a Czech speaker – focus is on glottal stop insertion.

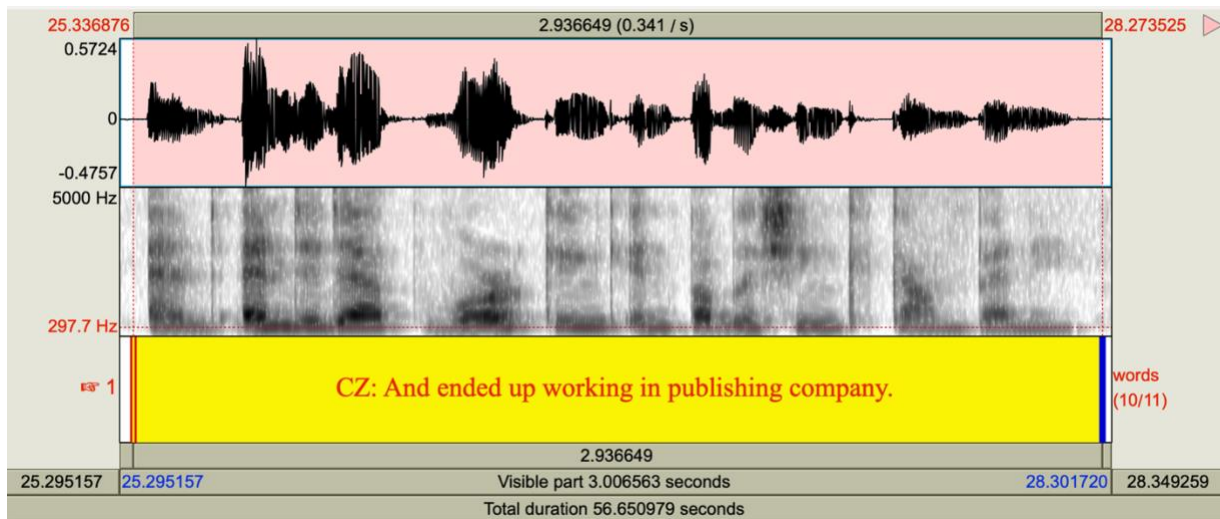
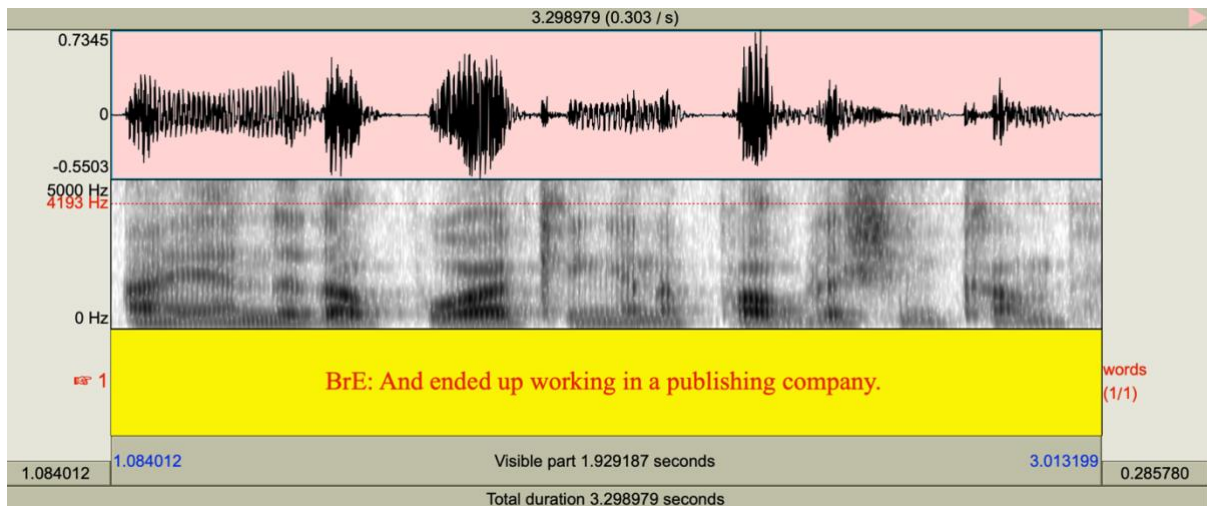


Figure 3.2. A spectrogram of an English speaker – focus is on linking of words.



Questionnaire Findings: Isolated Words

The following tables present those isolated words that were part of the questionnaire. Each table includes the IPA (The International Phonetic Alphabet) transcription of the English word together with the pronunciation given by a Czech speaker.

Table 3.2. English and Czech pronunciation of the word: Accompanied.

Word	English IPA	Czech mispronunciation

Accompanied	[ə'kʌmpənid]	['ɛkompana:ɪt]
-------------	--------------	----------------

From 80 responders, seven decided to skip the question of what word they hear. Only 25 responders ended up recognising the word presented in table 3.2. correctly. The others either said they cannot make out the word, put a question mark as an answer or completely misunderstood the word. Some of the answers of those who misheard the word were: “I come tonight”, “tonight”, “here come tonight” or “a camp night”. This suggests that the pronunciation of this word was way too different from what is expected, rendering this word unintelligible. This was presumably caused by the fact that the speaker here based their pronunciation on the fact that the phoneme /ɪ/ is in isolation pronounced as [aɪ]. The speaker also placed the stress on the first syllable.

Table 3.3. English and Czech pronunciation of the word: Also.

Word	English IPA	Czech mispronunciation
Also	[ˈɔ:lsoʊ]	['also]

From 75 people who answered the question regarding this isolated word (table 3.3.), only five people did not make out the word and other five people skipped the question. The Czech speaker read the word ‘also’ exactly how it is written, using vowels from the Czech vocalic inventory. The answers of those people who misheard this word were “I saw”; “answer”; and “ourselves”. This might be due to the fact that the Czech speaker’s pronunciation of this words’ fist vowel is closer to those of the words that the responders stated they heard.

Table 3.4. English and Czech pronunciation of the word: Married.

Word	English IPA	Czech mispronunciation
Married	['mæriɪd]	['mɛriɪd]

The Czech speaker here substituted the /æ/ sound for the Czech /ɛ/. Except for four responders who skipped this question and eight responders that did not guess the word married (table 3.4.) right, the responders did not have major issue recognizing this word. One responder stated he heard the word ‘merit’, which is relevant because in English, voicing contrast of consonants in a final position is achieved by different length of the preceding vowel, as Skarnitzl and Rumlová (2019) noted, and “the vowel will be significantly shorter before voiceless consonants [...] than before voiced ones [...]”. Since the Czech vowel /ɛ/ is a shorter vowel than the English /æ/ sound, hearing it, the responder might have presumed a voiceless consonant [t] follows.

Table 3.5. English and Czech pronunciation of the word: That.

Word	English IPA	Czech mispronunciation
That	['ðæt]	['dɛd]

As Czech speakers often do, this one (table 3.5.) too substituted the considerably longer vowel /æ/ with the Czech short vowel /ɛ/ and pronounced the dental fricative /ð/ as [d]. When asked about what word they hear, the responders were given two options to choose from: the words ‘that’ and ‘dead’. While 40 responders did choose the word ‘dead’, 38 responders still selected

‘that’ as the answer, even though the Czech speaker’s pronunciation corresponded with the one of the word ‘dead’. Two responders skipped this question.

Table 3.6. English and Czech pronunciation of the word: Thing.

Word	English IPA	Czech mispronunciation
Thing	['θɪŋ]	['thɪŋk]

In this instance (table 3.6.), the Czech speaker pronounced the [th] sound as a [t] followed by an audible [h]. Further, the speaker clearly pronounced the [k] sound as the final consonant, making 78 responders choose the word ‘think’ as the word they heard.

Table 3.7. English and Czech pronunciation of the word: Love.

Word	English IPA	Czech mispronunciation
Love	['lʌv]	['la:f]

The speaker in table 3.7. pronounced the long Czech vowel sound [a:] instead of pronouncing the English short vowel /ʌ/, making 62 responders think they heard the word ‘laugh’.

Table 3.8. English and Czech pronunciation of the word: Interested.

Word	English IPA	Czech mispronunciation
Interested	['ɪntrɪstɪd]	['ɪnterestɪd]

Except for six people, each responder recognized this word correctly. Those six responders all answered that they heard “arrested”. Two of those people were American. It might be that those

other four responders were advanced speakers and same as the American responders were misguided by the rhythmic pattern. The Czech speaker gave each of the syllables the same prominence, pronouncing the Czech vowel /ɛ/ instead of the /ɪ/ phoneme, making it sound similar to ‘arrested’, which has a stress on a second syllable and includes an /ɛ/ sound [əˈrɛstɪd].

Table 3.9. English and Czech pronunciation of the word: Birth.

Word	English IPA	Czech mispronunciation
Birth	[ˈbɜːθ]	[ˈbɪrd]

In table 3.9. it can be seen again that Czech speakers often pronounce a word the way it is written. The Czech speaker substituted the long English vowel /ɜː/ with short Czech vowel /ɪ/ and pronounced the /θ/ sound as [d]. This suggests that the speaker might not be aware of the fact that there are two ways to pronounce the [θ] sound and he pronounced it as the voiced dental fricative /ð/.

When asked about what word they hear, the questionnaire responders were given the options ‘birth’ and ‘bird’. From 80 responders, 21 chose the word ‘birth’ and the other 59 responders chose ‘bird’. The word ‘bird’ should be pronounced as [bɜːd], with the same vowel /ɜː/ that is in the word ‘birth’. The fact that the responder clearly pronounced [d] as the final consonant was presumably the deciding factor in the responders’ answer.

Table 3.10. English and Czech pronunciation of the word: Instead.

Word	English IPA	Czech mispronunciation
Instead	[ɪnˈstɛd]	[ˈɪnstɪd]

The Czech speaker in table 3.10. placed the stress on the primary syllable. Interestingly, the speaker did not pronounce the word how it is written, which Czech speakers often do and which in this case would be closer to what the pronunciation should be. It seems that in this case, the speaker was not sure about the pronunciation of this word and improvised. Still, the responders mostly understood this word, with the exception of only eight people, who could not make it out.

In relation to the last two discussed words (table 3.9. and 3.10.), the survey responders were presented with the context sentence of the two words:

Table 3.11. Context sentence to words in table 3.9. and 3.10.

My wife reported my date of birth in the American format, and instead of the 3rd of December...
[maɪ waɪf rɪpɔ:rtɪd maɪ dɜ:ɪt ov bɜ:ɪd ɪn dɜ: amerɪkən fɔ:mɑ:t, ɪnd ɪnstɪd ov d sri:rd ov dɪsɛmbr...]

When asked whether hearing the context help them recognize the words, 89% of responders answered that it did. Their answer however mainly relates to the question regarding the word ‘birth’ in table 3.9., as the word ‘instead’ in table 3.10. turned out as not being a problematic one in the first place.

Questionnaire Findings: Full Sentence Recordings

In the second part of the questionnaire, the responders listened to selected parts of the collected recordings and were asked to state whether they find the speakers intelligible or not. The full recordings’ transcriptions can be found in appendix A. Below are transcribed parts of the audios used in the survey together with the evaluation given by the questionnaire responders:

Table 3.12. Transcription and IPA of the 1st Czech speaker.

<p>Hi, I am from Czech Republic. I am a cycling lover. I like to ride a bike from spring to autumn. In our beautiful country there are hundreds and hundreds of kilometres of bike paths and many beautiful places worth visiting.</p>
<p>[haɪ, aɪəm frɒm tʃɛk rɛpabli:k. aɪəm ə saɪklɪŋ lʌvə. aɪ laɪk tu raɪd ə baɪk frɒm sprɪŋ tu ɔ:təm. ɪn ɔ:ər bju:tɪfl ka:ntri dɛrə:r haʊndrɪdz ɛn haʊndrɪdz ɒv kɪlɒmɛtrz ɒv baɪk pa:z ɛnd mʌni bju:tɪfl pleɪsɪz wɔ:z vɪzɪtɪŋ.]</p>

The bigger part of the responders (65%) evaluated this speaker's speech (table 3.12.) as **moderately intelligible**. 33% of the responders thought the speaker is very intelligible and 2% marked the speech as not intelligible at all. Apart from the speech having the typical Czech accent aspects which will be discussed later, this person's pronunciation problem, that might have made the responders evaluate this speaker as moderately intelligible, is the speakers' trouble distinguishing between the voiced and unvoiced variant of the [th] sound and pronouncing both as the [s] sound.

Table 3.13. Transcription and IPA of the 2nd Czech speaker.

<p>I am forty years old, and I come from Karlovy Vary – a spa town on the west of Czech Republic. But I have lived in Prague more than twenty years.</p>
<p>[aɪəm fɔ:rtɪ jɪ:rz ɔ:ld, ɛnd aɪ kʌm frɒm kɑ:loʊvɪ vɑ:ri . ə spa taʊn ɒn d vɛst ɒv tʃɛk rɛpabli:k. bʌt aɪ hɛv lɪvd ɪn prɑ:g mɔ:r dɛn twɛntɪ jɪ:rz.]</p>

The speech of this speaker (table 3.12.) was evaluated as **very intelligible** by 75% of the responders. This might be due to the fact that this speaker over-articulated and spoke with a slow, calming voice. 21% responders chose the option moderately intelligible and 4% not

intelligible at all. In this case 4% constitutes three responders out of 80. The speaker did use the /v/ sound instead of the /w/ sound in the word ‘west’.

Table 3.14. Transcription and IPA of the 3rd Czech speaker.

I love to plant flowers, my husband plants vegetables. There is a little pond in our garden with fish and water lilies. But you can swim in it too.
[aɪ lav tu plənt 'flaʊərz, maɪ hazbənd plənts vɛdʒətəblz. dɛr ɪz ə 'lɪtl pɒnd ɪn 'aʊər 'gɑːrdn vɪt fɪʃ ənd 'fɔːtər 'lɪlɪz. bət juː kən swɪm ɪn ɪt tuː.]

The speech of this speaker (table 3.13) was also evaluated as **very intelligible** by 66% of the responders. 33% thought the speaker is moderately intelligible and 1% chose not intelligible at all. This speaker was one of the few from the survey recordings that correctly pronounced the schwa sound in some syllables (the previous two speakers used schwa only in the position of an indefinite article). The speaker pronounced the labiovelar approximant /w/ in the word ‘with’ as [v] and as [f] in the word ‘water’.

Table 3.15. Transcription and IPA of the 4th Czech speaker.

My son Matěj was born on July in 2019 and it was literally the day where my life has changed. I would say it was one of the best days in my life...
[maɪ san matjɛɪ vɔz bɔrn ɒn dʒulaɪ ɪn tuː θaʊzən nɑɪm 'tiːn ɛːnd ɪd vɔz lɪtrəlɪ d dɛɪ wɛɪr maɪ laɪf hɛz tʃɛndʒd. aɪ wʊd sɛɪ ɪt vɔz wʌn ɒv d bɛst dɛɪz ɪn maɪ laɪf...]

This speaker (table 3.14.) was evaluated as **very intelligible** by 75% speakers and as moderately intelligible by 24% speakers. 1% of speakers found the speaker not intelligible. This speaker pronounced the [th] sound the way it is written, with audible [t] sound followed by an [h] sound. The speaker pronounced the schwa correctly in one instance of a reduced

syllable. The speaker also placed the stress correctly in the word ‘nineteen’. The speaker alternates between the pronunciation of [v] and [w] sound incorrectly, this however does not seem to be influencing the intelligibility.

In summary, it can be said that except for a few exceptions, the speakers in the presented recordings:

1. pronounced each syllable with the same prominence. This caused what are supposed to be reduced vowels to be pronounced as full vowels.
2. All speakers except for one exception placed the stress on the first syllable of each word.
3. The speakers substituted English vowel sounds with Czech ones.
4. All speakers pronounced the rhotic /r/ sound in each instance.
5. The speakers in majority did not link but made clear distinct boundaries in between words by inserting a glottal stop.
6. Aspiration of the voiceless stops /p/, /t/ and /k/ was not observed in any instance but contrary to Jenkins’ opinion, it does not seem like it is affecting the intelligibility of the Czech speakers’ speech greatly.
7. The pronunciation of dental fricatives /θ/ and /ð/ as discussed in the first part of this chapter was confirmed in this section.
8. When it comes to the pronunciation of /w/ and /v/, it seems that some less advanced Czech speakers of English alternate between the pronunciation of those phonemes due to lack of knowledge of the pronunciation rules.

Questionnaire Findings: Comments Regarding the Czech Accent

The last question of the survey asked the responders to comment if they have any remarks regarding the Czech accent, the full list of which can be seen in appendix B. Selected below are some of the most relevant answers as given by the responders:

Table 3.16. Transcribed answers as given by the survey responders.

<p>All off the speakers are intelligible to varying degree, in context more than in isolation (only one word at a time).</p>
<p>As an Italian speaker, the fact that the speakers were pronouncing all the syllables made it pretty easy for me to understand the recordings (with some exceptions ofc).</p>
<p>I think it's mostly the different pronunciation of the vowels and the stress that determines whether someone is intelligible or not.</p>
<p>I think it's easier to understand when there is more context. I thought it was quite difficult to understand the meaning of the words that were played in isolation.</p>
<p>Sometimes English words have subtle differences and the voice samples I heard, didn't really show these differences which made it hard to understand. It's definitely easier if you hear the whole sentence. Words alone were harder to understand.</p>
<p>All in all they speak very clear but some words are confusing when it's only the word you hear and not the sentence.</p>
<p>The hardest part of the accent for me are the slight changes in the colours of the vowels.</p>
<p>The intelligibility depends on whether the person has lived abroad or whether they interact a lot with foreigners (e.g. if they live in Prague).</p>
<p>Familiarity with the nuances of Czech itself helps a lot in understanding and recognizing their English accent.</p>
<p>As a person who speaks two languages fluently, and has been at close contact with many foreign speakers I think it is easier for me to understand than for a British person who hasn't had the same opportunities.</p>
<p>The pronunciation is a bit different compared to the anticipated way of pronouncing certain words. Having in mind, though, the origin of the speakers, which explains this specific accent, and taking into account the context, it was quite clear what they were talking about.</p>
<p>No, I work with internationals and Im used to different accents.</p>
<p>Pronunciation of different vowel sounds differ across cultures and can cause difficulty when trying to understand a Czech accent.</p>
<p>I understand better a Czech accent than an English born.</p>
<p>Generally, I understand because of the context but individual words are sometimes harder to understand.</p>
<p>The emphasis is put on wrong parts of particular words, rendering the sentences hard to understand. I could not make out the word in question 10, my answer was more of a guess. For the most part one can understand the sentences but in some cases, it takes a lot of focus, in other, while some words are not articulated correctly one can understand them from the context.</p>

About question 21; the first word I know because of the sentence but the second I still can't understand. I think overall the accent is better to comprehend with context and also if you have heard before.

I work for a large global company and work directly with many people in Europe (including Czech Republic). I have always found it easier to understand people who are speaking English as a second language if I can see them via video or in person. I found that understanding the audio clips of a single word were extremely challenging and listening to the entire sentence gave a bit more context.

The fact that Czech people pronounce every syllable fully helps me understand them more.

Here are the main ideas of the responders' answers in summary:

1. The Czech accent is intelligible if context is provided.
2. Words in isolation are harder to understand due to the vowel and consonant articulation and stress positioning being different from the one that is expected in English.
3. Pronouncing all syllables as full syllables helps with the intelligibility of the speech.
4. Being familiar with the nuances of the Czech language helps with intelligibility.
5. Being familiar with foreign accent makes it easier for one to understand pronunciation that is not typically English.

3.3. Conclusion

Several things were established in this chapter. First, that less advanced Czech learners of English use Czech vowel sounds in place of the English ones. If not sure about the pronunciation of a certain vowel, they either read it how they see it, or they often try and guess the pronunciation. Second, Czech speakers simplify for themselves the pronunciation of those consonants that are foreign to them. Third, the fact that Czech speakers use glottalization in excessive manner makes their speech more understandable to foreign speakers. Fourth, the

Czech accent is intelligible as long as context is provided. These results will be further discussed in more detail in the following, concluding chapter.

4. Conclusion

4.1. Overview

The present study's goal was to find out how intelligible the Czech accent is to a foreign speaker and what are the influencing factors of possible misunderstandings. Summary of the pronunciation issues of the Czech speakers was presented, the main findings of which will further be discussed in this chapter in a deeper manner. This chapter answers the proposed research questions and points out the limitation of this study. Tips for Czech learners of English are presented at the end of this chapter. These will not help with attaining native-like accent but will ensure that one's speech is intelligible enough for them to lead a comfortable conversation.

4.2. Findings

Intelligibility

According to Poesová and Weingartová (2018: 97), having an accent might “activate dormant prejudices or trigger off largely subconscious social and behavioural reactions to non-native manifestations, such as various kinds of biases, negative judgements or discriminatory acts”. While this is sadly still true and there are always people who will have this opinion, people's accents represent their origin and identity. It is something that every person should be proud of. Therefore, no-one should feel the need to get rid of their accent. The only time a speaker's accent constitutes a problem is when it causes the conversation to fail due to a misunderstanding, which indicates that mutual intelligibility has not been reached (Kenworthy, 1997). Intelligibility and thus successful communication should be the ultimate goal one aims to reach.

‘Mutual intelligibility’ presupposes more than one speaker. As Kenworthy (1997: 14) pointed out, “intelligibility has as much to do with the listener as with the speaker”. Being able to understand depends greatly on the familiarity of the listener with other foreign accents. If a person comes into contact with international speakers a lot, it will likely be easier for him to understand said speaker than for people who are not used to hearing other accents. What is more, being familiar with the nuances of a specific language (for example living as a foreigner in the Czech Republic) will also increase the understandability of those speakers to the listener. Ultimately it can be said that being exposed to many different accents preconditions one to understand the English of speakers from all over the world.

This study’s responders were all bilingual or multilingual (except for three speakers who were native English speakers) and overall, they found the Czech accent to be intelligible in situations where context was provided. Big number of the responders stated that words in isolation were harder to understand due to different pronunciation aspects than they are used to in English. While one responder stated that the Czech accent is “very strong”, others stated that the accent is “nice” or that it is easier for them to understand a Czech speaker’s English rather than a native speaker’s one. It might be said that the degree to which foreign speakers understand Czech accented English depends on whether they encountered many different accents and also possibly on how similar is their language to the Czech one.

Jenkins’ LFC

Were the intelligibility of the Czech speakers judged solely by considering Jenkins’ core pronunciation features, the Czech English would presumably pass as intelligible in speech where context is provided. Jenkins allows for the substitution of /θ/ and /ð/ with other consonants, which is one of the main pronunciation issues of Czech speakers. Jenkins in her LFC states that rhotic ‘r’ is preferred in order to support intelligibility, which is something that all speakers did in the collected recordings. While Jenkins included aspiration of the word-

initial voiceless stops /p/, /t/ and /k/ in her LFC, none of the Czech speakers were following this rule. However, from the pronunciation issues of the Czech speakers, this one does not seem to affect the intelligibility of their speech.

What might affect the intelligibility of the Czech speakers is the fact that less advanced Czech learners of English substitute English vowels for Czech vowels and often times, Czech speakers pronounce the word as it is written, or they guess the pronunciation. While the letter-to-sound correspondence is applicable in the Czech language, it does not work in English and the listeners might end up misinterpreting certain words that they hear. What is more, Jenkins in her LFC noted that maintaining short or long vowel length where it is supposed to be is important, as changing it might alter the meaning of the word. This proved to be true as some Czech speakers in the collected recordings violated this rule and the words that they uttered turned out to be unintelligible, such as pronouncing the word *accompanied* as [ˈɛkompana:ɪt], the word *‘that’* as [ˈdɛd], *‘birth’* as [ˈbɪrd] or the word *‘love’* as [ˈlɑ:f]. The fact that Czech speakers reach into the Czech vowel inventory when pronouncing vowels then causes a problem, because there is much bigger variety of vowels in English than in Czech. While English vowels, specifically those in the open mouth region, differ in length and pronunciation, there are only two vowels in that region in Czech, and it is either short [a] or long [a:].

This therefore constitutes an issue, but, as this paper showed, mainly in isolated words. If context is provided, the Czech accented English speech proved to be quite intelligible. This is probably due to the fact that Czech speakers enunciate every sound, which makes them pronounce each syllable with the same prominence, turning reduced vowels into full vowels. This, according to some of the survey responders’ answers, might render the accent easier to understand, because for some foreign speakers, the fact that native English speakers reduce vowels and link words together actually makes the English accent harder to understand, as the words merge together. Jenkins is in favour of addition of sounds rather than deletion, and

pronouncing weak vowel forms as full sounds is, according to her, acceptable and might help with intelligibility.

Further, Czech speakers place the stress at the beginning of each word, and they insert a glottal stop in between words instead of linking them. Jenkins' LFC does not consider this an issue. The fact that Czech speakers do not use linking and instead glottalize makes their speech more intelligible to foreign speakers, however native speakers of English may find this problematic as they are used to the typical English speech melody, and setting boundaries in between words disrupts this smooth rhythm.

As Levis (2018) noted, there were some that criticized Jenkins for not including word stress and intonation in her *Lingua Franca*. According to Levis, it was also proposed that nuclear stress should not be included in LFC as it does not constitute a source of unintelligibility. This study did not encounter any instances of nuclear stress causing misunderstandings. The same cannot be said about word stress. Kenworthy (1997: 18) noted that "often when a native speaker mishears a word, it is because the foreigner has put the stress in the wrong place, not because he or she mispronounced the sounds of the word." Placing the stress on the wrong syllable might cause the listener to hear a different word than the speaker intended. As Kenworthy (1997: 14) noted, "the stress pattern of a word is an important part of its identity" and native speakers rely on it. Native speakers and advanced learners of English will expect a specific word to have a certain stress pattern (Kenworthy, 1997). Not placing the stress on the right syllable might thus confuse them, which proved to be true in this paper. When isolated words were played to the survey responders, placing the stress on a different part of the word than where it should be caused some misunderstandings.

It can thus be said that not everything that is proposed in Jenkins' LFC is clear cut and what may be intelligible for non-native listeners may not work for native listeners (Levis, 2018).

Skarnitzl and Rumlová's expectations

Turning to Skarnitzl and Rumlová's propositions, one can see that the results of this study correlate with their findings in great length. The only aspect that slightly differs is that while their proposition stated that Czech speakers pronounce the voiceless dental fricative /θ/ as [f], [s] or [t] and voiced dental fricative /ð/ as [d] or [z], this study's recordings showed that less advanced Czech speakers pronounce the /θ/ sound as [s], [t] or [t] followed by an audible [h]. There were no instances of speakers pronouncing this consonant as [f], nor were there instances of speakers pronouncing the voiced consonant /ð/ as [z], except for when this sound occurred in the preposition 'with'. This word ('with') was further pronounced with the phoneme [t], [f] and [d]. In one instance, the /ð/ sound in the word 'southern' was pronounced as [t] - [sautɛn], and in the word 'paths' as [s] - [pa:s].

This paper confirmed what Skarnitzl and Rumlová (2019) expected, which is that Czech speakers not only pronounce open-front /æ/ as open-mid /ɛ/, but also that they pronounce the short-open English /ɒ/ as Czech mid /o/ or that they replace open and open-mid back unrounded vowels /ɑ:/ and /ʌ/ vowels with the Czech open central /a/ and /a:/ vowels. While Skarnitzl and Rumlová stated that mispronouncing the /æ/ vowel will affect the intelligibility of Czech accented speech more than the mispronunciation of other open vowels, in this paper, substituting /ʌ/ with the vowel /a:/ for example in the word 'love' did cause confusion on the listeners' side. This paper also showed that the long open-mid central unrounded vowel /ɜ:/ is unfamiliar and thus problematic for Czech speakers. In this paper, the vowel /ɜ:/ in the word 'birth' was pronounced as [ɪ]. It can be proposed that Czechs would pronounce this vowel as [u] in the word 'nurse' or 'turn' and as [o] in 'word' or 'world'. This is caused by the less advanced Czech speakers of English not being familiar with all of English vowels and thus them simplifying the pronunciation by placing Czech vowels in place of English ones together with pronouncing words the way they are written.

4.3. Research Questions

The aim of this thesis was to explore the intelligibility of the Czech accent in English. This section presents the answers to the research questions which consist of a summary of the findings made above.

1. What can we find out about the international intelligibility of the Czech accent?

This paper proved that Czech accented English can be very understandable to the foreign speaker as long as context is provided. Without context, however, the Czech pronunciation of less advanced English learners may be of an issue for it may cause misunderstandings. Native speakers of English and advanced speakers of English may find the Czech way of pronouncing certain words and letters quite hard to understand as they are used to the typical rhythmical pattern of English language, which is influenced by stress positioning and alternating between the stressed and unstressed syllables. On the other hand, foreign speakers that are familiar with the nuances of the Czech language may have an advantage in that they anticipate the Czech pronunciation and thus increase the mutual intelligibility of the speakers.

2. What are some of the main pronunciation mistakes that Czech learners of English language make?

This list presents all pronunciation deviations of Czech accented English from the prescribed English pronunciation. However not all of these affect the intelligibility of the Czech speakers in the same way, and some rather enhance it.

- Placing stress on the first syllable in every word.
- Pronouncing weak vowel forms as full sounds.
- Substituting English vowel sounds with Czech ones.
- Pronouncing rhotic /r/ sound in each instance.
- Over-excessive use of glottal stops instead of linking words together.
- Not aspirating voiceless stops /p/, /t/ and /k/.

- The pronunciation of voiceless dental fricative /θ/ as [s], [t] or [t] followed by an audible [h] sound.
- The pronunciation of voiced dental fricative /ð/ as [d].
- Pronouncing the /ð/ sound in the word ‘with’ as [t], [f], [d] or [z].
- Alternating between the pronunciation of /w/ and /v/ sounds.

4.4. Limitations

The main limitation of this study is the selected number of recordings. The number of recordings collected was influenced by having a limited amount of time to search for participants in the Czech Republic. Further, convincing Czech speakers to record their English speech proved to be challenging, as some opted to decline due to them being self-conscious about their English skills. While the findings of this paper confirmed suggested pronunciation problems of the Czech speakers and the Czech accent proved to be intelligible, the number of people that provided recordings for this research does not reflect the general Czech population’s English accent situation. Higher number of recordings would ensure more precise results.

4.5. Tips for Czech Learners of English

Many Czech learners of English feel self-conscious about their pronunciation. The speakers whose recordings were used for this study were indeed hesitant when asked to be recorded and few of them laughed nervously during recording. Several speakers declined to be recorded due to them being insecure about their English. As Kenworthy (1997) pointed out, nervousness and lack of confidence will only cause a person to make more mistakes while speaking which will also affect intelligibility. Some Czech speakers, including those that provided recordings for this research, try to mimic sounding like native speakers, which as a result also causes more mispronunciations. While this paper showed that Czech English is overall quite

understandable, one might still want to better the clarity of their English speech, whether it is for work, school or for boosting their confidence.

One of the biggest pronunciation problems for Czech speakers constitute stress placement in words and with that connected vowel pronunciation. These following tips represent steps one should take in order to improve their English pronunciation.

Stress Placement

While word stress is something that Jenkins (2000; 2002) did not include in her *Lingua Franca Core* and thus, as this paper showed, it is not crucial for intelligibility, placing the stress always on the first syllable, together with pronouncing all vowels with the same prominence, will cause Czech speakers to sound monotone or ‘flat’. It might also make it hard for some listeners to identify the word the speakers are trying to pronounce. As Kenworthy (1997) noted, “the stress pattern of a word is an important part of its identity” and native speakers rely on it. Native speakers and advanced learners of English will expect a specific word to have a certain stress pattern (Kenworthy, 1997). Not placing the stress on the right syllable might thus confuse them.

The best way to learn where the stress falls in an English word is by memorizing, for there is too many rules and many exceptions, which can turn out to be very challenging for one to learn (Smakman, 2019). In order to improve the clarity of their English pronunciation, one can start by keeping in mind at least these basic rules (Kenworthy 1997: 63). Underlined syllables are stressed:

1. Core vocabulary words have stress on the first syllable (water, people, brother, table, apple, woman, finger).
2. In nouns and adjectives with two syllables the stress lies on the first syllable (escort, produce, permit, rebel, progress, happy, broken, lucky).

3. In verbs and prepositions with two syllables the stress lies on the second syllable (escort, produce, permit, rebel, progress, about, below, above).
4. Prefixes are never stressed in English, and so in two- and three- syllable words with a prefix, the stress usually lies on the second or third syllable (repeat, begin, conclude, understand).
5. Suffixes are never stressed in English. Many suffixes cause the syllable preceding the suffix to be stressed. The suffix -able does not change the stress pattern of the word that it is added to. (quietly, original, impressive, incipient, infectious, diminish, knowledgeable, adaptable, reliable)

It is worth noting that there are exceptions to each of these rules and that is when memorizing comes into place.

Acknowledging the Schwa

Not only do Czech speakers place the stress always on the first syllable, but they also give each syllable the same prominence. Czech speakers will very often pronounce all vowels in both unstressed and stressed English syllables fully. While this might be regarded as over-articulation, this paper proved that full pronunciation of vowels can actually help with clarity and intelligibility of Czech speakers. However, it is still important for Czech learners of English to learn to recognize reduced vowel variants, so as to be able to understand other non-native and native speakers of English (Smakman, 2019).

In English, only those vowels that bear stress are pronounced fully. As already stated in this paper, stressed vowels are louder and longer than the unstressed ones. Unstressed syllables generally morph into the mid-central vowel schwa: /ə/. As Smakman (2019: 38) noted, one can practise the pronunciation of schwa by having relaxed, half open mouth position while pronouncing a vowel. The final sound should resemble the same vowel one produces when making the ‘uuuuuuuuuhm’ sound (Smakman, 2019: 38).

The reduced schwa vowel also typically appears in what are called the ‘function words’. Function words are such words that carry grammatical meaning and thus are not the carriers of the message in the sentence (Smakman, 2019). These are for example articles, prepositions, auxiliaries, or quantifiers. For reference, the following sentences in the left column in table 4.1. each have a schwa in them which is indicated in the text in bold. The right column presents the IPA transcription of the sentences.

Table 4.1. This table presents English sentences indicating schwa in bold together with the IPA transcription.

This has been fun.	[ðɪs həz bi:n fʌn]
I've adopted a cat.	[aɪv ə'dɒptɪd ə kæt]
I'm not from here.	[aɪm nɒt frəm hɪə]
Apples and oranges.	[æplz ənd ɔrɪndʒɪz]
I was having lunch with your sister.	[aɪ wəz hævɪŋ lʌntʃ wɪð jə sɪstə]
Her pregnancy was accompanied by nausea.	[hə prɛgnənsɪ wəz ə'kʌmpənɪd baɪ nə:ziə]
Can you open the door for me?	[kæn ju əʊpən ðə dɔ: fə mi:ʔ]
Let's discuss it tomorrow .	[lets dɪs'kʌs ɪt tə'mɒrəʊ]

English Vowels

As stated in this study, Czechs will often replace English vowels that are unknown to them with those that are available in the Czech vowel inventory. One needs to take an extra step to learn the pronunciation of new vowels that are not present in their own language. Best way to do that is to learn about these vowels and their pronunciation, listen to them and practise. British council for this purpose created a free application called ‘LearnEnglish Sounds Right’ that can be downloaded into everyone’s phone. It is a phonemic chart that includes not only all English vowels, including schwa, but also diphthongs and consonants. This handy application allows

one to click on each phonemic symbol and listen to the correct pronunciation. Each symbol also includes three examples of a word where each sound appears.

Dental Fricatives

There are two pronunciation variants of the English [θ] sound. A ‘lenis θ’ is a voiced variant of the sound while ‘fortis θ’ is an unvoiced one (Smakman, 2019). The lenis [ð] pronunciation of the sound is the more frequent one. It can be found in commonly used **function words** such as: the, that, them, those, this, then (Smakman, 2019: 95). As this paper proved, Czech speakers usually pronounce this sound as [d], which generally does not affect the intelligibility of the speakers. But it may affect the intelligibility if one alternates between the voiced and unvoiced pronunciation. As Smakman (2019) pointed out, other mispronunciations of the lenis sound other than the [d] pronunciation might be disturbing. Those who wish to better this aspect of their pronunciation should keep the following in mind:

- When pronouncing the regular [d] sound, the tongue is touching the alveolar ridge behind the teeth.
- When pronouncing the lenis [ð] sound, the tongue is slightly stuck out touching the back of the teeth. Vocal cords should vibrate while air flows out past the tongue and teeth.
- Fortis [θ] sound is pronounced the same way as lenis [ð] sound but without vocal cord vibration = voiceless. (Smakman, 2019)

The voiceless, fortis variant [θ] does not occur as often, but in contrast to the lenis variant which appears in function words, this unvoiced sound can be found in **content words**, such as: think, south, theatre, path, thousand or thing (Smakman, 2019). This paper showed that while some Czech speakers manage to pronounce this sound, often times they also pronounce it as [s], [t] or in some instances [t] followed by an [h].

V and W phonemes

As the [w] phoneme does not occur in Czech words, it can be a challenge for learners of English to get the hang of this sound. Alternating between these two phonemes usually does not cause confusion, however a native speaker will hear the difference. In comparison to the [th] sound where it might be difficult for a learner to remember which one to pronounce in which word, with [v] and [w] sounds it is simpler - [v] is pronounced in words that include this consonant such as ‘very’, ‘above’, ‘veil’, or ‘love’, while the [w] sound is pronounced in words such as ‘wheel’, ‘reward’, ‘wear’ or ‘while’ (Smakman, 2019: 100 – 105). Here is how to pronounce each phoneme:

- [w] the lips do not close while producing this phoneme, they are rounded – the pronunciation of this sound resembles the pronunciation of the vowel [u:].
- [v] this sound is produced by stream of air passing through the upper teeth and the lower lip touching. (Smakman, 2019)

4.6. Discussion

The interesting aspect of this study is the fact that while writing this thesis, I also learned a great deal. This is because the original idea for writing this paper was to simply point out pronunciation mistakes of Czech speakers and include tips for the learners to sound “less Czech”. This study and Dr. Smakman’s amazing project ‘Pronouncing English Clearly’ made me realize that everyone should embrace their accent and not try to suppress it or be ashamed of it. During the research for this thesis, I quickly learned to correct my view on pronunciation teaching and was keen to learn about the Intelligibility Principle and what it entails.

As this paper establishes, sounding native-like is an outdated goal. Having clear pronunciation, however, is something that everyone can achieve by practicing. One only needs to put the time and effort into it. It is best to self-reflect and read through Jenkins’ *Lingua Franca Core* to see which aspects of English can be improved on to be intelligible to other

speakers. This study shows that even strong accented Czech speakers of English can be proud to say that their speech is considered mostly intelligible (if context is provided), contrary to their own belief. This seems to be due to the enunciating each syllable with the same prominence aspect, the over-articulation and glottalization, which makes the boundaries between words more distinct and thus renders the speech clearer. Those pronunciation problems that were pointed out in this study can be easily corrected if one wishes to be intelligible in all aspects of English speaking. Czech speakers should thus be confident and not be afraid to speak, solely for the reason that their accented speech differs from the native-like.

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Appendix

Appendix A. Transcriptions of recordings of Czech speakers' English.

Speaker 1:

I am forty years old, and I come from Karlovy Vary – a spa town on the west of Czech Republic. But I have lived in Prague more than twenty years. I have two sweet kids: seven years old Karolína and five years old Jonáš. I have always liked books, so I studied librarianship and ended up working in publishing company. I am interested in healthy lifestyle and well-being too. My other hobbies are city gardening, cultural events and just being with my family and friends. What are my plans for the future? I do not think far. I see myself balanced, with happy family, living ordinary but filled life.

Speaker 2:

I was in the mountains last week. It was organised by my school, and I could not decide if to take snowboard or ski for really long time. In the end I took snowboard because I enjoy it more. I love skiing and snowboarding and my another hobby is aerial acrobatics. When I was younger, I was on circus camp and I liked it, so I started doing it. Now I have been doing it for five years and I have been teaching children on circus trainings since the beginning of this school year.

Speaker 3:

I was born in Prague. When I was studying in Prague technical university, I met a boy from the southern Bohemia. I fell in love with him and after finishing our studies, we got married and we built a house in the village near České Budějovice. It was in 1991 and we have been living there since then. We have a garden with a lot of fruit trees and flower beds. I love to plant flowers, my husband plants vegetables. There is a little pond in our garden with fish and water lilies. But you can swim in it too.

Speaker 4:

I went to the Prague Zoo with my husband and our two daughters yesterday. We saw lot of animals, for example elephants, tigers, kangaroos, many kinds of monkeys and others. My older daughter love giraffes and flamingos. She even convinced us to buy soft toy giraffe for her and she cuddles it all day. This Zoo is one of my most favourite places in Prague. We visit

it many times during the year with my family, or with my friends and their kids. You can find many places where kids can play when mummies have a rest. My daughter loves the small pool open during summer, where children can walk through the water and have fun there. I am looking forward to next trip in Prague Zoo, maybe it will be in one week.

Speaker 5:

We have been going to Val-Gardena regularly for several years. We always rent a nice cottage right on the slopes where the Alpine skiing world cup is held regularly. The chalet is for twelve people but there were fifteen of us there this year and it worked. In Val-Gardena there are more than two hundred kilometres of ski slopes, which we do not have a chance to visit all in one week. Covid has affected the numbers of skiers, but services are not limited. Masks are of course mandatory. There is no problem with buying a ski pass, if you have the required green passport. But I had a bit of a problem, because my wife reported my date of birth in the American format, and instead of the 3rd of December, 12th of March was entered into the system. As a result, the system evaluated me as having an invalid green passport. After we figured out what the problem was, everything was great. The only bad thing was that the stay was too short.

Speaker 6:

Hi, I am from Czech Republic. I am a cycling lover. I like to ride a bike from spring to autumn. In our beautiful country there are hundreds and hundreds of kilometres of bike paths and many beautiful places worth visiting. I like to ride my bike among the vineyards in south Moravia, but I also love the hills of the beautiful Šumava region. I also ride a bike as a spinning instructor. I love cycling accompanied by rhythmic music and clients who are excited about movement.

Speaker 7:

My son Matěj was born on July in 2019 and it was literally the day where my life has changed. I would say it was one of the best days in my life, because what happened next I could not imagine. Now it has been about almost three years full of joy, happiness, and of course unpredictable situation, but we love our son with my husband so much. He is so funny, amazing and he is just our best thing. I am also proud of him, because I think his development is going really fast and I am really looking forward what following days bring us.

Speaker 8:

I will tell you about how we went skiing for the first time with my daughter Caroline. On Wednesday we borrowed her a pair of skis and in the evening we tried her to ski a short run around our cottage, and we were surprised she really enjoyed it. On the second day, we went to ski slope for kids, just to make her able to watch other kids skiing, to motivate her somehow. And even the other day, she really enjoyed skiing, although she was not able to turn round she only was able to ski straight. It was really great time for all of us.

Speaker 9:

Hi, I would like to say about my hobby. My biggest hobby are dogs. I like care about dogs, and I think that living with dogs is very interesting, because from dogs to you there is every day coming too much love. And there is one special sport which is with dogs. It is called Canicross, it came from France, and it is that in this sport you are running with dogs. And when you are running, you are connect with a special line, and you are with the dog running in the forest, in the field, in the countryside. And my biggest experience in this sport it was when I was running half marathon in the mountain.

Speaker 10:

I have never been some lover of home animals. I was always upset when some cat or dog or hen from neighbours came in our garden and always I was very upset and very strict on it. But once, three years ago, came in our garden very nice kitty. With a rust brown colour, each eye other than the other, and it was wonderful. Since this time, because my wife gave her some milk, even I told her 'do not worry', because in this case she will stay here and she will never go away. Since this time we have our kitty in our house, she is our darling, our honey, and we are happy because she is fantastic.

Speaker 11:

I can say that I really love all seasons of the year. Because every season of the year has some special charm. So in the winter I love going skiing, for example to Italy, does not matter because everywhere it is really nice to go skiing. In winter I am still looking forward to spring because it is clear that I can restart my favourite hobby and it is really cycling. So I love cycling really really much because I can actually join two things that I really love and it is sports and enjoying countryside, beautiful landscape, and just amazing places in the Czech Republic.

Appendix B. Tables and figures collected from the survey.

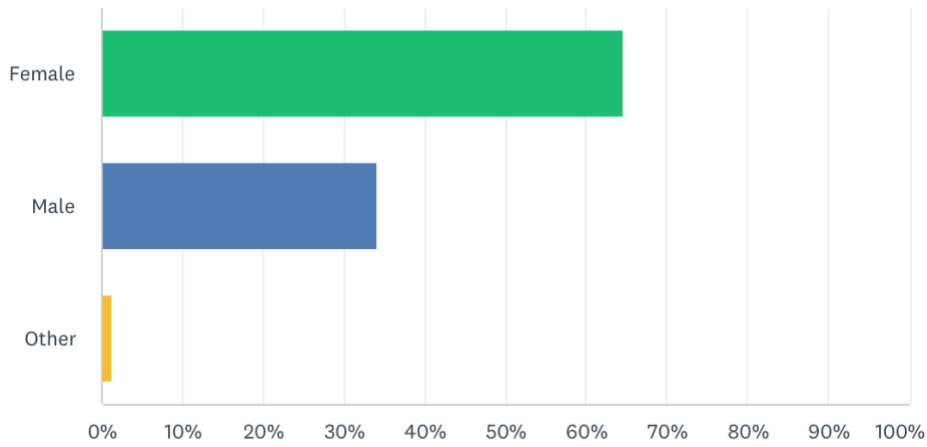


Figure B.1.
A graph representation of the gender of the survey responders.

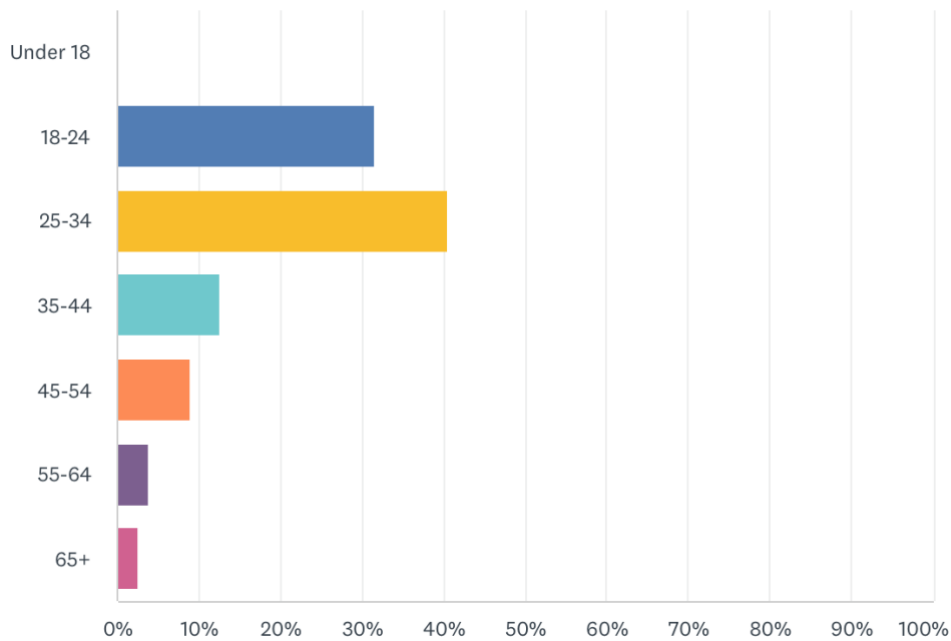


Figure B.2.
Approximate age of the survey responders.

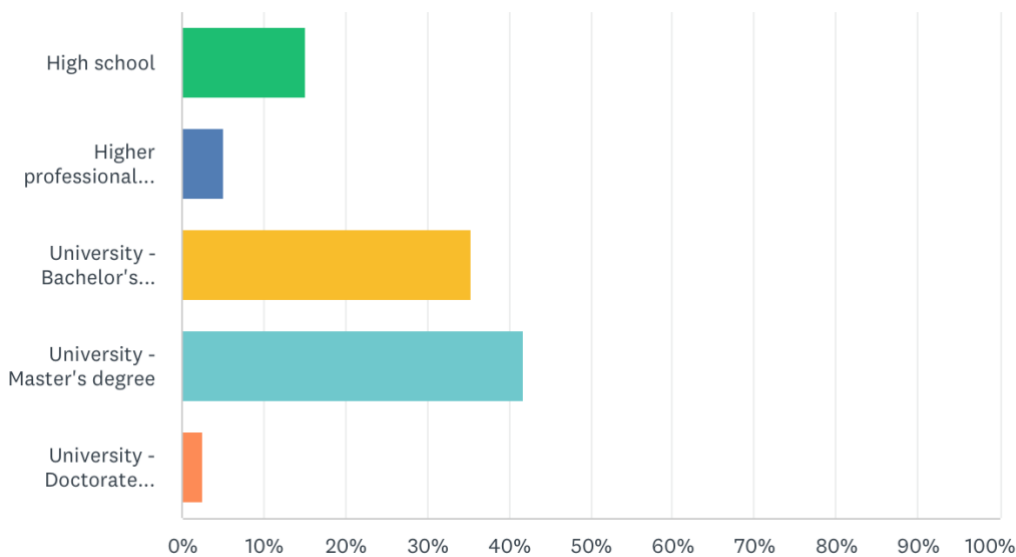


Figure B.3.
Highest attained education of the survey responders.

Table B.1. Overview of the nationalities of the questionnaire responders.

Q3 What is your nationality?

Answered: 69 Skipped: 11

#	RESPONSES	DATE
1	dutch	6/14/2022 4:07 PM
2	Irish	6/14/2022 12:19 AM
3	United States	6/13/2022 10:48 PM
4	Italian	6/13/2022 12:33 PM
5	Austrian	6/13/2022 12:26 PM
6	Turkish	6/13/2022 11:07 AM
7	Iranian	6/13/2022 10:29 AM
8	Singaporean	6/13/2022 9:25 AM
9	romanian	6/13/2022 8:29 AM
10	Dutch	6/13/2022 8:11 AM
11	Polish	6/13/2022 2:28 AM
12	Italian	6/13/2022 1:16 AM
13	German	6/12/2022 11:16 PM
14	Ukraine	6/12/2022 11:10 PM
15	South african	6/12/2022 10:55 PM
16	polish	6/12/2022 10:34 PM
17	Iraqi	6/12/2022 10:11 PM
18	Serbian	6/12/2022 10:09 PM
19	French	6/12/2022 10:00 PM
20	American	6/12/2022 9:38 PM
21	romanian	6/12/2022 9:36 PM
22	Indonesian	6/12/2022 9:35 PM
23	American	6/12/2022 9:33 PM
24	Swiss	6/12/2022 8:38 PM
25	Russian and Irish	6/12/2022 8:29 PM
26	German	6/12/2022 8:11 PM
27	French	6/12/2022 7:57 PM
28	Hungarian	6/12/2022 3:53 PM
29	Dutch	6/12/2022 3:46 PM
30	Dutch	6/12/2022 3:42 PM
31	dutch	6/12/2022 3:41 PM
32	Italian	6/11/2022 9:47 PM
33	French	6/11/2022 9:12 PM

34	Greek	6/11/2022 8:12 PM
35	Danish	6/11/2022 2:04 PM
36	USA	6/11/2022 12:47 PM
37	Dutch	6/11/2022 12:08 PM
38	Dutch	6/11/2022 11:52 AM
39	Italian	6/11/2022 1:17 AM
40	Canada	6/11/2022 12:46 AM
41	Canadian	6/10/2022 7:00 PM
42	British	6/10/2022 5:24 PM
43	Dutch	6/10/2022 5:00 PM
44	Dutch	6/10/2022 4:52 PM
45	Dutch	6/10/2022 4:21 PM
46	Swiss	6/10/2022 4:12 PM
47	Pakistani	6/10/2022 2:34 PM
48	Pakistan	6/10/2022 2:25 PM
49	Norwegian	6/10/2022 2:02 PM
50	Nederland-Jamicaans	6/10/2022 2:01 PM
51	Irish	6/10/2022 1:52 PM
52	Spanish	6/10/2022 1:24 PM
53	Greek	6/10/2022 12:13 PM
54	Dutch	6/10/2022 10:55 AM
55	Dutch	6/10/2022 10:28 AM
56	Mexican	6/10/2022 10:19 AM
57	Dutch	6/10/2022 10:06 AM
58	German	6/10/2022 9:35 AM
59	Dutch	6/10/2022 9:35 AM
60	Dutch	6/10/2022 9:13 AM
61	British	6/10/2022 9:06 AM
62	Dutch	6/10/2022 8:59 AM
63	German	6/10/2022 8:55 AM
64	China	6/10/2022 8:52 AM
65	Swedish	6/10/2022 8:50 AM
66	Maltese	6/10/2022 8:22 AM
67	Dutch	6/10/2022 8:15 AM
68	Ukrainian	6/10/2022 7:59 AM
69	British	6/10/2022 5:23 AM

Table B.2. Responders' answers to the open question regarding their opinion of the Czech accent.

Q22 Do you have any comments regarding the intelligibility of the Czech accent?

Answered: 49 Skipped: 31

#	RESPONSES	DATE
1	you can understand most if they slow down the speech	6/14/2022 4:07 PM
2	I work for a large global company and work directly with many people in Europe (including Czech Republic). I have always found it easier to understand people who are speaking English as a second language if I can see them via video or in person. I found that understanding the audio clips of a single word were extremely challenging and listening to the entire sentence gave a bit more context.	6/13/2022 10:48 PM
3	No	6/13/2022 1:23 PM
4	No	6/13/2022 12:33 PM
5	Regarding question 21, I could say it was somehow intelligible to understand the words in the previous questions. Therefore, my response to the question 21 is neither of the options. It could be "Hearing the whole sentence did not affect intelligibility of the words independently."	6/13/2022 10:29 AM
6	Helps when the speaker doesn't fumble/stutter/stammer in speech	6/13/2022 9:25 AM
7	About question 21; the first word I know because of the sentence but the second I still can't understand. I think overall the accent is better to comprehend with context and also if you have heard before.	6/13/2022 8:11 AM
8	The emphasis is put on wrong parts of particular words, rendering the sentences hard to understand. I could not make out the word in question 10, my answer was more of a guess. For the most part one can understand the sentences but in some cases, it takes a lot of focus, in other, while some words are not articulated correctly one can understand them from the context.	6/13/2022 2:28 AM
9	I lived in Prague the last 4 years, but I don't speak Czech (I was using English)	6/13/2022 1:16 AM
10	Generally, I understand because of the context but individual words are sometimes harder to understand	6/12/2022 11:46 PM
11	Not bad at all	6/12/2022 10:55 PM
12	The fact that Czech people pronounce every syllable fully helps me understand them more	6/12/2022 10:11 PM
13	No	6/12/2022 10:09 PM
14	Like any accent, if you are familiar with which letters sound like what in English with a Czech accent, then you can more easily distinguish between the words. I would have added a question regarding the participants travel history as well as ethnic background.	6/12/2022 9:38 PM
15	nop	6/12/2022 9:36 PM
16	No	6/12/2022 9:35 PM
17	It is a nice accent	6/12/2022 9:33 PM
18	For Question 21, I understood what the words were even without hearing the complete sentence	6/12/2022 8:30 PM
19	I understand better a Czech accent than an english born	6/12/2022 7:57 PM
20	No	6/12/2022 7:16 PM
21	Nothing	6/11/2022 9:47 PM
22	It depends on the natural voice of the person	6/11/2022 9:12 PM

23	The pronunciation is a bit different compared to the anticipated way of pronouncing certain words. Having in mind, though, the origin of the speakers, which explains this specific accent, and taking into account the context, it was quite clear what they were talking about.	6/11/2022 8:12 PM
24	similar to english dialects where the difference between "D" and "TH" is sometimes difficult to understand.	6/11/2022 12:47 PM
25	Along with context it is definitely much easier to make out which word is being used.	6/11/2022 12:08 PM
26	As an Italian speaker, the fact that the speakers were pronouncing all the syllables made it pretty easy for me to understand the recordings (with some exceptions ofc)	6/11/2022 1:17 AM
27	Pronunciation of different vowel sounds differ across cultures and can cause difficulty when trying to understand a Czech accent.	6/10/2022 9:06 PM
28	Women seem to sound more intelligible than men in English	6/10/2022 7:00 PM
29	As a person who speaks two languages fluently, and has been at close contact with many foreign speakers I think it is easier for me to understand than for a British person who hasn't had the same opportunities	6/10/2022 5:24 PM
30	None	6/10/2022 5:00 PM
31	I think I could understand most of the recordings due to the fact that I understand English and work in the language with people who have different English accents as well. Therefore, I may have an edge over others who don't interact with the English language as much as I do.	6/10/2022 3:28 PM
32	Familiarity with the nuances of Czech itself helps a lot in understanding and recognizing their English accent	6/10/2022 2:25 PM
33	Its funny	6/10/2022 2:01 PM
34	The intelligibility depends on whether the person has lived abroad or whether they interact a lot with foreigners (e.g. if they live in Prague).	6/10/2022 1:52 PM
35	I think in some cases the quality of the sound (or the device I'm using) could be having an impact on me understanding the word or not	6/10/2022 1:24 PM
36	It's very difficult if it's just a word but in a sentence I can mostly understand what they are talking about	6/10/2022 12:13 PM
37	The hardest part of the accent for me are the slight changes in the colours of the vowels.	6/10/2022 10:55 AM
38	Interesting survey	6/10/2022 10:49 AM
39	All in all they speak very clear but some words are confusing when it's only the word you hear and not the sentence	6/10/2022 10:28 AM
40	Very very strong	6/10/2022 10:19 AM
41	Sometimes English words have subtle differences and the voice samples I heard, didn't really show these differences which made it hard to understand. It's definitely easier if you hear the whole sentence. Words alone were harder to understand	6/10/2022 9:35 AM
42	I think it's easier to understand when there is more context. I thought it was quite difficult to understand the meaning of the words that were played in isolation	6/10/2022 9:35 AM
43	I think it's mostly the different pronunciation of the vowels and the stress that determines whether someone is intelligible or not	6/10/2022 9:13 AM
44	Perhaps spending more time with Czech people speaking English helps understand better their accent.	6/10/2022 9:06 AM
45	No, but the research. Understanding single words is in general quite difficult	6/10/2022 8:55 AM
46	Probably the speed will also impacts the intelligibility	6/10/2022 8:52 AM
47	All off the speakers are intelligible to varying degree, in context more than in isolation (only one word at a time)	6/10/2022 8:50 AM
48	No, I work with internationals and Im used to different accents.	6/10/2022 8:22 AM

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Research Paper Survey - Exploring the Intelligibility of the Czech Accent

SurveyMonkey

49	No, think the accent is quite understandable.	6/10/2022 8:15 AM
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Appendix C. Praat Figures.

Figure C.1. A spectrogram of a Czech speaker – focus is on glottal stop insertion.

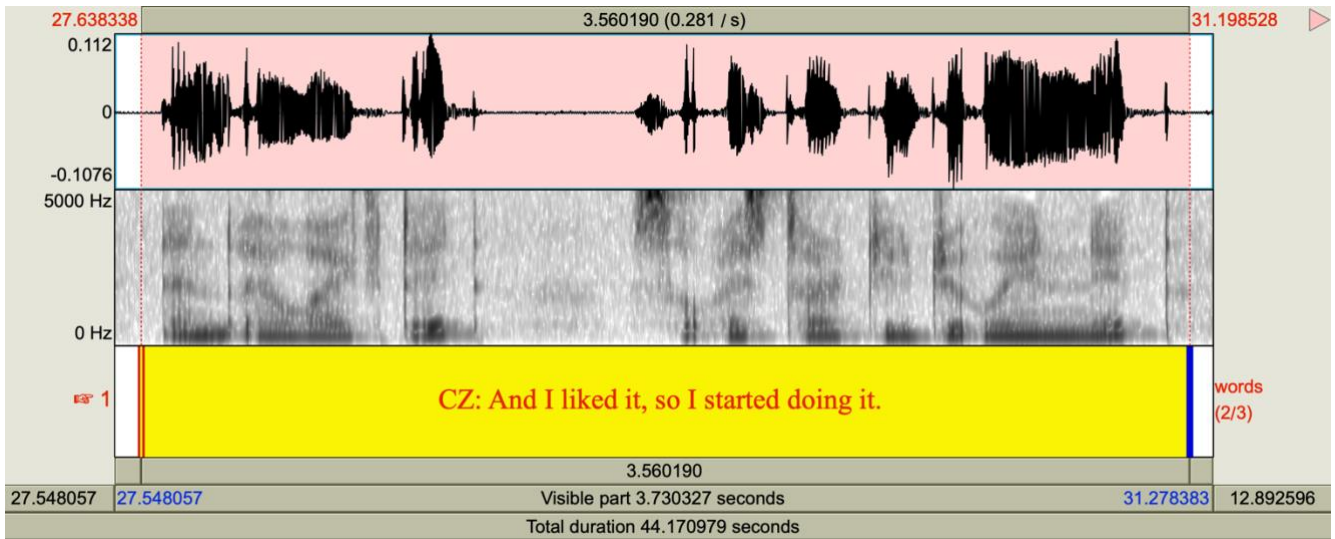


Figure C.2. A spectrogram of an English speaker – focus is on linking of words.

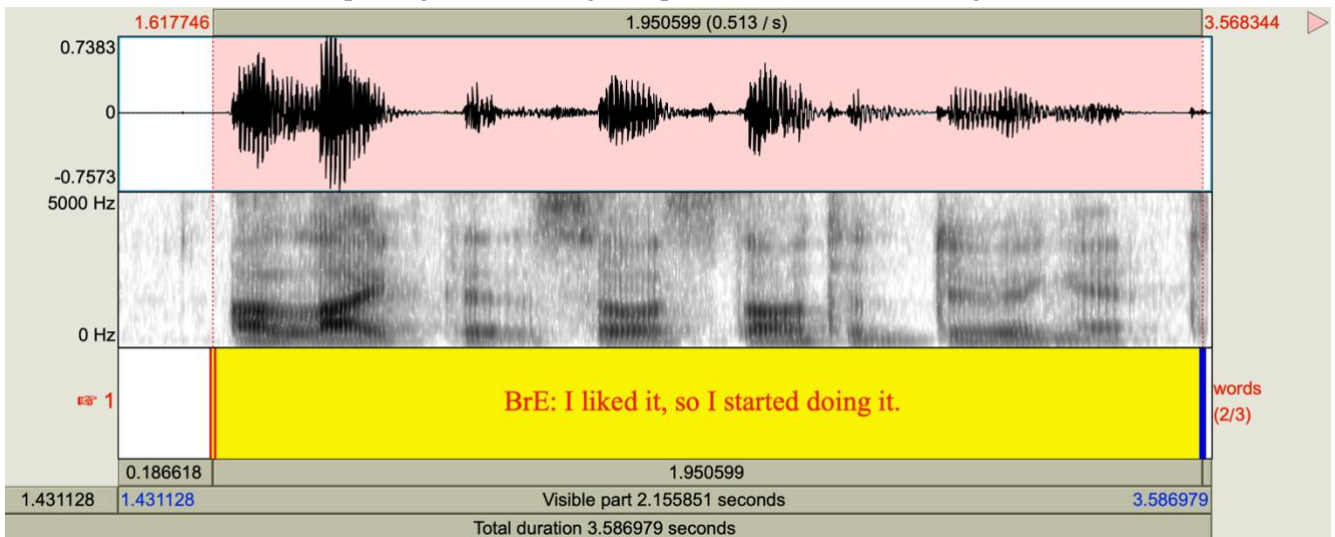


Figure C.3. A spectrogram of a Czech speaker – focus is on glottal stop insertion.

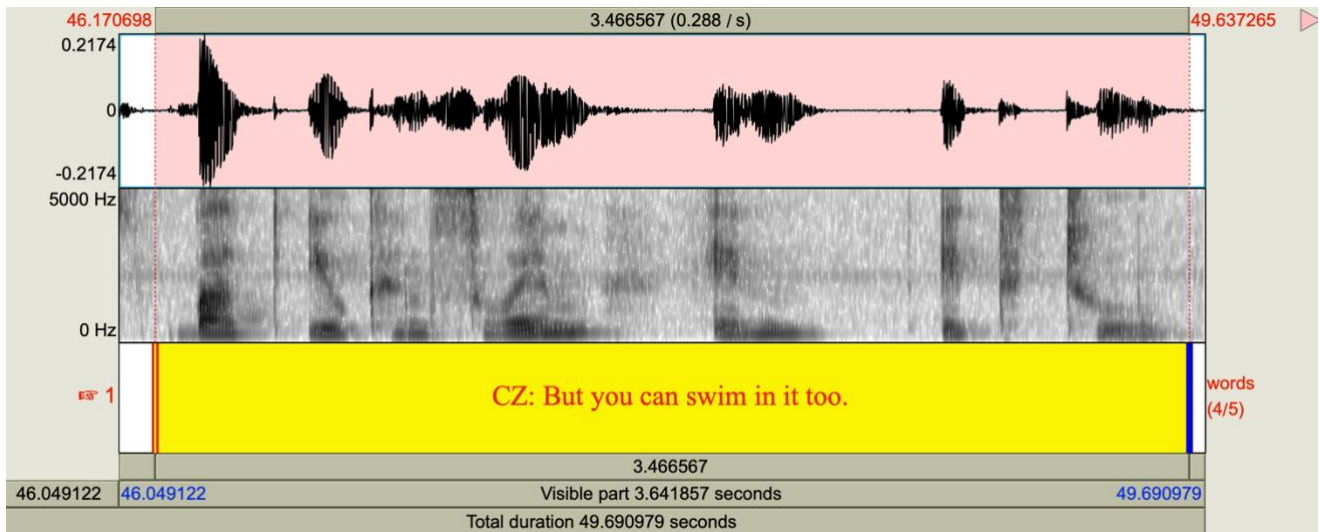


Figure C.4. A spectrogram of an English speaker – focus is on linking of words.

