

Masaryk University
Faculty of Arts

**Department of English
and American Studies**
English Linguistics

Mgr. Bc. Magda Sučková

**Phonetic and Lexical Features of First
Language Attrition: Research into the
Speech of Anglophone Expatriates in the
Czech Republic**

Doctoral Dissertation

Supervisor: prof. PhDr. Ludmila Urbanová, CSc.

Consultants: PhDr. Kateřina Tomková, Ph.D.
prof. Monika Schmid, Ph.D.
doc. PhDr. Mojmír Dočekal, Ph.D.

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*I declare that I have worked on this thesis independently,
using only the primary and secondary sources listed in the bibliography.*

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Author's signature

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1 Introduction

What happens to someone's first language when they become an immigrant? And what happens if the first language is English, the world's language number one? Does it change? And how? And how does it interact with the new home country language which is far less wide-spread? Which changes are the immigrants conscious of and which are more covert? What are some of the factors that influence the degree of these changes? Are there any changes that are deliberate? And how does all of this *feel*? These are the broad questions that sparked my interest in the fields of language attrition, crosslinguistic influence, and language maintenance, and to which I seek to provide at least partial answers in the present dissertation focusing on first language attrition in the accent and the mental lexicon of native speakers of English (the British and Americans) residing in the Czech Republic.

In this introductory chapter I discuss why first language (L1) attrition research presents such an important and fascinating branch of linguistics, briefly outline its history, and introduce the core concepts and terminology. The following chapter provides an overview of theories relevant for the present research, including Activation Threshold Hypothesis, Communication Accommodation Theory, and Speech Learning Model. Chapter 3 then discusses the present status of the English language in the world and reviews L1 attrition studies featuring native speakers of English as participants. Chapter 4 details the research questions, the sample of participants, and the data collection procedure. Chapter 5 zooms in on first language (L1) attrition on the level of individual

phonemes, namely word-initial plosives, dental fricatives, and word-final voiced consonants. Chapter 6 then zooms out on the overall accent of the participants, analyzing and discussing both quantitative and qualitative data. The following chapter (Chapter 7) addresses L1 attrition in terms of mental lexicon accessibility and restructuring, including a section on code-switching. In Chapter 8 I discuss factors affecting the degree of L1 attrition in the sample of participants. The final chapter provides an overview of the results, the overall discussion, and the conclusion.

It should be noted here that due to ethical and privacy concerns, the audio recordings of the research participants cannot be made publicly available. However, for the purposes of inspection by the reviewers and researchers in the field, the audio materials that support the findings of this dissertation can be obtained from the author on request.

1.1 Why research L1 attrition?

While not many outside of the field of sociolinguistics or psycholinguistics may be familiar with the term L1 attrition, almost everyone, when asked, can relate an anecdote or two about a family member or a friend returning from abroad and not being able to remember L1 words or speaking the L1 with an unusual accent.¹ Others may mention

¹ Inspiration by these anecdotes is echoed in the titles of works from the field, including: *I understand it well, but I cannot say it proper back: language use among older Dutch migrants in New Zealand* (Crezee, 2008), *When your native language sounds foreign: A phonetic investigation into first language attrition* (de Leeuw, 2008), *Sometimes I feel as if there's a big hole in my head where English used to be!* (Dostert, 2004), *What's that in English? Language attrition in the English of Americans living in Finland* (Brown, 1994), and *'I feel clumsy speaking Russian': L2 influence on L1 in narratives of Russian L2 users of English* (Pavlenko, 2003).

celebrities who, after years and years of travel and life abroad, do not sound perfectly native-like anymore when they appear in media and are made fun of, or, even worse, shamed for “forgetting their mother tongue”.² The fact that first language attrition is a common experience can be further illustrated by just a brief Internet search for key words “losing mother tongue”, which gives hundreds of hits, including newspaper articles, blogs, and websites dedicated to this topic.³ Browsing through these sources reveals another feature of L1 attrition: it often is a worrying experience. As “mother tongue” carries deep emotional connotations and presents an extremely important part of one’s personal identity, it is no surprise that the impression that one is losing it becomes a source of anxiety. In fact, it was this anxiety and concern about one’s first language that motivated some of the research in the field (e.g. Köfer, 1991). An extreme case of anxiety caused by L1 attrition was reported by Serra et al. (2015): a young Italian woman developed selective mutism after having attended a German-language school. Her frequent exposure to the German language resulted in lexical retrieval difficulties and a partial replacement of her L1 Italian word order by the L2 German word order, which then led to anxiety and fear, and, ultimately, the inability to produce speech. Providing accurate, evidence-based information about L1 attrition may help ease the worries and suggest effective language maintenance strategies and interventions.⁴

² Sportspeople in general and tennis players in particular seem to be under the closest observation: Steffi Graf (who, in fact, is the subject of the longitudinal case study by de Leeuw, 2019), Martina Navrátilová, and Ivan Lendl are just a few of the most well-known cases.

³ Cf. also Schmid’s website languageattrition.org (n.d.b), which provides a list of such stories.

⁴ A great example of this practice is the article by Schmid (2018) on how to prepare for a job interview if one is returning to the home country after a prolonged stay abroad.

Next, L1 attrition often presents a serious concern for parents when a family relocates abroad. Will the children forget their mother tongue due to the omnipresence of the majority language in the environment? How to best raise the children bilingually? Could one language harm the other or present a hurdle for a healthy psychological development? And will the children acquire the full version of the parents' L1 if the parents have started experiencing attrition? In the EU, a great emphasis has been placed on language education; however, as Schmid (2004) pointed out, "the prevailing opinion in many European countries seems to be that knowledge of the heritage language is something that is unnecessary at best and detrimental to integration into the dominant society at worst" (p. 355). As a result, far fewer resources have been allocated to language preservation and transmission programs, overtly encouraging language loss among the immigrant groups (Levy, 1982). In other words, hardly anybody would deny the advantages of being proficient in more languages — unless it is a language spoken by underprivileged minority groups (English and other elite languages arguably present an exception), which means a great loss of linguistic richness and potential. The aim of the researchers in the field of first language attrition thus should not only be careful observation, description and explanation of the phenomenon in question, but also dissemination of the findings among all stakeholders, including — apart from the individuals and communities concerned — also policy makers, educational institutions and NGOs. In addition to providing accurate information and evidence-based conclusion, the scholars in this field may be instrumental in creating and promoting language maintenance programs based on empirical findings.

Recently, L1 attrition scholars have made an important contribution to the debate about using language analysis for determining the region of origin in asylum seeker cases. The existing body of L1 attrition and bilingualism studies provides scientific evidence that the assumption behind this practice, i.e. that the way a person speaks and sounds can be linked to and should overlap with their region of origin, is seriously flawed. Further, there is evidence suggesting that traumatizing experiences contributes to the degree of L1 attrition (Schmid & Patrick, 2015; Schmid, Campbell as cited in Mohdin, 2015).

Finally, the theoretical importance of research into L2 phenomena such as cross-linguistic influence is illustrated by the following quote:

If a theory of language ignores L2 phenomena, then it is based on data that exclude a very significant portion of linguistic phenomena, since perhaps more than half the world's population uses a second language in some meaningful capacity. Linguistic theory needs to be able to withstand the test of L2 phenomena. (Major, 1992, p. 191)

In other words, if “[m]onolingual native speakers are far from typical of human beings and are increasingly hard to find in the world” (Cook, 2003, p. 4) and “[t]he L2 user's knowledge of their first language is in some respects not the same as that of a monolingual” (Cook, 2002, p. 6), bilingual phenomena, including L1 attrition, should be on the forefront of linguistic research.

And lastly, why study first language attrition in the population of Anglophone expatriates? This particular immigrant population differs from others in several respects, which are potentially preventive of L1 attrition (a high amount of L1 use, a low amount of

L2 use, and a relatively low L2 proficiency). English is a prestigious language and Czech city dwellers typically have some knowledge of it; therefore, the pressure and need for the Anglophone expatriates to linguistically (and otherwise) assimilate is not as pronounced as with other immigrant groups. In fact, the opposite may often be the case in the Czech context, i.e. Czechs, eager to practice the hard-learned L2, encourage the expatriates to communicate with them in English. Consequently, the L1 use rate is very high within this immigrant group (and can remain at 100% in the “expat bubble” in the capital), and, as a result, this population may to a certain degree be immune to L1 attrition brought about by acquisition of an L2. However, with this population there is a unique opportunity to study the impact of a long-term exposure to the L2 learners’ variety of English (in this context it is the English of the Czech learners, or Czenglish). The Anglophone expatriates experience a constant stream of “Czenglish” input, ranging in quality from heavily-accented agrammatical speech of beginners to the near-native-like of advanced users. Further, the speakers of American English may experience yet another influence on their L1, namely that of British English, as this variety is still given preference in the Czech education system. And finally, for many Anglophone expatriates their L1 presents the main source of income⁵ and thus they may benefit greatly from findings concerning L1 attrition in this specific context.

⁵ This is also one of the reasons why the recordings of the expatriates and their personal data are not published as a part of the present dissertation.

1.2 A brief history of L1 attrition research

The research into the phenomenon of first language attrition (or reverse crosslinguistic influence) has only been systematically undertaken since the 1980s (Köpke & Schmid, 2004). Before then, first language (in)stability in an individual speaker in a language contact situation was largely ignored by linguistic scholars, who busied themselves tracking diachronic changes, mapping dialect spread, and searching for universal grammar.

However, as early as in 1911 the prominent Czech linguist and co-founder of the Prague School of Linguistics Vilém Mathesius wrote of “potentiality of language phenomena” (or what some scholars may now call speech plasticity, e.g. de Leeuw, 2019) discussing commonplace slight phonetic nuances (not induced by a language contact situation) in an individual speaker’s use of their mother tongue (Mathesius 1911/1964). The same scholar later noted that “Czechs living in Slovakia seem to be more prone to š (/ʃ/) pronunciation in foreign-origin words due to the influence of the Slovak language” (1935, p. 102). Yet, even though the Prague Circle promoted contrastive method of analysis with the emphasis on comparison of genetically unrelated languages and held that it was linguistic hurdles, language errors, and language pathologies that helped reveal the structure of the given language the most (e.g. Mathesius, 1929/1982), they never undertook the study of non-pathological first language loss, despite the fact that the opportunity readily presented itself since many members of the Prague Linguistic Circle were immigrants. And yet, Roman Jakobson, another distinguished member of the Prague Linguistic Circle, contributed to the field of first language attrition with the so-called

regression hypothesis (1941/1968), the basic tenet of which is that the progression of language loss mirrors the process of language acquisition. The hypothesis was formulated with respect to pathological language loss and has been (often implicitly) tested as such (Keijzer, 2010). Only relatively recently it has been researched more extensively in the field of non-pathological language loss in the work of Merel Keijzer (e.g. 2007, 2010)

In 1953, Weinreich in his benchmark work *Languages in Contact* provided now a classic definition of linguistic interference as “[t]hose instances of deviation from the norms of *either language* which occur in the speech of bilinguals as a result of their familiarity with more than one language” (p. 1; emphasis mine). However, what followed in the next couple of decades was intensive research into L1 → L2 interference in individuals and into language changes on the societal level leading which led to creolization or language death (Cook, 2003; Schmid, 2002), with only few individuals noticing that the interference is hypothesized to go in *both* ways (Cook, 2003). According to Cook (ibid.), the reason for this neglect may be the fact that L2 → L1 interference is much subtler, only becoming blatant in (rare) cases of severe attrition. Another factor contributing to the lack of scholarly interest in this phenomenon was the belief in the native speaker standard, i.e. treating the language as used by native speakers unquestioningly as the ultimate yardstick for correctness and as L2 learners’ target (ibid.).

It was only in 1980 at the University of Pennsylvania that the first conference on first and second language skills loss was held, followed by the publication of the first edited volume fully dedicated to this topic two years later: *The Loss of Language Skills* by Lambert and Freed. The book set the agenda, the terminology, the methodology and

theoretical perspectives (Köpke & Schmid, 2004). Of particular importance in this volume, as pointed out by Köpke and Schmid (ibid.), is the paper by Andersen which provided systematic guidelines, or a “blueprint”, to formulating hypotheses and conducting empirical enquiry into the L1 attrition. These guidelines emphasize the need for a cross-disciplinary perspective, baseline comparison, distinguishing between attrition and incomplete acquisition, and taking into account the possible compensatory strategies of the attriters (Andersen, 1982). In 1991, a second major publication in the field came out, a volume titled *First Language Attrition* edited by Seliger and Vago, bringing together papers investigating a range of linguistic areas in a range of languages. However, it did not focus solely on non-pathological L1 attrition on the level of individual speaker (as the term is understood and employed nowadays), but covered also aphasia, language shift and language death (Köpke & Schmid, 2004).

In 2002 Schmid published her meticulous treatise of L1 attrition among German Jews living in Anglophone countries, which highlighted the role of attitudes towards the first language in the process of L1 attrition. Schmid has since then worked tirelessly to interconnect the researchers in the field of L1 attrition, co-editing two volumes of papers (Schmid, Köpke, Keijzer, & Weilemar, 2004; Köpke, Schmid, Keijzer, & Dostert, 2007) which cover various theoretical perspectives and methodological approaches. In 2010s, several large-scale research projects were launched and the field has seen an increased interest in the relationship between L1 attrition and what has been termed heritage languages, or the degree to which the potentially attrited first language of immigrant parents is passed on to and mirrored in their children’s language.

To date, several major conferences dedicated to L1 attrition have been held along with a number of workshops and panels in conferences dedicated to bilingualism. That the field of L1 attrition is now firmly established within linguistics is further evidenced by the publication of a (predominantly) methodological treatise *Language Attrition* (Schmid, 2011), on which this dissertation draws heavily, and very recently of the first handbook (*The Oxford Handbook of Language Attrition*, Schmid & Köpke, 2019).

In the context of Czech linguistics, apart from a couple of isolated diploma theses (including Sučková, 2012), not much research has been conducted in the field of L1 attrition. In general, linguistic deviations from the expected norm have been investigated under the influential Language Management Theory (LMT, e.g. Nekvapil, 2009), which is primarily concerned with an individual's or institutional *reactions* to linguistic deviations rather than the patterns of deviations per se, their prevalence, and the factors contributing to their development. Apart from the notable exception of Ngo's 2016 qualitative investigation of language attrition and maintenance within the Czech Vietnamese community, there does not seem to be much research on L1 attrition within the LMT framework. As regards the latter direction of research (i.e. crosslinguistic influence patterns, prevalence, and causes), I know of only 1 other larger scale Czech project, namely Kříž's relatively recently launched investigation into L1 attrition of Slovaks living in the Czech Republic (Kříž, 2016).

In conclusion, L1 attrition research is now a firmly established discipline, drawing on and contributing to the fields of psycholinguistics, sociolinguistics, and,

perhaps to a lesser degree thus far, neurolinguistics. In the words of Barbara Köpke, it is a discipline “at the crossroads of brain, mind, and society” (2007, p. 9).

1.3 Terminology

Thus far, I have used the terminology regarding changes in the L1 of a bilingual person somewhat freely. In this chapter I review the key terminology (including aphasia, shift, maintenance, heritage language, attrition, loss, crosslinguistic influence and interference) used within the field and discuss their different connotations and implications.

1.3.1 Aphasia

According to Benson & Ardila (1996), there is little disagreement on what **aphasia** is: it is “the loss or impairment of language function caused by *brain damage*” (p. 3, emphasis mine). The term dysphasia may be used to denote partial impairment, while the term aphasia may be reserved for the complete loss of a given language skill or item. The causes of this pathological condition include (among others) stroke, brain injury, tumor, and degenerative disease (Norman, 2016). There are different types of aphasia (see e.g. Basso, 2003; Benson & Ardila, 1996, for an overview) based on the brain areas damaged and language skills affected. Certain proportion of patients see complete or partial recovery of their language abilities (Lazar & Antonello, 2008; Ferro, Mariano, & Madureira, 1999), including L2s in polyglots (Oblér & Mahecha, 1991).

First language attrition, in contrast, is *not* caused by brain pathology and appears to be largely performance related (Schmid, 2011). However, researchers in the field of L1

attrition sometimes draw on both the theoretical and methodological insights of aphasiology (e.g. Keijzer, 2007, 2010; Köpke, 2007).

1.3.2 First language attrition and loss

The term **language attrition** is defined as “the total or partial forgetting of a language by a healthy speaker” (Schmid, 2011, p. 3), or “changes (usually a decline) in an individual's abilities in a language, induced by decreased use of and input in this language” (Bergmann, Nota, Sprenger, & Schmid, 2016, p. 72). As is implied by the two definitions, language attrition may concern any language one has acquired over one's lifetime, both the first (L1) language(s) and subsequent or foreign languages. The term *does not* refer to gradual fall of a language into disuse by the speech community; rather, it concerns bilingual development of an individual speaker.

Schmid and Köpke (2009, 2017) stress that **L1 attrition** in fact begins from the very onset of L2 acquisition, regardless of the acquisition circumstances, rendering it a universal phenomenon concerning all students of foreign languages. Other scholars (e.g. Cook, 2003) tend to view L1 attrition as one of the several possible outcomes of acquiring and using an L2. Others still may regard it as an extreme case of bilingual development in emigration context (Costa & Sebastián-Gallés, Dussias & Sagarra, as cited in Schmid & Köpke, 2017). Undeniably, it is in this context that first language attrition research is typically conducted, i.e. investigating L1 changes in postpuberty migrants, who experience lower L1 and increased L2 exposure and output (Cook, 2003; Schmid & Köpke, 2009), with a tendency toward L1 deterioration (Isurin, 2011).

Schmid (2011, p. 12) also describes language attrition as a linguistic *circumstance*, rather than a linguistic *phenomenon*, hinting at the fact that the linguistic performance of “attriters” varies considerably depending on the context, and that it is next to impossible to discern whether the changes to their language skills are permanent (never to be regained) or only temporary. For this reason, Schmid (ibid.) further characterizes an attriter as “someone for whom the language of the environment is different from the language she or he grew up with.”

With the term **loss** one has to be more careful. In the past, it used to be employed as a synonym to or interchangeably with the term *attrition* as defined above (e.g. Fase, Jaspaert, & Kroon, 1992; de Bot, Gommans, & Rossing, 1991). However, it is now considered to be somewhat unspecific, as it has been also used to refer to language shift, language death within communities, and aphasia (Schmid, 2011). Further, while “attrition” implies gradual, and sometimes almost imperceptible, disintegration, the term “loss” would seem to refer to a sudden, discreet, all-or-nothing event (Schmid, 2011), which is certainly not the case in non-pathological contexts. On the other hand, to Köfer (1991) the word loss seems to add another, a deeply meaningful and personal layer to otherwise purely technical terminology: that of emotions inseparably tied to one’s mother tongue.

Nevertheless, the term **attrition** is not unproblematic either. It carries rather negative connotations, and, as Cook (2003) pointed out, while there certainly are negative L2 → L1 effects, there also exist positive effects, and effects that cannot really be labeled as either good or bad. Further, the term attrition also seems to imply permanent deterioration, a disappearance of language elements from one’s mind, which may arguably not be

the case. However, Schmid and Köpke (2017) argue that the benefits of utilizing the term *language attrition*, namely the research tradition and the cohesion it provides to the field, outweigh the drawbacks. After much consideration, I decided to adopt this position and utilize the term *L1 attrition* throughout this dissertation. The alternatives and closely related terms, the overview of which is provided below, include *multicompetence*; *cross-linguistic influence*, *interference* and *transfer*; and *language maintenance*.

1.3.3 Language shift and heritage language speakers, language maintenance

In sociolinguistics, the term **language shift** refers to a situation in which one language gradually replaces the other within a given community (typically a majority language replaces a minority language). However, it may also refer to a situation in which L1 attriters pass on their modified L1 to their children (de Bot & Weltens, 1991), who are then referred to as **heritage language** speakers, i.e. early bilinguals who acquired (possibly incompletely) a minority language as their L1 but later become strongly dominant in the majority language (Benmamoun, Montrul, & Polinsky, 2013).

Language maintenance, on the other hand, refers to “both retention of use and proficiency” of a given minority language, as opposed to the decline in use, the language shift, and the L1 attrition (Fase, Jaspaert, & Kroon, 1992, p. 4). Language maintenance also describes the investment of a certain amount of effort and resources on the part of the community or individuals into preserving the minority language (Isurin, 2011). The activities aiming at language maintenance may range from an individual’s conscious decision to study their first language and increase the amount of input, to language

“policies” within families, L1/heritage language activities organized by the local communities, and, ultimately, systems of bilingual education and nation-wide language planning policies.

1.3.4 Multicompetence

Multicompetence describes a “language super-system” (Cook, 2003, p. 2) of a bilingual speaker. Cook’s motivation behind the introduction of this notion was the fact that the term interlanguage describing a learner’s knowledge of an L2 is limited precisely to this area only and does not reflect the fact that two or more language systems in one mind are not isolated; to the contrary, they constantly interact with each other (Cook, 2003). Cook (2003, p. 5) further argues that “the L2 user’s knowledge of his or her first language is in some respects not the same as that of a monolingual”.

Unlike the term attrition, multicompetence carries much more positive connotations, emphasizing the ability to do things in more languages. In Cook’s view (2003), L1 attrition, i.e. the harmful effects of an L2 on the L1, is only one of the several possible manifestations of bilingualism, and many changes to the L1 caused by L2 acquisition cannot be labeled as good or bad, they “simply amount to differences” (p. 12), which are sometimes barely noticeable, as is the case of voice onset times (ibid.).

1.3.5 Crosslinguistic influence, interference, and transfer

L1 attrition refers to deterioration of language skills upon migration and carries the implications of having retrieval difficulties due to less frequent use. The terms **cross-linguistic influence, interference, and transfer** on the other hand, emphasize the “spilling

over” of one language into another in a multilingual individual, echoing the notion of multicompetence discussed above. To quote a definition, **crosslinguistics influence** is “the influence of a person’s knowledge of one language on that person’s knowledge or use of another language” (Jarvis & Pavlenko, 2008, p. 1). This, it would seem, is an accurate description of what many immigrants experience, as one cannot effectively isolate oneself from the surrounding majority L2. Thus, crosslinguistic influence (CLI) is a useful umbrella term for instances of code-switching, retrieval difficulties and non-standard use of grammar, and as such will be employed throughout the present dissertation, together with the term L1 attrition.

Jarvis and Pavlenko (2008) use the term **transfer** as a synonym to crosslinguistic influence; **reverse transfer** refers to L2 → L1 influence. **Crosslinguistic interference**, another common term in the field, carries slightly negative connotations: one language trespasses onto the other and impedes on communication. While this may be true in many a situation, it need not be a rule, such as in instances of code-switching among peers.

Table 1 on the following page provides Jarvis and Pavlenko’s (2008, p. 20) insightful 10-dimensional classification scheme of crosslinguistic influence. Drawing on this classification, the present dissertation is concerned with the following types of crosslinguistic influence: reverse, linguistic, implicit, both intentional and unintentional, productive, aural/oral, verbal, phonological and lexical, with negative outcomes.

Reverse transfer refers to L2 → L1 influence (Jarvis & Pavlenko, 2008), or L1 attrition, which is the main focus of the present dissertation. **Linguistic transfer** is

concerned with linguistic forms and structures (here: changes in the realization of certain phonemes) as opposed to language-mediated mental concepts (Jarvis & Pavlenko, 2008).

Table 1 <i>Classification of crosslinguistic influence according to Jarvis and Pavlenko (2008)</i>	
Dimension	Type
Area of language knowledge/use	phonological, orthographic, morphological, lexical, semantic, syntactic, discursive, sociolinguistic, pragmatic
Directionality	forward, reverse, lateral, bi- or multi-directional
Cognitive level	linguistic, conceptual
Type of knowledge	implicit, explicit
Intentionality	intentional, unintentional
Mode	productive, receptive
Channel	aural, visual
Form	verbal, nonverbal
Manifestation	overt, covert
Outcome	positive, negative

Implicit language knowledge is the knowledge *of* a language (as opposed to knowledge *about* a language, i. e. explicit language knowledge) and users are unaware of drawing on this knowledge when speaking (Han & Ellis, 1998). The present dissertation is concerned with crosslinguistic influence on implicit language knowledge as manifested in the participants' performance in the various tasks. Further, the manifestations of CLI in the domain of phonetics are interpreted as **unintentional**, i.e. not employed consciously and

deliberately as a communication strategy (Jarvis & Pavlenko, 2008), while both **intentional and unintentional** CLI may be observed in the lexicon-focused tasks. Both lexicon- and phonetic-focused tasks utilized in the present dissertation involve only **productive** skills (herein: speaking); receptive skills (such as text comprehension; Jarvis & Pavlenko, 2008) are not investigated here. As regards the CLI dimensions of channel and form, the dissertation focuses on **oral/aural** channel and **verbal** form (i.e. spoken production, as opposed to writing, gestures, and sign language; Jarvis & Pavlenko, 2008). I have limited the investigation to two main areas of language knowledge, namely **phonological** (the acquisition of Czech phonetic features) and **lexical** (mental lexicon access difficulties and code-switching). Finally, the CLI dimension of outcome deals with “the intelligibility, success, or situational appropriateness of the language that was used, or, more commonly, whether it violated the grammaticality constraints⁶ that are adhered to by monolingual native speakers.” (Jarvis & Pavlenko, 2008, p. 25). The negative outcome of CLI in the sense of the former description is more likely to be observed in the L2 of early-stage L2 learners; I do not expect it to be the case in the L1 of Anglophone expatriates. The present dissertation is mainly concerned with the **negative outcome** in the sense of the latter description, i.e. L1 attrition, or, in other words, non-adherence to or deviation from the monolingual speaker norm which can be viewed in negative terms (namely the acquisition of a foreign accent and lexical processing difficulties). However, I would like to emphasize that I agree with Cook (2003) and other researchers who claim that negative outcome is not the most ubiquitous one. It may, nevertheless, be the most noticeable one.

⁶ I suspect that the authors did not mean solely grammatical constrains, but also other aspects of language knowledge and production, e.g. phonetic features and lexical choice.

2 Theoretical Framework

This chapter provides an overview of sociolinguistic and psycholinguistic theories which constitute the theoretical framework to the empirical enquiry presented in the later part of this dissertation.

The underlying general assumption of L1 attrition research is that the attriters (typically immigrants) find themselves in a circumstance in which they use their L1 less frequently and in a more limited set of contexts than previously, which may by itself cause difficulties. At the same time, the immigrants are acquiring and using an L2 which competes with their L1, potentially causing interference and various types of transfer (Schmid & Köpke, 2017). Various theories of L1 attrition then further specify the underlying mechanisms of this process, identify contributing factors, and predict the outcomes.

First language attrition was described by Köpke (2007, p. 9) as a phenomenon “at the crossroads of brain, mind, and society”. This transportation metaphor fittingly depicts the interconnectedness of these areas and the resulting multifacetedness of L1 attrition. It also implies the multiple viewpoints from which it is possible (and, to a degree, necessary) to study it. That said, due to the complexity of the phenomenon under discussion, no single research project can conceivably cover all theoretical perspectives and integrate all aspects and factors involved in crosslinguistic influence. Hence, I have limited my discussion to theories dealing with phonetics and lexical access/fluency (these being the focal areas of the experiments presented here), and the predictor factors of the frequency of L1 and L2 use, the quality of input, the length of residence, L2 proficiency, and the relative

status of the two languages in question. Other aspects, such as gender differences, age, education, and brain maturation are discussed either only passingly or not at all, either because they lay outside of the scope of the present dissertation or because they are kept more or less constant as variables in the present research (e.g. age).

2.1 Language modes, activation, and inhibition

The amount of L1 and L2 use are among key variables in bilingualism research in general. This subchapter provides an overview of important theories that posit frequency of use at their core.

One of the most influential theories in the field of bilingualism is that of language modes (Grosjean, e.g. 2008). **Language mode** refers to “the state of activation of the bilingual’s languages and language processing mechanisms at a given point in time” (Grosjean, 2008, p. 39), and as such is everpresent in any context in any bilingual person. Language mode presents a continuum, with one language – the base language (not necessarily the L1) – being highly active, and the other language(s) being active to various (lesser) degrees, depending on the context. When speaking or listening to a monolingual speaker, the bilingual person may fully deactivate their other language, thus positioning themselves in the **monolingual language mode**. In the **intermediate mode**, the other language is active, but not to the same degree as the base language. This may be the case if the interlocutor speaks the bilingual’s other language to some degree; in such situation the bilingual may not feel necessary to completely deactivate the other language. Finally, in the **bilingual mode**, the other language is highly active as well. This mode is common in

the interaction of two bilinguals of the same languages, who may code-switch freely without risking miscommunication. In fact, they may switch into the other language completely, so that it becomes the base language. The transition is typically unconscious, smooth and effortless. It should be noted that apart from the mono/bilingualism of the interlocutor a number of other factors guide the positioning on the continuum (Grosjean, 2008, 2010).

In a way, the language mode theory resembles that of Communication Accommodation Theory (e.g. Gasiorek, Giles, & Soliz, 2015) and audience design (Bell, 1984) discussed later in this chapter, as it describes how the style of one's speech may change according to the perceived or imagined degree of bilingualism in one's interlocutor or audience. However, apart from important situational predictions (the number of code-switches and the processing fluency), the language mode theory also carries long-term implication, which I am presently going to discuss.

An elegant theoretical explanation of *why* and *how* the frequency of use (or, in other words, the activation of one language or the other) should impact one's L1 processing in the immigration context was offered by the neurolinguist Michel Paradis (e.g. 2004). The basic principle of his **Activation Threshold Hypothesis** is that a language item (be it a word or a syntactic feature) requires a certain amount of neural impulses to be activated; this is its activation threshold. With each activation the threshold is lowered, i.e. a smaller number of impulses is required. However, when an item does not get activated for a long time (as in long-term monolingual mode) the threshold increases, rendering the item more difficult to retrieve. This holds especially for declarative memory items, i.e. lexicon;

however, procedural memory items – phonology and syntax – are hypothesized to be gradually affected as well, being slowly replaced by those of the L2. Language comprehension is less demanding in terms of the amount of neural impulses, which explains why it is less severely affected than language production (Paradis, 2004, 2007). Thus, limited use of L1 results in its being more demanding to activate and more vulnerable to L2 interference. Conceivably, it may also lead to frustration and in turn to even less frequent usage of the L1, creating a vicious circle of a kind. According to Paradis (2007, p. 128), emotions/motivation also impact activation threshold: a negative emotional attitude towards L1 accelerates L1 attrition through raising the activation threshold, and, by turn, a positive emotional attitude lowers the activation threshold, thus slowing down the progression of L1 attrition. The Activation Threshold Hypothesis has been supported by priming experiments, as well as L1 attrition data (see Paradis, 2007, for an overview).

Nevertheless, Activation Threshold Hypothesis presents only one side of the coin, namely activation. In fact, deactivation, or inhibition, is also at play in language modes (although Grosjean's original theory does not directly postulate it; de Groot, 2011): in the monolingual and intermediate mode a bilingual person needs a mechanism that helps keep the other language at bay. Green's (1998) neurolinguistic inhibitory control model poses such mechanism, namely the **supervisory attentional system** (SAS) that instantaneously inhibits spreading activation in the non-target language, thus helping to select the item from the target language. The more active a non-target item, the stronger the reactive inhibition; therefore, the inhibition of one's L1 is stronger if the output is L2 than vice versa (de Groot, 2011).

Based on these two models, i.e. activation of the target item and inhibition of the non-target item, Köpke (2007) hypothesized different outcomes for different bilingual immigration settings. In the first scenario, the immigrant has no contact with other speakers of their L1; therefore, their L1 does not get activated very frequently which results in the increased activation threshold of the L1 items. At the same time, their L2 is highly activated; in other words, the immigrant finds themselves in the L2 monolingual mode most of the time. Consequently, when the immigrant uses their L1 as a base language in the monolingual mode, it “may be doubly impeded: by lack of activation of L1 on the one hand and the need to strongly inhibit the highly active L2 on the other,” resulting in “both accessing and processing difficulties” but not “much interference in terms of errors” (Köpke, 2007, p. 13). This scenario would conceivably concern immigrant speakers of “small” languages, but also last speakers of dying minority languages and immigrants who for various reasons chose to abandon their L1 and/or national identity (e.g. some of German Jewish immigrants in Schmid’s (2002) research who had been exposed to the worst terror of the Nazi regime).

In the second scenario posed by Köpke (2007), the bilingual immigrant frequently operates in the bilingual mode through a strong contact with the immigrant L1 community. Their L1 is active and much easier to access than in the previous scenario due to a lower activation threshold (Köpke, 2007), and there is less need to inhibit the L2 as the interlocutors typically understand it. This leads, however, to more crosslinguistic interference (ibid.). This scenario is probably common in big minority language communities in societies where bilingualism is a norm, and, it could be argued, within the community of

university students enrolled in L2 studies. Another example may be a setting in which the interlocutors are receptive bilinguals: while each uses their own L1 to communicate, they both receive an L2 input; an example of this setting is the Slovak minority living in the Czech Republic.

Thirdly, newly arrived immigrants may experience L1 processing difficulties because of the need to strongly inhibit their L1 while they are in the process of intensive L2 learning (Köpke, 2007).

Finally, one more scenario (not discussed by Köpke, 2007) needs to be considered here, namely that of a prestigious L1 immigrant. This is the case of native English speakers, and, conceivably, speakers of other “big” lingua franca languages like Russian in some parts of the world. Not having to actively learn and use the L2 because it is possible to “get by” relatively easily in the environment where their L1 is commonly taught at schools as a foreign language, the immigrants find themselves predominantly in the L1 monolingual mode without the need to inhibit the L2 (which they have a limited knowledge of or do not use frequently). In such scenario, no serious retrieval difficulties or crosslinguistic interference are to be expected. However, other phenomena (discussed further in the coming subchapters), are at play, namely the **foreigner talk** output and the **interlanguage input**. Native speakers of English living abroad naturally receive native input from the media and relatives and friends “back at home”, but arguably much bigger amount of their L1 input is non-native from their partners, in-laws, friends, colleagues, and, last but by far not least, their students. Depending on the proficiency of the speakers, these L2 users’ varieties feature a number of deviations from the monolingual “norm”.

In lower-proficiency users, L1 phonological system strongly influences L2 production, resulting in a “foreign accent”. Further, as their L2 vocabulary is limited to the most frequent L2 words, it seldom permits conversation beyond simple everyday topics. There are frequent tense and aspect choice errors, word-order errors, and a lack of syntactic complexity. Regarding pragmatics, the L2 users may lack knowledge as to the expected linguistic behavior in a given situation, and linguistic resources to properly express it. As the L2 user’s proficiency increases, the occurrence of the above enumerated features decreases but rarely disappears altogether (for an overview see Birdsong, 2004). Even the most advanced L2 users may lack knowledge of current slang and idiomatic expressions. Taken altogether, the L2 users’ interlanguage does little to contribute to activation of linguistic items beyond foreigner talk and teacher talk. And while it is a common practice of language schools to assign native speakers mostly with reasonably advanced students, it may not always be the case; in addition, with family, friends and colleagues interlanguage situations arise as well. Over time, the limited L1 input and the frequent use of foreigner talk and teacher talk may lead to extremely low activation threshold for high frequency items and high activation threshold of lower frequency items, leading to simplification of L1 output and retrieval difficulties in situation requiring less frequently utilized registers. As Søndergaard (as cited in Dostert, 2009) put it, “one can lose one’s first language without learning to master one’s second.”

2.2 Communication Accommodation Theory

Communication Accommodation Theory and Audience Design are discussed only very infrequently in connection with L1 attrition (with a notable exception of Dostert, 2009). However, they may be key in explaining language attrition phenomena in speakers who continue using the prestigious L1 upon immigration (the prime example of such speakers being the Anglophone expatriates).

Communication Accommodation Theory (CAT, previously also known as Speech Accommodation Theory) states that “[i]n interaction, individuals adjust their communicative behavior [...] based on their evaluation of their fellow interactant’s communicative characteristics, as well as their own desire to maintain a positive personal and social identity.” (Gasiorek, Giles, & Soliz, 2015, p. 1). The adjustments, or **accommodation**, are realized through the strategies of convergence, divergence, and maintenance. **Convergence** refers to the adjustment in one’s communicative characteristics (be it pronunciation, speech rate, gestures, etc.) to become more similar to those of the interlocutor; **divergence**, on the other hand, refers to the increasing of dissimilarities in the communicative characteristics (Dragojevic & Giles, 2014). **Maintenance** refers to *not* making any changes to one’s communicative style, i.e. retaining the same characteristics throughout the encounter (Bourhis, as cited in Giles & Ogay, 2007). CAT also provides the explanation as to why speakers adopt the respective strategies. The speaker may converge when they desire to obtain social approval, decrease social distance, and/or achieve a high level of communication efficiency. They may maintain communicative patterns or diverge if they desire to increase or maintain social distance, or desire to highlight a particular

group membership (Beebe & Giles, 1984; Gasiorek, Giles, & Soliz, 2015; Giles & Ogay, 2007).

How is CAT relevant to Anglophone expatriates? Upon arrival to the host country, native speakers of English may have no knowledge of the country's language, so they cannot converge by using the L2. Often, the however, the host country inhabitants (especially the city dwellers) may be more than happy to converge to the foreigner, seizing the chance to practice their L2.⁷ The foreigner, wishing to be accepted and to enhance communication, in turn converges towards the interlocutor's L2 English, speaking more slowly, switching to the standard dialect, and avoiding low frequency lexical items. In other words, native speakers of English may retort to **foreigner talk**, in a country where *they* are foreigners.

The term **foreigner talk** (FT) was coined to describe the way people communicate with foreigners; previously the term baby talk had been used because of the shared characteristics of the two (Ferguson, 1981). Foreigner talk denotes, in words of Barbara Freed (1981), "one of several circumstances in which adult speakers of a language may feel the need to modify their 'normal language' to make themselves understood to certain types of listeners" (p. 19), namely the ones we feel are somewhat linguistically impaired (ibid). FT is characterized, much like baby talk, by frequent pauses, limited vocabulary and brevity. Unlike baby talk, however, FT is usually spoken with increased volume, does not contain diminutives, and concerns both present, past and future (Freed, 1981). An early study by Snow, van Eeden and Muysken (1981) on communication of municipal

⁷ This seems to happen even when the expatriate does, in fact, speak the local language well.

employees and foreign workers found that FT characteristics correspond to some extent to the foreigners' mistakes in the L2, and that a higher occurrence of mistakes tends to elicit FT utterances from the native interlocutors. Further, the native speakers' utterance length was shown to be influenced by that of the foreigner: short and simple sentences elicited short and simple replies and vice versa. Snow et al. concluded that "foreigner talk represents an attempt to improve communicative efficiency by mimicking the speech of the foreigner." (ibid., p. 90).

The English language lesson is another circumstance in which one (i.e. the teacher, be it a native or a non-native speaker) may consciously or unconsciously feel the need or even the necessity to simplify (or "grade") their language, giving rise to what has been termed **teacher talk**. The past research has shown that teacher talk (TT), especially with lower level students, typically features exaggerated articulation (enunciation), lesser reduction of unstressed vowels, repetitions, slower rate of speech and longer pauses, more basic vocabulary, fewer contractions, and shorter sentences (Chaudron, 1988). Osborne (1999) likened TT to formal English speech in its pace, clarity and the use of standard forms, but, in contrast, lacking syntactic complexity and lexical sophistication. As most novice English language teachers will attest, it takes time and effort to learn to "grade" one's language; at first it requires constant monitoring and pre-meditating what to "say next", not only the content but also the form, so that it is adequate for the class's level.

Conceivably, both foreigner talk (FT) and teacher talk (TT) require the inhibition of complex vocabulary (such as idiomatic expressions, phrasal verbs, and specialized, low-frequency words) and a simplification of syntactic structures. While TT, by definition,

entails language accuracy by virtue of the teacher providing the language model for the learners, FT, on the other hand, may mirror the L2 user's errors (Snow, van Eden, & Muysken, 1981). Frequent engagement in FT and TT may then lead to a higher activation threshold of infrequently used language items and consequently to retrieval difficulties. Additionally, over time, FT and TT may become habitual, especially in those expatriates who do not have much contact with the local native speaker community and family and friends "back home." It may be hypothesized that teachers of English and the expatriates who interact in English with non-native speakers frequently (such as with a Czech partner) exhibit the greatest impact of TT and FT on their L1. Dostert (2009) also hypothesized dialect leveling, i.e. the gradual disappearance of the speaker's dialectal features, in favor of the standard variety (here: Standard British English and General American) with which the L2 users are more familiar.

So far, the results of research into the amount of L1 and L2 input/output are rather complex; and, to the best of my knowledge, there has not been any research attempting to measure interlanguage input and TT/FT output and including them as independent variables (c.f. also Dostert, 2009).

In connection with CAT and its relevance to the present dissertation, one more aspect needs taking into account, namely the addressee in the research session (i.e. the researcher/interviewer). Whether the addressee, and indeed the potential auditors (Bell, 1984), is a (native) speaker of the language and whether or not they are perceived as a member of the ingroup play an important role, which is seldom addressed in L1 attrition

research. The implications of Audience Design (Bell, 1984) for the present research are discussed further in Chapter 6.

2.3 Speech Learning Model

As regards L1 attrition in phonetics, research shows there is often a shift towards the surrounding/majority language phonetic features and, in some cases, the speakers may no longer be perceived as native. A compelling explanation why this may be so is offered by Flege's influential **Speech Learning Model** (SLM, Bergmann, Nota, Sprenger, & Schmid 2016; Flege, 2002). This model posits the existence of a common phonological space in which the phonic elements of a bilingual's L1 and L2 interact with each other. If an L2 sound is identified by the L2 learner as being very similar to an L1 sound, the two sounds are merged into a single category, and, as the L2 learner becomes more proficient, this merged category assumes an intermediate value, a value which is different from both L1 and L2. The learner subsequently uses this merged phoneme in both the L1 and L2. The above described process is called **phonetic category assimilation**. The process of **phonetic category dissimilation**, on the other hand, is activated when an L2 sound is identified as different from an L1 sound and forms a distinct category in the phonological space. In order to maintain the L1 and L2 contrast, however, both L1 and L2 sounds drift away from the two monolingual norms to more extreme positions (Flege, 2002). This can, in fact, be seen as a form of hyper-correction. In summary, SLM hypothesizes bidirectional influence of L1 and L2 element's phonetic characteristics in the bilingual's common phonological space (Bergmann, Nota, Sprenger, & Schmid, 2016). This reconstituting of multiple

phonetic elements may then lead to the overall “foreign-accentedness” in both L2 learners and L1 attriters. The notion of mutual interaction of L1 and L2 elements in a common space is also central to Cook’s (2002) model of **multicompetence** discussed in the Introduction.

However, the Speech Learning Model does not take into account the effects of long-term exposure to foreign-accented varieties (as is the case with the Anglophone expatriates). The question whether the long-term exposure to non-L1 phonemes leads to dissimilation in order to distance one’s phonemes from both the L2 and L2-accented L1 or assimilation to the surrounding “norm” has so far not been addressed.

2.4 Summary

In this chapter I have reviewed the most influential theories of L1 attrition relevant to the present research. To summarize:

- Activation Threshold Hypothesis (Paradis, 2004) and Inhibitory Control Model (Green, 1998) predict L1 attrition in the form of accessibility difficulties, processing difficulties and crosslinguistic interference (errors) depending on the bilingual’s most frequently utilized language mode (Köpke, 2007).
- Communication Accommodation Theory (e.g. Gasiorek, Giles, & Soliz, 2015) predicts that in order to obtain a positive evaluation and enhance the communicative efficiency, the expatriate native speaker of English will converge towards the L2 users’ English, slowing down speech tempo and simplifying the utterances.

The opposite, i.e. divergence (move away from the non-native variety), in order to maintain a positive group identity is also possible, but unlikely.

- Speech Learning Model (e.g. Flege 2002) predicts a merger or drifting apart of L1 and L2 phonetic elements depending on the perceived similarity by the L2 learner/user.

3 Native Speakers of English and L1 Attrition

In this chapter I first discuss the status of the English language in today's world, as it is highly relevant to the central theme of the present dissertation. Next, I briefly outline the general characteristics of the Anglophone expatriate community, and then I provide a detailed overview of the L1English attrition (and related) research on which I base my own enquiry.

3.1 The unique status of English in the world

Although it is not the aim of this dissertation to discuss and critically evaluate the highly topical and indeed controversial phenomenon of English as a lingua franca, or, what some scholars call English linguistic imperialism or hegemony of English (e.g. Macedo, Dendrinou, & Gounari, 2003; Phillipson, 2000), it is nevertheless important to provide at least a brief introduction of the global context, against which the present research is set. The English language has a very specific status in today's world, perhaps unparalleled in history, having become the language of international business, politics and academia. However, Phillipson (2008) considers labeling English as lingua franca misleading; instead, he proposed to call it lingua economica, emotiva, academica, cultura, bellica, Americana, and cucula,⁸ implying that the fact that countries where English is the majority L1 (USA, UK, Ireland, Australia, New Zealand and Canada) are among the world's wealthiest and most powerful is the main explanatory factor for the unprece-

⁸ i.e. cuckoo's

mented and often unchallenged spread of English and perpetuation of its privileged status (Phillipson, 2000), as well as the position of power of the above mentioned countries (Macedo, Dendrinos, & Gounari, 2003).

Put differently, English carries a high linguistic capital. The notion of linguistic capital (Bourdieu, 1977) can be defined as fluency in a high-status language used by groups who possess economic, social, cultural and political power and status in the given society, providing those who have or are able to develop skills in this language with access to the benefits it is associated with (Talbot, Atkinson, & Atkinson, 2003, p. 274). Vice versa, those who do not attempt to learn the language, or fail to succeed in their endeavor, are seen as responsible for their lack of advancement (Macedo, Dendrinos, & Gounari, 2003). Accordingly, languages carrying a high linguistic capital are in greater demand on the linguistic market (Mac Giolla Chríost, 2003). As such, in the course of the 20th century English was successfully turned into a highly sought after commodity, and English language teaching became a very profitable industry (Pennycook, 1994/2017). As a result, native speakers of English seldom struggle securing a job abroad. However, to lose one's English, then, be it through L2 attrition (i.e. the forgetting of once mastered foreign language) or L1 attrition, may have serious economic consequences.

3.2 Native speakers of English

At the time of writing, non-native speakers of English (i.e. individuals who speak English a foreign language) outnumber the native speakers (Eberhard, Simons, & Fenning, 2019). Consequently, in the majority of uses English serves as a lingua franca (Seidlhofer,

2001). However, it is not the more numerous L2 speakers, but the L1 speakers of English (“native speakers”⁹) who, in most contexts, are still considered (and marketed as) the ideal language model for students. This is due to the native speaker fallacy, i.e. a supposedly “greater facility in demonstrating fluent, idiomatically appropriate language, in appreciating the cultural connotations of the language and [...] in being the final arbiter of the acceptability” (Phillipson, 1992, p. 194). Putting aside the question of the definition of a native speaker,¹⁰ this assumption is also problematic in several other aspects. Firstly, as Phillipson (2000) pointed out, the terms native/non-native are offensive in themselves, creating a subconscious hierarchy in which the Other occupies the subordinate position. Secondly, the native speaker fallacy equals one individual native speaker of a certain variety of English with the whole of the English language, which, of course, one person may never be able to even explore completely, let alone use in its entirety (Phillipson, 1992). Thirdly, it completely disregards other qualities and qualifications important for teaching a language which leads to favoring native speaker teachers over L2 teachers on the job market (see e.g. Braine, 1999, for various perspectives on the matter). Finally, and perhaps most relatedly to the central tenet of the present dissertation, there is the objection that one’s L1 is not a stable entity isolated from external influences, such as learning another language in general (e.g. Cook, 2003) or emigrating to an L2 country. Thus, native speaker standard as a target in second language acquisition and the ideal model in second language teaching is “based on shifting sand” (Cook, 2003, p. 5). To put this in yet another

⁹ It is symptomatic that, when no language is specified, the collocation “native speaker” often refers to native speakers of English.

¹⁰ Which Dostert (2009) discusses in great detail.

words, English, despite its unique position, might be as much a subject to attrition, shift, and crosslinguistic interference as other minority languages. And yet, English is hardly ever viewed as a minority language (Piller, 2002), or indeed a heritage language, and has not been frequently investigated as such. By the same token, Americans, Canadians, Australians, and the British are not typically recognized and considered to be a minority group, at least not in European countries (which is also pointed out in Latomaa, 1998, and Boyd, 1998). This is also mirrored in the common usage of the word “expatriate” rather than “immigrant” when referring to this particular community. According to Klekowski von Koppenfels (2016), there is “an artificial division of the world’s mobile individuals into expatriates, from wealthier countries, and migrants, from less well-off countries”.

After some deliberation, I decided to retain the label “expatriate” for the L1 speakers of English who are the focus of the present research in order to highlight that there *do exist* differences between this particular group of immigrants and the other big immigrant groups in the Czech Republic (the Vietnamese, Ukrainians, Russians), even though they would probably not prefer the term themselves (Klekowski von Koppenfels, 2016). First and foremost, the Anglophone immigrants are not “unwelcome”, as members of some other migrant groups are (for details on Czechs’ attitudes towards foreigners see e.g. Tuček, 2018). Secondly, the pressure to assimilate and learn the Czech language is not as prevalent as it is with other groups since members of the majority (especially city dwellers) typically have at least some knowledge of the English language, thus allowing the Anglophone expatriates to communicate in their L1. Thirdly, the expatriates are typically well-educated, and, in combination with speaking a prestigious language, they tend

to hold middle- or upper-middle class occupations¹¹ (as is the case in other European countries, see Latomaa, 1998; Boyd, 1998; Piller, 2002). Their occupations tend to be language-related (teachers, translators), or in industries where a good command of English is necessary (such as IT) or presents an advantage (in multinational corporations) (Piller, 2002).

3.3 Anglophone immigrants in L1 attrition and crosslinguistic influence research

The present dissertation draws upon and builds on the body of past research on L1 attrition and crosslinguistic influence in Anglophone immigrants. This subchapter provides an overview of the key studies, including the information on the sociolinguistic contexts, methodologies, results, and the relevance for the present research.

3.3.1 North Americans in the Nordic region

Boyd and Latomaa (1996) and Boyd (1998) compared the use of L1 in four minorities (namely North Americans, Finns, Turks and the Vietnamese) living in the Nordic countries of Sweden, Norway, Denmark and Finland (the qualitative results from Finland are further analyzed in Latomaa, 1998, see below). Somewhat surprisingly, Boyd (1998) noted that the American expatriates utilized the majority languages more than the Turks and the Vietnamese; additionally, they also reported higher L2 skills (Boyd & Latomaa, 1996), thus contradicting the commonly held stereotype that Americans do not

¹¹ Nevertheless, Anglophone expatriates also typically experience regress in their careers upon immigration (Boyd, 1998).

learn and use the host country language. On the other hand, they were also found to speak their minority language (English) to the members of the majority more often than the other groups of immigrants, which is not surprising given the likely limited knowledge of the other minority languages (Turkish, Vietnamese, and Finnish) by the majority population. Further, the American households had fewer completely monolingual members (in either language) than the other groups. The Turkish and Vietnamese households seemed to use the minority language more in the home domain (*ibid.*). The children of American immigrants were found to use the majority language more than the children of Vietnamese and Turkish parents, and to be more skilled in the majority language than in English,¹² possibly due to the fact that their social networks consisted mainly of majority language speakers (Boyd, 1998). In the conclusion of their article, Boyd and Latomaa (1996) identify two different types of language maintenance: language maintenance by exclusion and language maintenance by choice. The former is typical of Turkish families: while Turkish language is seen as a core value of Turkish culture, the Turks are segregated from the majority through possible discrimination, and thus display a lower level of bilingualism. The latter characterizes the American minority in this region, whose situation is “diametrically opposed” (p. 179): the level of integration into the majority society is high and English is supported at schools and promoted through popular culture and media.

¹² These findings are further supported by older survey data from France (Association of American Wives of Europeans, as cited in Varro, 1998) showing that English language dominance or bad bilingualism were less common than French language dominance in children from French-American families.

As the circumstances of the Anglophone minority in the Czech Republic appear to be similar, a high degree of bilingualism in mixed-marriage families in both parents and children can be expected in the present research.

3.3.2 Americans in Finland

Latomaa's (1998) mainly qualitative study dealing with the linguistic situation of Americans living in Finland presents an important source for comparison, with Finland being similar to the Czech Republic in two important respects: the proportion of native speakers of English to the general population (Latomaa, 1998; Czech Statistical Office, 2015), and the characteristics of the respective majority languages, which, in both cases, have a relatively small number of speakers, are generally only spoken in their home countries, are not commonly taught at schools as a foreign language, and may be considered difficult to acquire from the speakers' of English perspective due to their synthetic nature¹³ (and also the lack of cognates in the case of Finnish) (Latomaa, 1998). The fact that Finnish is genetically unrelated to English may also explain why the American expatriates living in Finland use English more often and have lower overall L2 proficiency than the expatriates living in the Germanic language Nordic countries (c.f. Boyd, 1998, summarized above). Furthermore, in Finland, as well as in the Czech Republic, English presents the most frequent choice of first L2 and is regarded an essential requirement for professional positions in international corporations (European Commission 2006, 2012; Latomaa, 1998). However, in the Czech Republic the proficiency

¹³ Coincidentally, both Finns (Latomaa, 1998) and Czechs like to describe their mother tongues as "the most difficult in the world".

in English among the older generations is lower than in Finland (European Commission 2001, 2006, 2012) due to the Iron Curtain isolation from Western cultures and languages in the second half of the 20th century.

Let us now turn to the study itself. The sample consisted of 30 Americans living in the Helsinki area. Out of this, 25 were married to a Finnish spouse (in 5 cases it was a Swedish-speaking Finn), the remaining 5 were married to Americans. The majority of the informants held a university degree; the most common occupation was teaching. The average length of stay in Finland was 11 years, the reason for immigrating to Finland having been family (re)unification and work. Most informants had studied Finnish for two or more semesters. As regards the use of English at home, the L1 English parents used English consistently when speaking to their children. However, as is common in other bilingual families, the children tended to reply in Finnish more often than in English,¹⁴ especially if the L1 English parent was the father.¹⁵ The participants also repeatedly reported that their Finnish interlocutors would very often switch into English (even though it was worse than the participants' Finnish) once they realized they were speaking with an American (Latomaa, 1998). All in all, Latomaa's sample socio-demographic characteristics and day-to-day expat experience are relatively similar to those of this dissertation's group of informants (see 4.3 for the description of the present sample).

The participants of Latomaa's (1998) study reported lexical difficulties (namely word-retrieval problems and spelling insecurities), avoiding slang and dialectal features,

¹⁴ This is interesting, as one would expect the international prestige of English to enhance its attractiveness as a heritage language.

¹⁵ This was also true for the expatriates in Sweden and Denmark (Boyd, 1998).

and speaking more slowly and clearly with Finnish interlocutors. Many informants also claimed that their English prosody had been influenced by the monotonous intonation of Finnish. Adoption of British idioms and lexical items (such as *lift*, *queue*, and *flat*), caused probably by the preference for British English among Finns and in Finnish schools, was also mentioned. Additionally, the informants commonly used literal translations of Finnish collocations, as well as Finnish lexical items related to everyday life, school, food,¹⁶ Finnish culture (e.g. the word *sauna* pronounced in the Finnish way, p. 63), and concepts for which there are no suitable English translations or counterparts. Other common Finnish insertions included phatic and back-channeling expressions. Clearly, the adoption of these did not serve the purpose of replacing the difficult-to-retrieve words; rather, it presents enrichment of one's mental lexicon.¹⁷ Simplifying one's word choice and insertion of Finnish greetings and back-channeling may be interpreted as an accommodation strategy of convergence towards Finns or as an identity marker of belonging to the community of native English speakers residing overseas. The latter can be supported by the findings from another study (Vertiainen, as cited in Latomaa, 1998) in which American expatriates in Finland with *more numerous and more frequent contacts* with other American expats exhibited *bigger* crosslinguistic influence, possibly because code-mixing became community practice within the expat group.

What may seem surprising is the fact that a few participants were actually pleased with some of the changes they observed. They felt that "they were speaking better English

¹⁶ Interestingly, these included some long and not easily pronounced words, such as *lastenhoitaja* instead of much simpler English nanny (Latomaa, 1998, p. 63).

¹⁷ Especially in cases when "Finnish variants seemed to be used just for the fun of it, without any obvious reason" (Latomaa, 1998, p. 64).

now, since people they came into contact with had learned ‘proper’ English at school.” (Latomaa, 1998, p. 65). However, negative feelings of unhappiness and anxiety concerning the changes prevailed. The informants had become aware of the changes themselves; their family and friends back home also noticed in some cases. On the other hand, the informants tended to believe that the changes were only temporary and their L1 would go back to normal upon arrival in US (Latomaa, 1998).

To summarize, this study, although dependent on self-reported data, provided important cues as to what to expect in the Czech sample of native English speakers, given the sociolinguistic similarities of the Czech Republic and Finland. It is namely the adoption of Czech phatic expressions, the adoption of Czech collocations (be it through direct translation from Czech or through the Czenglish input), the use of Czech words for everyday items (such as food), a slower pace of speech, a lack of dialectal flavoring, a flattening of intonation, and lexical retrieval problems.

3.3.3 Bilingual couples in Germany

Piller’s (2002) study focuses mainly on the language choice and constructing bilingual spaces by English-German couples living in Germany and the USA and UK, using qualitative analysis of the couples’ narratives rather than a minute quantitative linguistic analysis. Insightfully, Piller points out that in vast majority of studies intermarriage is presented in a negative light, as a threat to L1 retention and the cause of imperfect acquisition and language shift (admittedly, the present dissertation is not an exception: language used with one’s partner is hypothesized to be one of the variables

influencing the degree of L1 attrition). Implied is the unchallenged assumption that the couples automatically choose the majority language for communication which has a negative effect on the minority language. In Piller's sample, English-German couples living in Germany who used a mixed code or the "minority language"¹⁸ (here: English) outnumbered those using the majority language (German), which was not so for the couples living in the Anglophone countries, hinting again at the privileged status of English. The couples who reported using a mixed code demonstrated contradictory attitudes towards this practice: on the one hand, code-switching and mixing was seen as undisciplined and a danger to purity of both languages and thus potentially harmful to the children; on the other hand they felt that their bilingualism helped them express themselves better, and enjoyed wordplay associated with it. The majority of participants reported socializing in both L2 and L1 (including the use of L1 with some of their majority language friends for the sake of their practice).

Piller's (2002) study clearly demonstrates that English-German couples living in Germany do by no means abandon the "minority language", and use it actively at home, at work, in children's playgroups and with friends. Further, all families included in the sample reported being keen on raising their children bilingually.¹⁹ Given that the English language has a similar status in the Czech Republic, similar linguistic setting is to be expected in Czech-English families, perhaps even more so as Czech, unlike German, does not carry the prestige associated with being a "world language".

¹⁸ I agree with Piller (2002) that it is very unusual to think of English as a minority language given its international status and prestige, hence the use of quotation marks.

¹⁹ As Piller (2002, p. 180) poignantly puts it, "[n]ot being burdened with a problematic identity, clearly frees up energies to devote to maintenance of the L1 and to promote and celebrate bilingualism."

3.3.4 Voice onset times in Americans living in France and Brazil

The following two studies by Flege (1987) and Major (1992) are concerned with cross-linguistic influence on a relatively small phonetic detail, namely the length of aspiration in fortis plosives (operationalized as voice onset time – VOT). VOT in plosives (see more details in 5.2) is a frequently employed variable in foreign accent research, mainly for two reasons: it is relatively simple to measure, and it was shown to correlate well with perceived global foreign accent (Major, 1987; Flege & Eefting, 1987a; Riney & Takagi, 1999).

Flege (1987) tested the prediction of his Speech Learning Model (see 2.3 for more details) that the exposure to an L2 phoneme that is similar (but not quite the same) to that of the L1 leads to the creation of single phonetic representation of the two phonemes, which in turn results in greater similarity of the said phoneme in both L1 and L2 speech. The “similar” phonemes under investigation were English and French /t/, which differ in the length of aspiration – the French /t/ VOT is shorter. The results of Flege’s experiment showed that American immigrants married to French husbands and living in France displayed significantly shorter VOTs in their L1 than the control groups with no or much smaller experience with the French language. In other words, intensive exposure to a similar L2 phoneme for a long period of time (11.7 years on average) led to the assimilation of the L1 phoneme with its L2 counterpart.

Major (1992) was interested in seeing whether yet another variable, namely the degree of speech monitoring or the amount of attention one pays to one’s speech production, led to the variation in the length of L1 English VOTs in Americans living in

Brazil, i.e. under the possible influence of Brazilian Portuguese short-lag fortis plosives. The hypotheses, inspired by William Labov's work (e.g. Labov, 1972), predicted that L1 attrition is correlated with L2 mastery (operationalized as the length of L2 VOTs in L2 production), and that the degree of L1 attrition in a casual style is greater than in a formal style. The sample consisted of 5 American native speakers of English living in Brazil, all with a Brazilian spouse. The participants had a good proficiency in Portuguese, and, at the same time, used English professionally on daily basis. The results supported the hypotheses and were in keeping with Flege's (1987) study discussed above. For the purposes of the present dissertation I adopted parts of Major's (1992, p. 208) English word list.

The question of how stable the changes in VOTs are was partly addressed by Sancier and Fowler (1997). Their study featured a single subject – a native speaker of Brazilian Portuguese with advanced command of English, who lived in both Brazil and the USA, alternating between the two twice a year. Sancier and Fowler made recordings of a Portuguese-English and English-Portuguese translation task as the participant was about to leave for Brazil (i.e after a period of high English exposure and output), and then just after her return (i.e. after a period of high Portuguese exposure and output). It transpired that in both languages, the stops under investigation (/p, t/) mirrored the recent phonetic environment: they were longer after the stay in the USA and shorter after the return from Brazil, indicating that changes on the phonetic level may be only of temporary nature and that VOTs are very sensitive to the surrounding linguistic environment.

3.3.5 TEFL²⁰ professionals in Spain

The research by Porte (1999, 2003) is, as far as it was possible to discern, the only that explicitly considers non-native L1 input as a factor that influences the degree of L1 attrition. According to Porte, native-speaker teachers of English residing abroad face a double challenge: L1 attrition “consequent upon residence in the foreign country” (2003, p. 104) and L1 attrition through the regular exposure “to deviant [sic!] forms of English” (1999, p. 29).

Porte’s (1999) sample consisted of 52 professional teachers of English living in Spain, all well acculturated and integrated into the Spanish society, including having Spanish partners and social networks. The self-reported changes to their spoken L1 included code-switching. In written L1, where Porte (1999) hypothesized the influence of Spanish students’ written L2 English, the informants reported changes in spelling, punctuation, lexicon (the use of Spanish calques, leveling of prepositions) and word order. Finally, all informants mentioned having experienced doubts over the correctness of written items and some grew so accustomed to their students’ frequent errors that they gradually ceased to recognize their severity. While the study did not analyze the actual language production of the informants, it demonstrated that TEFL professionals working abroad were well aware of the possible influence of their students’ L2 and many felt they had experienced it.

The focus of Porte’s 2003 study was the process of creation, sanction, and transmission of code-mixing within a group of bilingual TEFL professionals. The parti-

²⁰ Teaching English as a foreign language

cipants were three university lecturers, native speakers of English who had participated in the 1999 survey discussed above and had reported anxiety about the state of their L1. All were long-term residents in Spain (15-24 years), married to Spanish spouses, well-integrated into Spanish society and fluent in Spanish. The researcher recorded the participants (who were unaware of the actual aim of the study) conversing on familiar topics connected with the university environment, social life, and differences between living in Spain and England. The participants exhibited occasional retrieval difficulties and insecurity about the appropriate lexical choice, L2 noun and nominal group insertions, and the use of direct translations or loans for specialized concepts non-existent or different in the English language and culture. They also utilized Spanish cognates with L1 endings and pronunciation, which Porte interpreted as either deliberate or as the influence of L2 English users. In the course of the conversation, as Porte (2003, pp. 113, 114) noted “most of the deviant output apparently went largely unmonitored by the protagonists themselves and unchallenged by the other participants in the conversation,” possibly due to having been recognized, accepted and reproduced as this specific speech community’s practice (p.115). Porte is highly critical of this practice and repeatedly mentions the possible unfavorable impact on students, suggesting that native-speaker TEFL professionals residing abroad may wish to make “more effort to keep their bilinguality in check at times” (p. 116), as otherwise such relaxation of linguistic norms could trigger L1 attrition and bring about more insecurity. However, the author himself concluded that despite a certain amount of crosslinguistic influence, there was no evidence of serious L1 attrition among the informants.

3.3.6 Americans in Israel

Olshtain and Barzilay (1991, p. 139) described the sociolinguistic context of their study as “least conducive to primary language erosion and yet exhibiting interesting changes in linguistic competence.” The sample consisted of 15 Americans, long-term residents in Israel. All participants spoke Hebrew (some to near native proficiency, majority to an extent that allowed them to function in everyday life), but most had difficulties reading Hebrew. For all participants English remained the dominant language for communication during the course of their emigration.

The study focused on infrequent lexis of specific meaning and its accessibility, using a well-established storytelling elicitation material, namely the Frog Story booklets by Mercer Mayer as means of data collection. The particular words of interest included *jar*, *cliff*, *pond*, *gopher*, and *deer*; all essential for the narrative. In comparison with the control group, the American Israelis showed greater variety of semantically close (and indeed sometimes not so close) word replacements upon the first encounter of the given concept, especially with words *pond*, *deer*, and *gopher*, indicating retrieval difficulties. Further, the participants were aware of and commented on their difficulties, and engaged in conscious and systematic retrieval process of the specific word (Olshtain & Barzilay, 1991). In the present dissertation I adopted the method of comparing lexical choices for specific items and events in a narrative (Chapter 7 for the analysis of specific lexemes in Charlie Chaplin task retellings).

3.3.7 Dissertations: The British in Germany and Switzerland

Of particular interest to the present work are two dissertation projects investigating language attrition among the British living in Switzerland and Germany, as they allow for comparison with the Czech sociolinguistic context. To further facilitate comparison, the present dissertation employs some of the methods utilized in these two works (namely the Charlie Chaplin film-retelling task and the verbal fluency test).

Schoofs in her 2013 dissertation investigated L1 attrition from the perspective of dynamic systems theory, summarizing it thusly:

Due to environmental input, certain (L2) forms could gain the status of attractor states and become preferred forms; the language (sub)system has to use an amount of resources to escape the preferred forms. This development does not stop at a small change of, e.g., a word but works on in shifts, involving the whole interconnected system. (p. 40)

Schoofs's (2013) sample consisted of 5 groups altogether: 2 immigrant groups (the British living in Switzerland, and Standard German L1 users living in the UK) and 3 control groups (English, Swiss-German, and Standard German). The test battery consisted of a sociolinguistic questionnaire, a reaction time experiment concerning English-German interlexical homographs, and verbal fluency test (VFT, naming as many words belonging to one category, e.g. animals, in 60 seconds).

The results of the reaction time experiment showed the two immigrant groups were slower in their reactions to L1 stimuli than the respective control groups. VFT results were somewhat surprising, given the outcome of the reaction time experiment:

the number of items was comparable across the German language groups, but higher (i.e. more lexical items were produced within 60s, indicating *faster* lexical access) for the English expatriates, as compared to the English controls and all German groups. Confusingly, Schoofs proceeded to treat the VFT scores as the “indicator for attrition” (p. 139), submitting them to a multiple regression analysis, yielding significance for the independent variable of duration of stay, i.e. the longer the stay in L2 country, the lower the number of items produced in VFT. It remains unclear why the author did not select the more suitable variable of reaction times to L1 items as the main indicator of attrition.

To summarize, Schoofs’s (2013) results are somewhat contrary: they hint at slower reaction times of the immigrants in accessing L1 lexicon in a homograph experiment on the one hand, and faster speed at accessing the L1 lexicon in VFT on the other, at least on the part of the Anglophone test group. The results were not discussed in relation to the occupation of the participants.

Dostert (2009), in contrast, did consider accommodation as one of the possible sources of L1 attrition, citing Søndergaard stating that “one can lose one’s first language without learning to master one’s second” (p. 14). Being well-aware of the specific sociolinguistic circumstances the group under investigation (i.e. the British and Irish in Germany) found themselves in, Dostert discussed Communication Accommodation Theory as a potential source of explanation for L1 attrition in the specific population of Anglophone immigrants. She speculated that convergence to the L2 users’ variety may only last a relatively short period of time upon the arrival to the host country; once the Anglophone

expatriate builds their social network, they may no longer need to engage in accommodation seeking social approval.

Dostert's test group consisted of 25 British and Irish native speakers of English. The minimal length of residence (LOR) in Germany was 10 years, with mean LOR at 26 years. The participants were described as "functional bilinguals", and the majority had a German partner. Dostert further employed two control groups: a (largely) monolingual L1 English control group and a bilingual L1 German control group (consisting of individuals with a university degree in English).

The author hypothesized a decrease in lexical diversity and a decrease in fluency (operationalized as a number of pauses and retracings) correlating with LOR, gender, the age at emigration, the amount of L1 and L2 use, the self-reported L1 and L2 proficiencies, the level of education, the attitude and motivation, the knowledge of other foreign languages, and the degree of native speaker prototypicality. As regards the last factor mentioned, Dostert (2009) discusses the notion of being a native speaker of a language at great length, providing a comprehensive overview of to-date theoretical approaches and conducting a survey of her own, to arrive at a model consisting of three clusters of factors, namely language factors, attitudinal factors, and social/behavioural factors (not further explored nor tested in her work). Thus, in Dostert's approach, being a native speaker of a language is not an either/or category, but rather a continuum, with individuals exhibiting more or fewer factors related to the construct, and thus being more or less "prototypical" representatives of the construct. Based on her research into the native speaker "prototypicality" Dostert (2009) created a native speaker inventory consisting of 19 language and

language use related factors and 7 attitudinal factors (i.e. “the speaker would not willingly give up their British or Irish identity”, p. 83) to operationalize the construct of being a “native” speaker of a language.

Dostert’s test battery, then, consisted of sociolinguistic questionnaires (including English and German can-do scales and native speaker prototypicality questionnaire), the verbal fluency test (VFT; naming as many items from a certain semantic field in 60 s), English and German cloze tests, the Charlie Chaplin task (film clip retelling), a picture description task, and the ‘Scrabble’ test (creating as many words as possible using several Scrabble tiles in 6 minutes). Some of the tests, namely the VFT and the Charlie Chaplin task, are used in the present investigation, with the hope of allowing for comparison.

The results of the research indicated that the English immigrants living in Germany were to a large degree immune to L1 attrition, even though the two L1 English groups clearly differed in the degree of native speaker prototypicality in both language-related and attitudinal factors, with the immigrants displaying lower scores and greater variability than the controls. Firstly, the expats and L1 controls did not differ with regard to the can-do scales. Secondly, much like in Schoofs (2013) discussed above, the immigrants did not produce fewer items in VFT as was hypothesized, nor did they display less sophistication in this task. Dostert interpreted this as mental lexicon enrichment through the prolonged stay in a different culture. In my view, this is a correct interpretation based on the data obtained from the participants. Thirdly, there was no statistical difference between the two groups in the “Scrabble” test. Next, there was no difference between the immigrants and the English controls in the cloze tests scores.

Finally, in the film retelling task, as well as in the picture description task, the two groups exhibited the same degree of lexical diversity. The only statistically significant difference was in the number of short and long silent pauses in the Charlie Chaplin task. There were, however, some qualitative differences, namely different lexical choices and code-switching on the part of some immigrants.

As regards factors correlating with the immigrants' scores from the individual tasks, the statistical analyses revealed a medium positive correlation between the number of pauses in the film retelling task and the length of residence (the longer the LOR, the bigger the impact on L1 in terms of pauses). The other findings included that the immigrants' VFT scores (which did not differ from the control group's) were positively correlated with L1 attitude and self-reported L1 proficiency, i.e. the stronger the affinity to the L1 (English) and the higher the L1 proficiency, the higher the number of VFT items. L1 attitude further correlated negatively with the number of code-switches in the retelling and description tasks. These results provide support to the claim that L1 attitude is key for language maintenance. Code-switches and hedges in the film retelling were negatively correlated with self-reported proficiency. The other correlations were either non-significant or very weak.

Overall, Dostert's (2009) dissertation presents a very thorough and inspiring enquiry into the L1 attrition (or, rather, L1 maintenance) in terms of lexical accessibility in Anglophone immigrants living in Germany.

3.4 Summary

Thus far, the studies focusing on L1 attrition among Anglophone expatriates uncovered crosslinguistic influence in the domain of phonetics (more specifically a shortening of voice onset times in fortis plosives) and mental lexicon (retrieval difficulties/delays in a reaction time experiment and in storytelling tasks). Somewhat counter-intuitively, the expatriates also exhibited a better performance in verbal fluency tests. Code-switching within the community appears to be a shared practice, a kind of identity marker, and it is not necessarily caused by the inability to retrieve the given item in L1. The degree of L1 attrition has not been shown to be as dramatic as in other immigrant populations, e.g. in German Jews residing in Anglophone countries (Schmid, 2002). The reason for this is with all probability a strong motivation to maintain the L1 and a very positive attitude to it.

4 Research Design and Participants

4.1 Research questions and the test battery

The present dissertation investigates the following research questions based on the theories of L1 attrition and crosslinguistic influence outlined in Chapter 2, the body of previous research reviewed in Chapter 3, and anecdotal evidence and personal observation:

1. Do the Anglophone expatriates (the British and Americans) living in the Czech Republic exhibit signs of L1 attrition in the domain of phonetics?
2. Do they exhibit signs of L1 attrition in the domain of mental lexicon, especially in the form of retrieval difficulties, incorrect usage, and diminished lexical sophistication?
3. What are the sociolinguistic variables which correlate with the degree of L1 attrition?
4. What changes in terms of L1 attrition/crosslinguistic influence have the Anglophone expatriates observed themselves and what is their attitude towards these changes? What are the stories connected with L1 attrition and do they bear any correspondence to the experimental data?

The above stated research questions are investigated using the following battery of instruments: sociolinguistic questionnaires, a semi-structured qualitative interview, the Charlie Chaplin film retelling task, the verbal fluency test (VFT), a word-list reading task,

the CEFR (Common European Framework of Reference for Languages) self-assessment grid for Czech proficiency, a Czech proficiency test, and a global foreign accent rating.

Two **sociolinguistic questionnaires**, one for the expatriate group (based on Keijzer, 2007, and Dostert, 2009; see Appendix 1), and one for the control group (Schmid & Dusseldorp, 2010; see Appendix 2) were used to elicit important sociolinguistic variables such as demographic data, the amount and context of L1 and L2 use, and L1/L2 attitudes. The researcher asked the questions, offered options when applicable, and recorded the answers into the questionnaires. The whole interview was recorded.

The purpose of the subsequent²¹ **semi-structured qualitative interview** was to learn about L1 attrition from a more personal point of view. The interviewer asked the participants questions relating to the experience of L1 attrition, the reactions of their family, and their emotions and attitudes towards this experience (for the list of questions used in the interview, see Appendix 3).

The **Charlie Chaplin task** is a speech-elicitation method commonly used in the field of L2 acquisition and L1 attrition (e.g. in Schmid, 2007; de Leeuw, 2008; Dostert, 2009). The participants are asked to watch and then retell an 11 minute-long film extract from Charlie Chaplin's 1936 motion picture *Modern Times*. In the present dissertation, the recorded retellings are analyzed for hesitation phenomena and the degree of lexical sophistication (Chapter 7), as well as for perceived global foreign accent (Chapter 6).

The **verbal fluency test** (VFT) is a simple task which involves the participants naming as many lexical items from a certain category (e.g. animals, words starting with

²¹ Only the expatriate group were interviewed with these questions.

a certain letter) as they can remember in 60 seconds' time (Schmid, 2007). It has long been utilized in clinical setting to detect signs of neurological impairment (e.g. Tombaugh, Kozak, & Rees, 1999) and has also been adopted by researches in the field of bilingualism to assess language interference and non-pathological attrition in the domain of mental lexicon.

The **word-list reading task** (see Appendix 4 for the word list) involved the participants reading a list of words designed so as to tap into the production of specific phonetic variables hypothesized to be vulnerable to L1 attrition (Chapter 5 for more details). Some word-list items were adopted from Major's 1992 study on voice onset times.

The purpose of the **CEFR self-assessment grid**²² (Council of Europe, n.d.) for Czech proficiency and the **L2 Czech proficiency test** (Appendix 5; the multiple choice part of the test kindly provided by Karlová, Jazykové centrum Correct, s.r.o., n.d.; and the cloze test part by Hradilová, Department of Czech Studies, Palacký University Olomouc, n.d.) was to establish the expatriates' L2 Czech proficiency.

In the **global foreign accent rating** experiment, a group of raters (none of whom were members of either the expatriate group or the control group) listened to the clips from Charlie Chaplin task recordings and assessed the perceived degree of foreign accent of the individual speakers (see Appendix 6 for the FAR questionnaire adopted from de Leeuw, 2008). Further details are provided in Chapter 6.

²² The English version of the CEFR self-assessment grid was used as it soon transpired that some participants' Czech proficiency was not high enough to reliably complete the Czech version of the self-assessment grid.

4.2 Data collection procedure²³

The data-collection sessions with individual participants were held in different (quiet or at least relatively quiet) places depending on what the most convenient location was for the participants: in an office or classroom at the university, in an office at the participant's workplace, in the home of the participant, in a library, and the like.

First, the participants were asked to provide informed consent by reading and signing the informed consent form (see Appendix 7 for the expatriate consent form, and Appendix 8 for the control group consent form). They were also encouraged to ask any questions regarding the research process and data handling. Next, upon turning on the voice recorder²⁴ the researcher interviewed the participants using the sociolinguistic questionnaires (Appendices 1 and 2) and recorded their answer into the questionnaire sheets. For the expatriate group, the questionnaire interview was followed by the semi-structured in-depth interview (Appendix 3). Followed the Charlie Chaplin task, the verbal fluency test, and the word-list reading task (Appendix 4). The expatriate group further completed the CEFR self-assessment grid (Council of Europe, n.d.) and the L2 Czech proficiency test (Appendix 5). At the end of the session, the researcher debriefed the participants and thanked for their time and effort. The sessions typically lasted 2 hours for the expatriates and 1 hour for the controls. Due to privacy concerns the recorded materials are not publically available as a part of this dissertation. They can, however, be obtained from the researcher upon request for the purposes of review.

²³ The global foreign accent rating data collection is described separately in 6.2.

²⁴ Zoom H4n Handy Recorder at the sampling frequency of 48 kHz.

The data from both groups were collected personally by the author of the present dissertation, a Czech with a C2-level English proficiency. English was used exclusively throughout the interviews, including with participants with good knowledge of the Czech language. In other words, the interviews were conducted mostly in the English monolingual mode (Grosjean, 2008).²⁵ The participants were aware of the fact that they were being recorded. The primary addressee was the researcher; however, in the informed consent forms it explicitly stated that parts of Charlie Chaplin task retelling would be played to a wider audience (whose L1 was not specified) to obtain foreign accent rating. It is conceivable that the participants may have accommodated to this wider unknown audience in their retellings, perhaps speaking more clearly. It is important to note here that since the researcher was kept “constant”, so to speak, it is reasonable to assume that *both* groups accommodated to the same person. Therefore, any differences potentially uncovered in the performance of the two groups may be attributed to L1 attrition rather than the situational communication accommodation.

4.3 Participants

4.3.1 Expatriates

4.3.1.1 Sampling and recruitment of participants

The participants for the expatriate group were recruited in the period between spring 2015 and spring 2018 employing opportunity sampling methods, namely the

²⁵ However, a couple of participants may have been in the bilingual mode, as evidenced by the code-switches analyzed in Chapter 7.

author's personal contacts, leaflets, electronic board announcements in several international companies, and snowballing. The main criteria were that the participant was British or American (to narrow down the accent spectrum), a native speaker of English raised in a monolingual family (i.e. not an early bilingual; in other words, the participant only acquired an L2 as a foreign language at school, at work, or through self-study later on in their life), was not older than 60 years of age (to control for the potential linguistic decline due to maturation factors), and had lived in the Czech Republic for at least one year prior to the interview.

4.3.1.2 Demographic characteristics of the expatriate group

Altogether 18 expatriates were interviewed ($M_{age} = 38.2$ years, $SD = 8.7$), 11 males ($M_{age} = 39.2$, $SD = 9.1$) and 7 females ($M_{age} = 36.6$, $SD = 8.7$). As regards nationality, 10 participants were American, and 8 were British (7 English, 1 Scottish). The regions of origin included Louisiana, Georgia, Texas, Washington state, and Northeastern US in the USA; and London, Bristol, Dorset, Lancashire, Yorkshire, and Scotland in the UK. At the time of recording, all but one participant were living in the region of South Moravia, one participant was living in Prague. South Moravia is where most participants had lived the longest prior to the interview.

As for the level of education, it is generally quite high, with 15 participants having obtained a university degree (3 participants having completed postgraduate education), 2 received college education, and 1 participant completed secondary education. Profession-wise, there are 10 teachers of English (it is important to note here that it was rare for an expatriate participant to only teach, the job combinations included teacher

training, proofreading, translating, working for EFL publishing houses, and lecturing), 1 PhD student (and a part-time teacher of English), 1 full-time proofreader and editor, 2 technical support specialists, 2 IT specialists, a marketing specialist, and a business analyst. For the purposes of statistical analysis, the participants were categorized as teachers if teaching presented at least 50% of their work activity ($N = 11$), or as non-teachers if they held a profession outside the TEFL industry.

Regarding the marital status of the expatriates, 7 participants were married and living in the same household with their spouses, 5 were in a relationship (4 of whom were living with their partners in the same household), 1 participant was divorced and single, and the remaining ($N = 5$) were single at the time of the interview. All spouses and partners were Czech, with the exception of 1 Polish. 7 participants had children (ranging in age from young babies to late adolescents), all children were being raised bilingually. No participant had any grandchildren.

4.3.1.3 Sociolinguistic characteristics of the expatriate group

All participants were raised in English language monolingual families (with the exception of one participant whose parents were bilingual Czechs; Czech was, however, strictly not used in this family and the participant did not acquire any Czech language as a child). As already state above, the regions of origin included Louisiana, Georgia, Texas, Washington state, and Northeastern US in the USA; and London, Bristol, Dorset, Lancashire, Yorkshire, and Scotland in the UK. The participants who reported having spoken a local dialect (of various strengths) at their country of origin ($N = 5$) all claimed to speak either Standard British English or General American in the Czech Republic (the only

exception being the Scottish participant, who avoided utilizing the lexical aspect of his dialect, but kept a certain Northern tint to his accent).

At the time of the interviews, the participants had lived in the Czech Republic for the period of 1 to 23 years ($M_{LOR} = 9.5$; $SD = 6.9$), their age at immigration ranged from 19 to 47 years ($M = 28.2$, $SD = 7$). All participants but one were living in the region of South Moravia, one participant was living in Prague. South Moravia is the region where most participants had lived the longest prior to the interview.

With regard to some general patterns of language use, Items 80-85 of the sociolinguistic questionnaire (Appendix 1) enquired about the amount of spoken/written communication in English, Czech, and other L2s. Unsurprisingly, the majority of participants ($N = 15$), reported using English for 70% and more of their daily spoken interactions; only 3 participants reported using Czech for 50% or more in their spoken conversations. Written communication was dominated by the English language even more strongly, with all participants using more English than Czech. In fact, 11 participants reported using English over 95% of time when writing. The use of L2s other than Czech was rare: only 5 participants reported using another L2 for about 1-5% of time, mostly in the spoken form.

With their partners or spouses, 8 participants communicated mostly in English, 2 reported equal use of English and Czech, and, finally, the predominant or exclusive use of Czech was reported by 3 participants. As for the communication with children, only 1 participant reported using equal amount of Czech and English, all the others with children reported using English either exclusively or predominantly. With L2 partner's/

spouse's family, L2 is typically used (or the Czech partner translates) given the low level of English proficiency in the Czech late-middle-age population.

With friends (of any nationality), English was the primary language of choice for the majority of participants. Only 3 participants reported using equal amount of Czech and English when speaking to their Czech or international friends, and 1 only participant used more Czech with L2/international friends. With Anglophone friends, communication is held exclusively in English, even if both parties have an adequate level of Czech proficiency.

For the present sample of expatriates, work is the realm of English, with only 1 person using Czech and English equally at work. This is unsurprising, since one of the reasons for working in the TEFL industry or being hired for certain positions in multinational corporations is the fact that one is a native speaker of English and thus is required to utilize this asset.

The chart on the following page (Figure 1) displays the proportion of English and Czech used in various contexts by the sample of expatriates (Item 75 of the sociolinguistic questionnaire). It can be observed that "inner speech" (thinking, dreaming, praying, and counting) is predominantly conducted in English for the majority of the expatriate participants. The English language also dominates the questions concerning skills and proficiency, where Czech does not once take over the L1: this suggests a good degree of L1 maintenance, but, on the other hand, a relatively low level of L2 acquisition. More Czech is used in emotional contexts (swearing, saying "I love you"), and Czech comes to dominate in everyday situations such as talking to neighbors and transactions in pubs, hotels, and

shops. Unfortunately, Dostert's (2009) data presentation does not allow for comparison of the two samples.

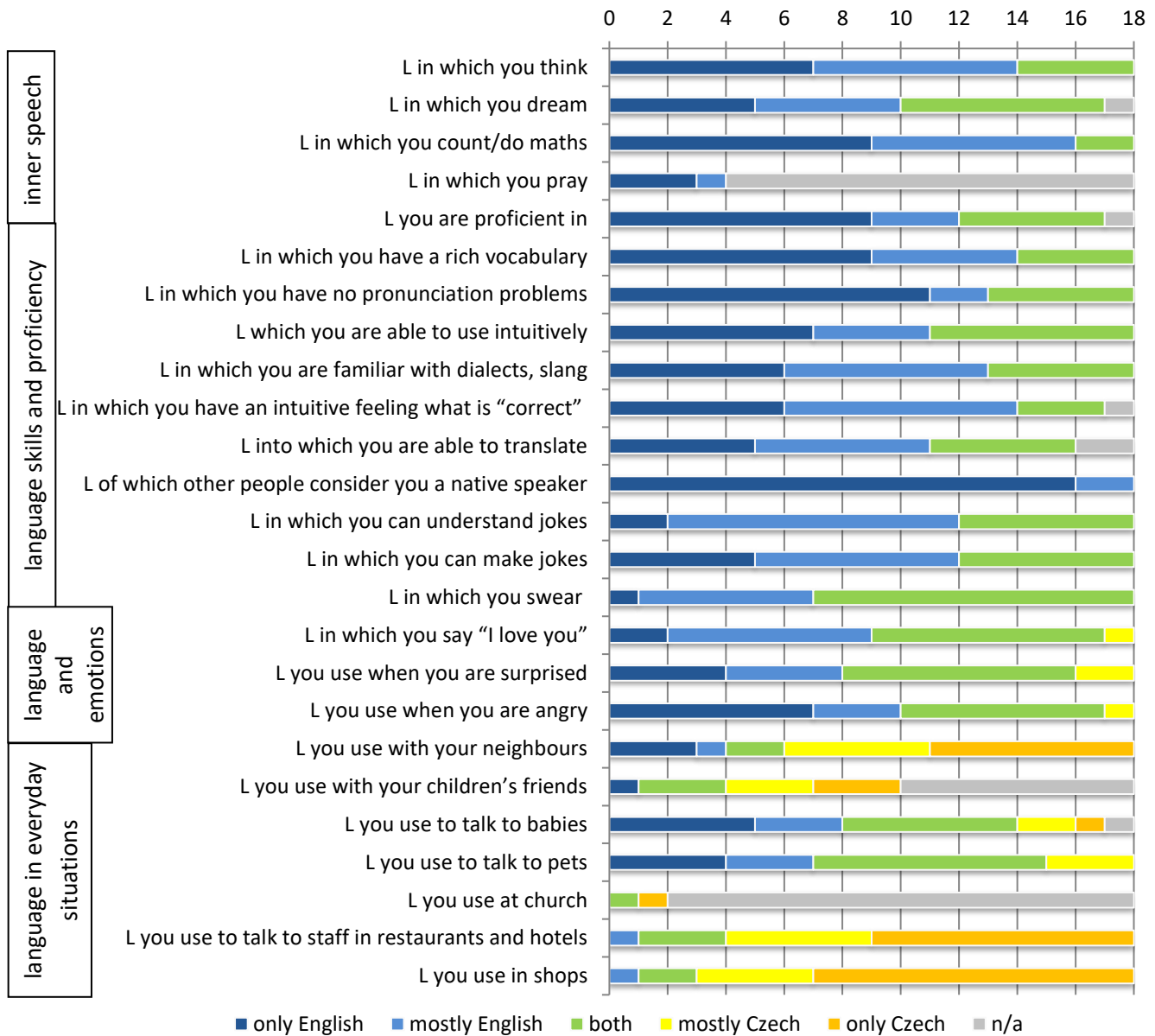


Figure 1. The proportion of English and Czech used in various contexts by the expatriates.

The Czech proficiency in the present sample of Anglophone expatriates varied greatly. Upon arrival in the Czech Republic, all but one participant had little or no knowledge of the Czech language (Item 88 of the questionnaire). As regards Czech proficiency at the time of the data collection, Table 2 shows the reported proficiencies (based on data from CEFR self-assessment grid). The CEFR self-assessment score was shown to correlate strongly with the number of points scored in the Czech proficiency test (Appendix 5): Kendall's $\tau_B = .77$, $p < .001$. A moderate positive correlation exists between the length of residence (LOR) and the Czech proficiency test score, Kendall's $\tau_B = .51$, $p = .004$. In comparison with Dostert's (2009) participants' German language proficiency, the Czech proficiency of the present sample is lower; this is undoubtedly due to shorter LOR (Dostert's mean LOR was 26 years) and possibly due to the fact that Czech is much less prestigious and wide-spread language and therefore mastering it brings fewer benefits and opportunities outside of the Czech Republic, which is not necessarily the case of German.

Table 2						
<i>Czech language proficiency in the expatriate sample based on CEFR self-assessment grid</i>						
Czech proficiency						
	A1 beginner	A2 elementary	B1 intermed.	B2 upper intermed.	C1 proficiency	C2 mastery
N	3	3	6	4	2	0

As regards the knowledge of other foreign languages within the present sample, all participants had at some point of their lives studied one or more foreign languages, typically only before moving to the Czech Republic. The most common FLs in the group were French ($N = 10$) and Spanish ($N = 10$), followed by German ($N = 9$), Japanese ($N = 4$), and various other languages. Prior to moving to the Czech Republic, 5 participants had spent longer than a year in a non-Aglophone country: 3 participants reported 2/3-year-long stays, and 2 had traveled extensively for 6 and 10 years respectively as teachers, partly mirroring the experience of 2 control group participants (see below).

4.3.1.4 Limitations of the expatriate sample

According to the Czech Statistical Office (n.d.), as of 2015 there were about 12,000 British and American citizens living for over a year in the Czech Republic (of which only less than one third were females). Unfortunately, the Czech Statistical Office analysis of 2011 census data on foreigners in the Czech Republic (2014) does not provide a socio-demographic data break-up for the American and British community, so it is not quite possible to establish what the basic overall characteristics such as age distribution, family situation, education, socio-economic status, and length of stay are for this particular group of foreigners. Consequently, the present sample of 18 participants cannot be claimed to be representative of the community. The sampling methods (opportunity sampling and snowballing) carry further bias. Finally, all participants were volunteers, and not every expatriate who was approached by the researcher agreed to participate. It is difficult to establish what kind of bias was introduced by self-selection; it may be speculated that only the expatriates experiencing cross-linguistic influence came forward, but, on the other

hand, it may as well be that only those expatriates who were *not* experiencing a decline in their L1 (and thus did not feel vulnerable to “expose” themselves to the researcher) volunteered.

4.3.2 Control Group

The participants for the control group were recruited during the author’s stay at University of Essex (autumn 2015). The research design (as outlined in 4.1 and 4.2 above) was reviewed and granted the ethical approval by the local Language and Linguistics Ethics Officer.

4.3.2.1 Sampling and recruitment of participants

Given the time and resources constraints, opportunity and snowball sampling were utilized. The main sampling criterion was that the control group participants were raised in an English language monolingual family in the UK or USA, were not early bilinguals (i.e. only acquired L2, L3, L4... as a foreign language at school, at work, or through self-study later on in their life), and were not older than 60 years of age. Several methods were employed to recruit the participants: group emails, short presentations, leaflets, word of mouth, and snowballing.

4.3.2.2 Demographic and sociolinguistic characteristics of the control group

Altogether 16 control group participants were interviewed ($M_{age} = 33.8$ years, $SD = 12$): 10 females ($M_{age} = 38.6$, $SD = 10.9$) and 6 males ($M_{age} = 25.7$, $SD = 9.5$). All participants were raised in L1 English monolingual families in the UK, with the exception of 1 participant, an American from the southern United States who had recently moved to

the UK. Most of the English participants were raised in South East and East England (London, Essex, Suffolk, Kent, Cambridge, Reading), two were raised in the Midlands and North England. The region of origin of the participants was mirrored in the reported dialects: Southern British ($N = 5$), Essex ($N = 3$), Estuary ($N = 2$), South-East, London, Standard British English, Standard Midlands, Potteries, Geordie, Southern US ($N = 1$ each). As regards the education level, all participants completed higher education, 9 were studying at university at the time of the interview, and 3 had already completed a university degree. Profession-wise, there were 9 students (with various part-time jobs), 4 participants worked in administration, 2 in education, 1 was in job training. Regarding marital status, a half of the participants were in long-term relationships with L1 partners (with one exception, of which more below), the other half were single (some divorced/separated). 6 participants had one or more children.

As regards the degree of bilingualism, no participant was raised in a bilingual family. However, all were exposed to various foreign languages (FLs) later at school, at work, or when travelling, some were students of an FL at university. The majority ($N = 13$) considered it very important or important to have a good command of a foreign language, among the reasons given were travel and life abroad, and the ability to communicate with people who do not speak English. At the same time, all but one agreed that having a good command of English was important or very important. 10 participants viewed the English language as an important part of their identity. The participants with children unanimously agreed it was very important that their children had a good command of English (and sometimes corrected their children's English) and a good command

of an FL. To summarize, the participants in general had a strong relationship to their first language, English, and recognized the importance of a good command of an FL.

As mentioned earlier, all participants had at some point of their life studied one or more foreign languages for over a year (with 6 participants having studied 3 or more FLs); however, not all of them retained (or indeed reached) a good proficiency in the given FL. In fact, 9 participants reported their FLs proficiency to be very poor or fairly poor, and only 4 reported one of their FL to be good or very good. The most common FL in the group was French ($N = 12$), followed by German ($N = 9$), Spanish ($N = 9$), and Italian ($N = 3$). The other languages included Romanian, Portuguese, Japanese, Hebrew, Thai, and Swedish. One participant reported having a “very minimal” knowledge of Czech acquired during his one-year stay in the Czech Republic several years previously. Only those participants who reported very good or good proficiency in an FL also reported frequent (i.e. daily or several times a week) FL input in the form of reading, music, and films/videos. Other participants would engage in these FL activities less frequently if at all. As regards the time spent abroad, the majority of participants ($N = 10$) had never spent a considerable amount of time (i.e. longer than 6 months) in a non-English speaking country. 4 participants had lived in a foreign country for between 1 and 3.5 years. In addition two participants (whose language background is discussed in greater detail below) spent longer than 10 years living in various non-Anglophone countries. All participants who reported a good command of an FL had spent at least one year abroad.

There were 2 participants who differed from the rest of the control group in that they had travelled extensively (over 10 years abroad each), had learned multiple foreign

languages (over 6 each), and were proficient speakers of at least 1 FL. The participant CG10²⁶ had worked as a teacher of English for several years and felt that his accent was “less localized” due to this; he reported speaking a more standard accent than was that of his sister. The participant had also spent a year living and working in the Czech Republic and had learned some Czech, which he claimed to have been mainly forgotten at the time of the data collection. His longest stay abroad was 7.5 years in another European country where his spouse also came from. Having started the relationship in his spouse’s country, CG10 and his spouse continued to use German in their everyday communication. After careful consideration, I decided to exclude CG10 participant’s data from the analyses concerning the mental lexicon, seeing that his German mental lexicon is probably highly active and in competition with the English one. However, I retained his data in the majority of phonetic analyses for a couple of reasons: firstly, this participant had been living in his home country, the UK, for several years at the time of data collection; secondly, while using L2 on a daily basis, it is not unreasonable to presume that his exposure to native L1 was much higher than to the L2 and in the domain phonetics there was probably greater English → German traffic than the other way around; and thirdly, CG10 participant’s foreign accent rating score, albeit higher than the control group mean, was not the highest and was not higher than the expatriate group mean. I did, however, exclude CG10 participant’s lenis plosives from the analysis as German exhibits different lenis plosive patterns from the English language (Kleber, 2018; Brockhaus, 1995).

²⁶ Control group participant nr. 10.

CG14 participant's sociolinguistic background has many similarities to that of CG10. She had travelled extensively and had lived and worked (mainly as an English teacher) in 9 countries altogether, having acquired 3 languages to a very good proficiency. As a teacher she also had to learn to "flatten" her native accent and enunciate for the benefit of her students. At the time of data collection, she had been living in the UK for a couple of years, but still getting FL input through media and communication with friends. I decided to retain her data for all analyses, as her main language had been English for several years prior to the data collection. Importantly, CG14's data did not show any deviations from the rest of the control group, perhaps with the exception of a very detailed Charlie Chaplin retelling

4.3.3 Control group as compared to the expatriate group

Table 3 on the following page provides the comparison of the main demographic and sociolinguistic characteristics of the two groups.

The expatriates and the controls differ in several important aspects. Importantly and desirably for the design of the present enquiry, they differ in the active L2: the expatriates have a highly active Czech; the controls either did not use an L2 at the time of the interview or had another active L2 (i. e. not Czech), typically Spanish, Italian, or German. Added to this is the fact that the spouses/partners of the expatriates in a relationship were Czech (and one Pole), while all but one control group spouses/partners were L1 English. Further, the members of the control group received no Czenglish input, whereas the expatriates (especially the EFL teachers among them) receive daily "doses" of it.

Table 3

Expatriate and control group compared on the main demographic and sociolinguistic variables

Group	Sex	<i>M</i> _{age}	Country of origin	Education	Profession	Family situation	Variety of English	Active L2
Expatriates <i>N</i> = 18	7 F 11 M	38.2	8 UK 10 USA	1 secondary 2 higher 12 univ. 3 postgrad.	11 EFL teachers 1 editor 4 IT/tech 2 business	7 married 5 with partner (all spouses/ partners are L2) 1 divorced 5 single 7 with children	Standard British (1 with a slight Scottish accent), GenAm	Czech
Control <i>N</i> = 16	10 F 6 M	33.8	15 UK 1 USA	4 higher 9 studying at university 3 university	9 students 4 administration 2 education 1 in training	3 married 4 with partner (1 L2 spouse) 2 divorced 7 single 6 with children	Southern British, Essex, Estuary, London, Geordie, Standard Midlands, Potteries, Southern American	None or other than Czech

There are, however, some differences which are not that desirable, but it was not possible to control for them and to counterbalance the two groups to a greater degree. Firstly, while the expatriate group presents a mix of the British and Americans, in the control group there is only one participant of American origin. This fact is taken into account when analyzing the phonetic variables in Chapter 5 and lexis used in the Charlie Chaplin task in Chapter 7. As regards regional accents, the expatriates all claimed to speak Standard British English or General American,²⁷ while the members of the control group reported speaking their region of origin accents. Secondly, there is an age difference between the control and expatriate group, with the control group being slightly younger on average. Thirdly, the members of the expatriate group achieved higher education (83% had obtained university education) than the members of the control group, in which only 19% had completed an academic degree (however, more than half of this group were university students working on obtaining university education at the time of the interview). Lastly, there is a difference in professions occupied by the members of the two groups: as stated above, members of the expatriate community tend to gravitate towards TEFL/editing and IT/business positions. These professions are not represented at all in the control sample. However, including EFL teachers into the control group would have been counter-productive as they would have been exposed to all kind of L2 Englishes through their work and thus possibly exhibit similar accommodation and attrition symptoms to those of the TEFL professionals in the Czech Republic.

²⁷ This is probably connected with the TEFL industry and the business sphere, the desire to be easily understood by Czechs, and with the higher level of education.

5 Crosslinguistic Influence on Individual Phonemes

The present chapter examines the characteristics of several phonemes hypothesized to be influenced by Czech and Czeenglish, namely voice onset times (VOTs) in word-initial fortis and lenis plosives, voicing of word-final phonologically voiced plosives and fricatives, and the realization of dental fricatives.

First, the data collection methods (the word-list reading task and the verbal fluency test) are introduced in greater detail. The following subchapters then each focuses on one group of the phonemes in question, comparing and contrasting the Czech and English phonetic and phonological systems, listing previous findings in the field of L1 attrition, and providing the data analysis and discussion of the findings of the present research.

5.1 Data collection methods

5.1.1 Word-list reading task

Word-list reading has a long history in the sociolinguistic and phonetic research. It features one important advantage for quantitative research, namely the fact that it ensures that all target items are elicited from each participant. On the other hand, reading a word list constitutes one of the most formal and “guarded” styles of speech (Labov, 1966), and, arguably, does not present a very frequent activity in daily life (as compared to casual speech). Along with reading a passage and reciting a word list, this task creates space for hypercorrection.

The word list for the present dissertation was constructed so as to allow for the investigation of the following variables:

- voice onset time (VOT) of fortis and lenis plosives in word-initial pre-vocalic position in monosyllabic words (Section 5.2);
- voicing in word-final phonetically voiced fricatives /v z/ and plosives /b d g/ (Section 5.3);
- the manner of articulation of /θ ð/ in word-initial and word-final positions (Section 5.4).

To investigate VOTs, items used in Major (1992) were incorporated into the word-list (highlighted in bold in Table 4). A comprehensive online minimal pairs list by Higgins (n.d.) was used as a source for voiced/voiceless contrast minimal pairs. Finally, the most common words (and therefore with the highest probability to be encountered mispronounced the Czech users of English) containing dental fricatives were included to investigate this phonetic variable. A number of filler words were then added to minimize the possibility that the participants uncover the focus of the investigation. The whole set of words was then randomized. Table 4 below presents the phonetic variables under investigation and the corresponding target lexical items. As can be observed, some lexical items were used to investigate more variables (e.g. the lexeme *cod*). Appendix 4 provides the word list as presented to the participants (160 items in total).

Table 4 <i>Overview of the items included in the word list</i>					
VOT word-initial fortis plosives N = 35					
/p/ N = 13	p path paw pay pet pick pig	poach pod pooch pot pub pup	/k/ N = 14	cab cap caught coat cob cod coo	cop cot cub cup k kept key
/t/ N = 8	t take taught Ted	teeth toe too tot			
VOT word-initial lenis plosives N = 33					
/b/ N = 17	b back bag bath bay bed bet boat	boot botch bought buck (2) bud bug bus buzz	/g/ N = 7	gate gawk geese get	goat goo got
/d/ N = 9	d day dead do dock	dog dose dough doze			
dental fricatives N = 19					
/θ/ N = 14	bath cloth path teeth thanks theory thermal	thermometer thief think thistle thought thunder youth	/ð/ N = 5	their there these they those	
word-final voicing in plosives N = 24					
/b/ N = 7	cab cob cub pub	rib robe slab	/g/ N = 7	bag brogue bug dog	league neg pig

/d/ N = 10	bed bud cod dead hid	mad need pod Ted thread			
word-final voicing in fricatives N = 18 (not analyzed due to the presence of reverberation)					
/z/ N = 11	allows buzz doze economize graze his	nose prize seize these those	/v/ N = 7	competitive leave love of	prove reeve save
stress placement (not analyzed)					
adolescence	determine	economy	historical	orienteering	
ambiguity	development	emergency	hotel	peculiarity	
behavior	discussion	event	Japan	produce	
biology	economics	execution	material	represent	
competitive	economize	genetics	opportunity	thermometer	
complementary items to minimal and near-minimal pairs					
a louse	grace	leak	neck	proof	rope
broke	hiss	luff	off	reef	safe
cease	hit	mat	price	rip	slap
garden	leaf	neat			
fillers					
airplane	flower	ketchup	new	rage	talented
arm	forest	meadow	open	shallow	three
centre	fresh	mechanism	opera	shock	through
chair	great	moon	pasta	sister	train
execute	honor	mountain	phone	star	went
figure	horrible	nephew	product	station	run
fist	hour				

The word list (Appendix 4) was presented to the participants after the completion of the sociolinguistic interview and the Charlie Chaplin task. The participants were instructed to read the list in the top-down, left-right direction. All items were read in isolation (i.e. not as a part of a carrier phrase). The participants were recorded by Zoom

H4n Handy Recorder at the sampling frequency of 48 kHz. The recordings were then analyzed in PRAAT (Boersma & Weenink, 2014, 2018).

5.1.2 Verbal fluency test

The verbal fluency test (VFT) is a simple task which involves the participants naming as many lexical items from a certain category (i.e. animals, words starting with the letter F) as they can remember in 60 seconds' time (Schmid, 2007). It has long been utilized in clinical setting to detect signs of neurological impairment (e.g. Tombaugh, Kozak, & Rees, 1999) and has also been adopted by researches in the field of bilingualism to assess language interference and (non-pathological) attrition in the domain of mental lexicon (Schmid, 2007). In this part of the dissertation the data is not analyzed in terms of mental lexicon accessibility, but in terms of the phonetic characteristics outlined above. VFT, in essence a list reciting task, presumably presents a less guarded speech style than reading a word list (e.g. Labov, 1966), and thus should produce data closer to "authentic" speech.

The semantic fields chosen for the semantic VFT were "animals" and "things you find in a supermarket". For the formal (or phonemic) VTF it was "words that start with the letter C" and "letter T" so as to facilitate the production of plosives and dental fricatives. The researcher explained the procedure in the following manner, providing further clarification if necessary:

- *Introduction:* The next task is called verbal fluency test. The task is to name as many words from a certain category in 1 minute as you can remember. For example: Colors. And you go: red, blue, green, etc. until I stop you. Alright?

- *Semantic task*: Now, the first category is (*pause*) animals. Go.
- *Formal task*: Now the task is slightly different. I am going to give you a letter, and your task is to come up with as many words as you can starting with this letter, in 1 minute. It can be any words, noun, verbs, adjectives. Alright? (*pause*) Now, the first letter is this. (the researcher shows a card with the target letter).

The participants were recorded by Zoom H4n Handy Recorder at the sampling frequency of 48 kHz. The recordings were then transcribed and analyzed in PRAAT (Boersma & Weenink, 2014, 2018) in the same manner (see the respective sections below) as the word-list items. VFT was not obtained from one expatriate group participant.

5.2 Voice onset times in word-initial plosives

It has now been over fifty years since voice onset time (VOT) was first introduced as a relatively simple, straightforward and, as has been demonstrated by a vast body of research, quite robust measure of acoustic differences among stop consonants of different voicing categories (Abramson & Whalen, 2017). Despite the fact that since the publication of Lisker and Abramson's (1964) seminal paper the concept of VOT has been shown not to be completely adequate for certain languages (Abramson & Whalen, 2017), and in need of modification for other than word-initial positions (*ibid.*), in bilingualism research it is now a standardly utilized variable due to its considerable interlanguage variability, proneness to cross-linguistic influence, and relative straightforwardness in measurement (Thomas,

2011). VOTs are also useful in that they tend to correlate well with the perceived global foreign accent (Major, 1987; Flege & Eefting, 1987a; Riney & Takagi, 1999).

5.2.1 VOT - definition and typology

Voice onset time is an acoustic feature of plosives and has been shown to be one of the most effective correlates of the lenis/fortis distinction (Skarnitzl, 2011). Lisker and Abramson (1964) defined voice onset time as “timing relation between voice onset and the release of occlusion” (p. 387). In Docherty’s (1992) words, VOT

refers to the interval (in ms) between the release of a stop closure, and the onset of voicing for a following voiced segment. The moment of stop release is assigned the value ‘0’, and any delay in voice onset following the release is assigned a positive value. If voicing commences prior to the release of the stop, the voice onset time is given a negative value. (p. 13)

This definition is most useful for post-pausal syllable-initial position (Docherty, 1992). In intervocalic positions one must further take into account the ceasing of voicing of the preceding vowel (Abramson & Whalen, 2017). In word-final position, the plosive may not get released at all (Davidson, as cited in Abramson & Whalen, 2017) or the vocal fold vibration ceases before the release (Mikuteit & Reetz, as cited in Skarnitzl, 2011).

For the present investigation focusing on English, Czech and Czenglish post-pausal, pre-vowel, syllable-initial plosives, the following VOT patterns are relevant (based on Docherty, 1992; Thomas, 2011; Roach, 2009):

- 1) **Lead / negative VOT, or prevoicing:** vocal fold pulsing (voicing, in other words) begins before the release of the stop closure, the full vowel unfolds shortly after the burst.

This realization is typical of some proportion of English utterance-initial /b d g/, especially in slow, careful and deliberate pronunciation, and may be completely missing in rapid speech (Roach, 2009).

It is not entirely clear what the situation is in the Czech phonetic system as not much work has been done in this field. Machač's (2006) otherwise comprehensive treatise of Czech plosives excludes post-pausal word-initial plosives from the analysis. Since Machač (2006) and, in a closely related work (also excluding post-pausal word-initial plosives), Šimek (2011) both consider voiced/voiceless contrast as a very stable feature of Czech plosives, it is not unreasonable to assume that Czech /b d g/ in word-initial positions exhibit prevoicing. This has recently been confirmed in an experimental study by Podlipský and Šimáčková (2018), in which Czech females produced the vast majority of word-initial /d/ with prevoicing.

- 2) **Short-lag VOT:** pulsing begins at or around the moment of release, the closure period does not feature vocal folds vibrations.

Typical of some proportion of English utterance-initial /b d g/, and of Czech /p t k/²⁸ in which vocal fold vibration and vowel unfolding starts shortly after the

²⁸ Machač (2006) explains that voicing is a stable distinguishing phonetic feature of Czech plosives corresponding closely to the phonological category of voicing (unlike in German or indeed English, in which it is more of a phonological category, and the aspiration plays the key role). However, Czech plosives do differ in duration, with voiceless plosives featuring longer closure and release phases than their voiced counterparts (Machač, 2006, p. 38).

release (Machač, 2006). Word-initial short-lag /p t k/ is perceived as /b d g/ by native speakers of English.

- 3) **Long-lag VOT:** the air escaping through the vocal folds – aspiration – causes the pulsing to be delayed tens of ms after the burst.

A feature typical of English /p t k/ (unless preceded by/s/). In the Czech phonological system, voiceless stops /p t k/ never feature aspiration (Skaličková, 1974) in any position.²⁹ This leads to L1 → L2 crosslinguistic interference in Czech³⁰ users of English (Pospíšilová, 2011; Melen, 2010).

5.2.2 Voice onset times in first language attrition studies

It has been shown in several studies that VOTs in plosives are a subject to L2 → L1 crosslinguistic influence in contexts where L1 and L2 of the country of residence feature different VOT patterns. Why this may be the case is explained by the influential Speech Learning Model (Flege, e.g. 2002), which postulates that phonemes of the 2 languages are merged into a single in-between category if they are perceived as identical by the L2 user, but, if perceived as different, they acquire more extreme values in both languages than is the monolingual norm.

A leading researcher, who studied voice onset times in bilingual contexts as early as in the 1980, is James Flege. He showed that American immigrants married to French husbands and living in France displayed significantly shorter VOTs in their L1English /t/ than the control groups with no or much smaller experience with the French language

²⁹ Machač (2006), however, provides an example of the utterance which may feature aspiration under certain circumstances, namely the exclamation Pane! (Sir!).

³⁰ And not only Czech, in fact; see e.g. Flege & Eefting (1987b), Kim (2011)

(Flege, 1987). In turn, the French living in the USA exhibited longer VOTS than their French living in France counterparts (Flege & Hillenbrand, 1984). In a study with Dutch users of English, Flege and Eefting (1987a) discovered that Dutch participants with high proficiency in English produced *shorter* short-lag L1 Dutch plosive /t/ than those who were not so proficient, establishing a more highly contrastive short-lag category in opposition to L2 long-lag one.

Major (1992) studied the influence of L2 Brazilian Portuguese on L1 English; the five participants all “to a greater or lesser extent”(p. 200) exhibited shortening of their L1 English VOTs in /p t k/, the degree of which was shown to roughly correlate with their L2 proficiency. The shortening was more prominent in the casual speech style. As regards the contact of English and Brazilian Portuguese, the influence goes both ways, as was shown in Sancier and Fowler (1997) and Kupske and Alvez (2016). VOTs in L1 Brazilian Portuguese lengthen in correlation with the length of stay in the L2 environment, as was evidenced in the study of Brazilians living in London by Kupske and Alvez (2016). Sancier and Fowler’s (1997) case study featured a single participant, namely a native speaker of Brazilian Portuguese with advanced command of English, who lived in both Brazil and the USA, alternating between the two regularly. In both languages, the stops under investigation (/p t/) mirrored the recent phonetic environment, i.e. were longer after the stay in the USA, and shorter after return from Brazil, suggesting the temporary nature of the changes.

Finally, in a recent study Stoehr, Benders, van Hell, and Fikkert (2017) examined VOT patterns in L1German-L2Dutch and L1Dutch-L2German bilinguals living in the

Netherlands. The two groups differed with respect to L2-use proliferation in different realms: the L1German speakers were exposed to their L2 (Dutch) both at home and at work, whereas the L1Dutch speakers were exposed to German only at home. The authors concluded that “[w]ithout frequent and diverse exposure to the L1, the more prominent L2 is likely to impact on the L1 phonetic categories” (p. 504) as was demonstrated with data from L1German-L2Dutch speakers, whose L1-German use was limited to the family context: these speakers exhibited shorter than native-like aspiration in L1-German voiceless plosives. However, their voiced plosives remained native-like, i.e. mostly without prevoicing. From the perspective of ease of articulation, both shorter VOTs in voiceless plosives and short-lag positive VOTs in voiced plosives require less effort to pronounce on the part of the speaker (ibid.). It should be noted that this study is one of the very few which investigated the impact of the L2 on the L1 voiced plosives.

5.2.3 Hypotheses

From the studies summarized above follows that crosslinguistic influence on plosives is to be expected in the sample of Anglophone expatriates living in the Czech Republic. I formulate the following hypothesis regarding fortis plosives:

The expatriates’ word-initial pre-vocalic fortis plosive VOTs are shorter in comparison with the control group due to the long-term exposure to the Czech language and Czech-accented English.

As regards lenis plosives, the formulation of the research hypothesis is more challenging given the lack of precise characterization of Czech word-initial plosives and

the limited body of research in the field of bilingualism (e.g. Major, 1992, included word-initial lenis plosives in his word-list, but did not analyze them). However, upon the acceptance of the assumption that Czech /b d g/ are prevoiced (i.e. feature long negative VOTs) in the majority of cases, the following may be hypothesized:

The expatriates exhibit more prevoicing in their word-initial prevocalic lenis plosives under the influence of the Czech language and Czech-accented English.

5.2.4 Method

5.2.4.1 Material

The material for this analysis comes from the participants' reading of the word-list (see Section 5.1.1 above and Appendix 4 for more details) and the verbal fluency test (VFT, see Section 5.1.2 above for more details). Table 5 on the following page provides the overview of the target lexemes for the individual plosives; items in bold are adopted from Major (1992). As can be seen, all items are monosyllabic, with the plosives under investigation in word-initial pre-consonant position. A t-test revealed that the two groups did not differ significantly in the duration of the word-list reading ($t(32) = 0.96; p = .35$).

In the verbal fluency test, the participants were instructed to provide as many words as they can come up with from a certain category (namely animals, things in a supermarket, and words starting with letter C and letter T). Only monosyllabic words with word-initial /p k t/ in the prevocalic position were admitted for the analysis. As regards word-initial lenis plosives, the number of monosyllabic tokens was very limited, therefore I decided to include disyllabic tokens into the analysis as well.

Table 5 <i>Word-list items for VOT investigation</i>					
<i>/p t k/ N = 35</i>			<i>/b d g/ N = 33</i>		
<i>/p/</i> <i>N = 13</i>	p path paw pay pet pick pig	poach pod pooch pot pub pup	<i>/b/</i> <i>N = 17</i>	b back bag bath bay bed bet boat	boot botch bought buck (2x) bug bud bus buzz
<i>/k/</i> <i>N = 14</i>	cab cap caught coat cob cod coo	cop cot cub cup k kept key	<i>/g/</i> <i>N = 7</i>	gate gawk geese goat goo get got	
<i>/t/</i> <i>N = 8</i>	t take taught Ted	teeth toe too tot	<i>/d/</i> <i>N = 9</i>	d day dead do dock	dog dose doze dough

5.2.4.2 VOT measurement

Although VOT is a relatively straightforward concept, several methods exist of its boundary delimitation. In the present research, the following method was used.

The moment of the release of the closure, represented as a sudden onset of aperiodic noise in the waveform and a corresponding dark vertical strip in the spectrogram, was set as the zero point (Skarnitzl, 2011). Tokens in which the burst was missing or was unclear were excluded from the analysis, as recommended by Jessen (cited in Skarnitzl, 2011). In the presence of multiple bursts, the first burst was set as the boundary, as recommended by Skarnitzl (*ibid.*).

The onset of vocal fold vibrations was delimited at the beginning of periodicity in the waveform, at the onset of the first complete period following the aperiodic noise signal in the case of a positive VOT (Skarnitzl, 2011). For negative VOTs, the beginning of periodic waveform (also accompanied by the presence of a voicing bar in the spectrogram) was set as the boundary. The process is illustrated in Figures 2-4 below. Finally, the duration of the signal between the two boundaries was recorded for the positive VOTs. For lenis plosives, only the presence/absence of pre-burst voicing was recorded, as it was sometimes impossible to establish the exact point when the voicing started. Additionally, in some instances the voicing ceased before the release of the closure. All measurements were conducted in PRAAT (Boersma & Weenink, 2014, 2018).

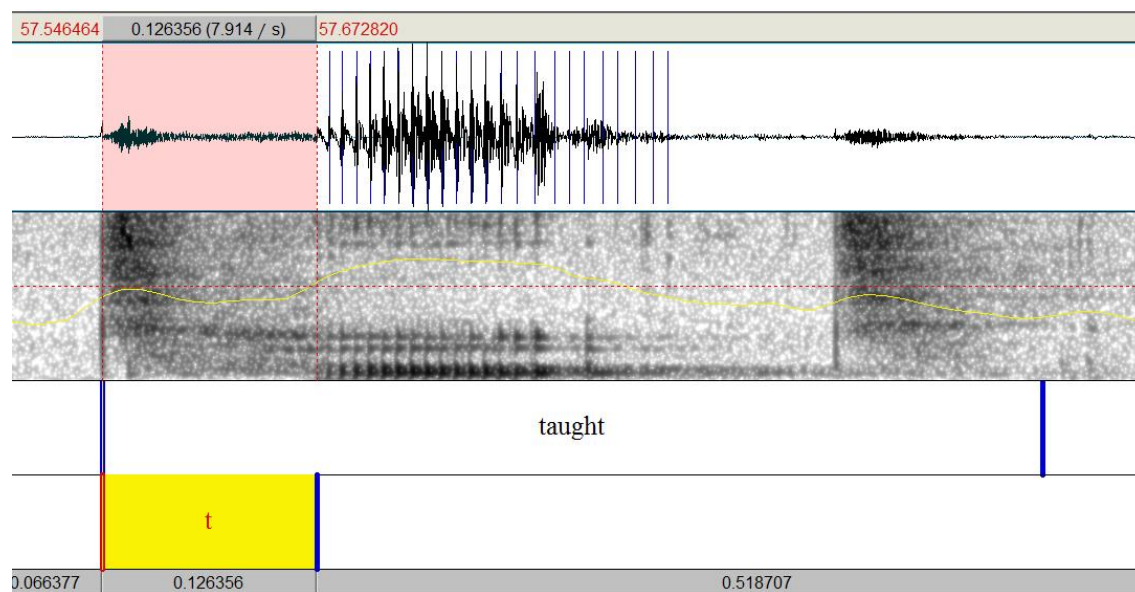


Figure 2. Measurement of the VOT in the lexeme *taught*

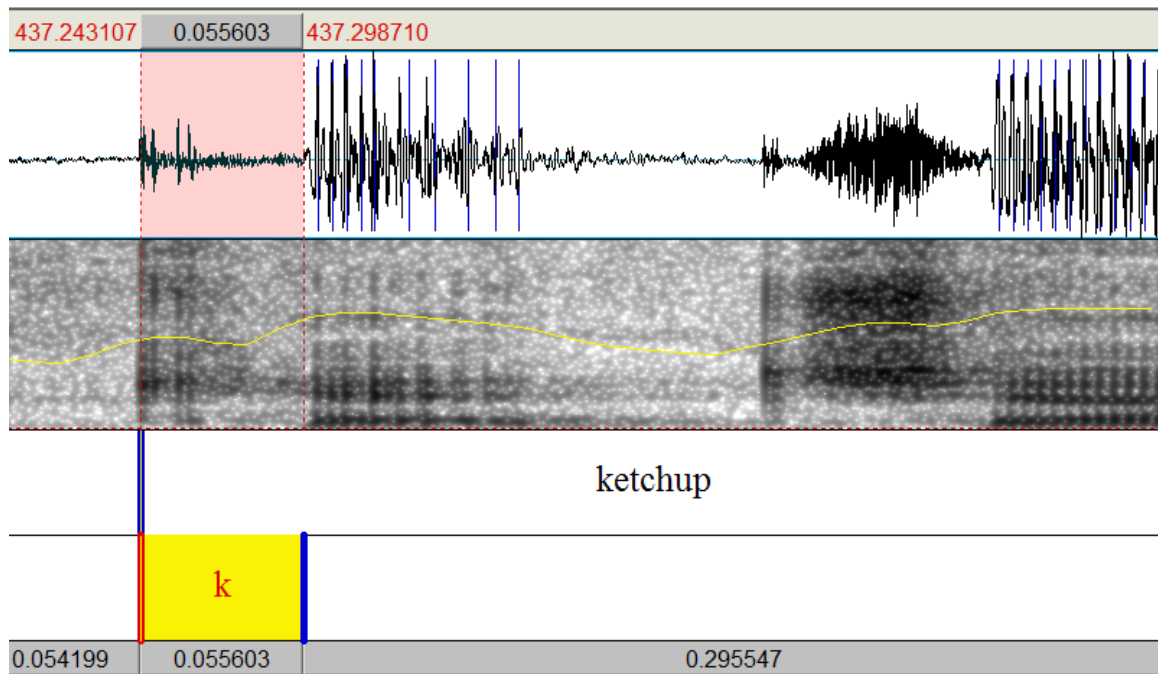


Figure 3. Measurement of the VOT involving multiple bursts in the word *ketchup*

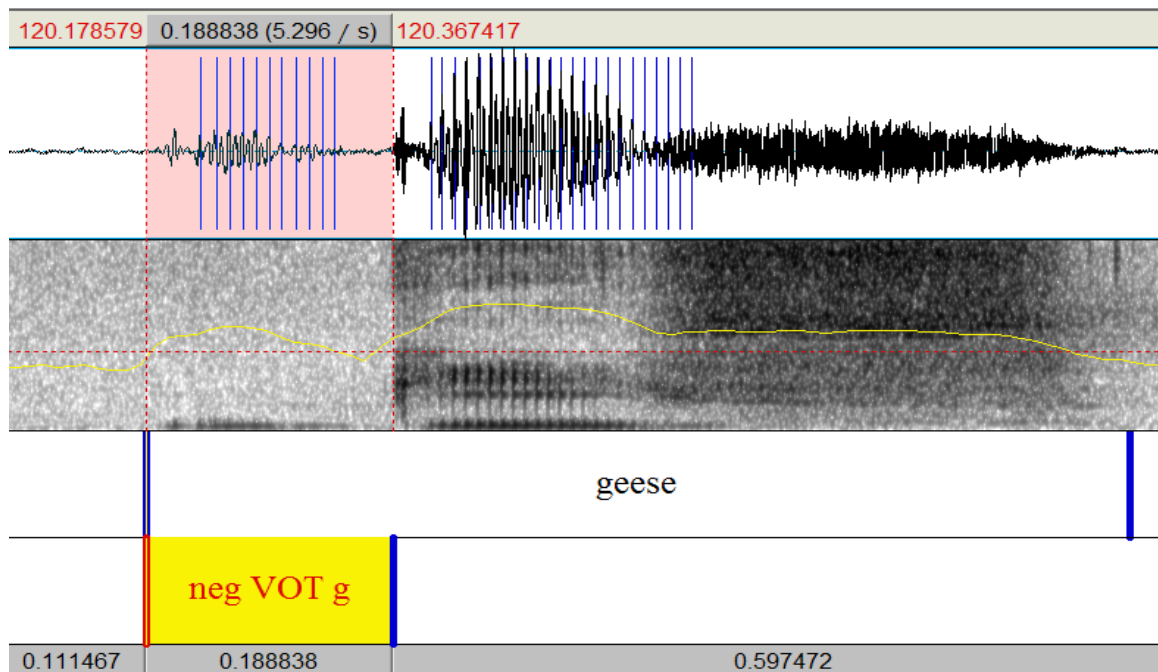


Figure 4. Measurement of the negative VOT (i.e. prevoiced release) in the word *geese*

To assess the reliability of the VOT measurement, VOTs of 4 speakers (2 from each group) were remeasured. High reliability of the fortis VOT measurement was confirmed by a strong correlation between the remeasured and original values at $r = .98, p < .001$. As regards lenis plosives, the situation proved to be more complex, with about 12% of control categorizations (short-lag/negative VOT) showing disagreement with the original categorizations. Based on this observation, stricter criteria than just mere presence or absence of pre-burst periodic vibrations enabling a more unambiguous classification were adopted. First, tokens for which voicing from the previous word continued without interruption until the burst of the word-initial plosive of the target item were excluded from the analysis. Secondly, for a VOT to be coded as negative, the voicing had to be present within 100 ms before the burst and, at the same time, be present for at least 60% of the time period from the onset to the burst. After applying the criteria on all word-list lenis plosives under investigation, another reliability check was conducted with greatly improved agreement at 99%.

5.2.5 Results: fortis plosives

5.2.5.1 Word list fortis plosives

After discarding 5 tokens due to missing or unclear release of the closure, in total 1,185 tokens of post-pausal prevocalic fortis plosives entered the analysis. Table 6 on the following page displays the number of tokens, group means and standard deviations for the individual fortis plosives for both groups. In order to examine the potential interference of native variety (British vs American), apart from the pooled data the table also

displays data for the expatriate British and the expatriate Americans in separate columns. As regards the single American participant in the control group, it was decided not to display her data separately.

The comparison of British and American expatriates (first two columns of Table 6) reveals only a minute difference in mean VOTs. The subsequent series of t-tests confirmed that the differences are not statistically significant (*/p/*: $t(16) = 0.31$, $p = .76$; */k/*: $t(16) = 0.65$, $p = .53$; */t/*: $t(16) = 0.182$, $p = .86$).

		Expatriates			Controls
		British N = 8	Americans N = 10	pooled N = 18	pooled N = 16
<i>/p/</i>	<i>N</i> _{tokens}	103	130	233	207
	<i>M</i>	62	64	63	78
	<i>SD</i>	9	12	11	18
<i>/k/</i>	<i>N</i> _{tokens}	111	140	251	222
	<i>M</i>	79	82	81	90
	<i>SD</i>	13	8	10	22
<i>/t/</i>	<i>N</i> _{tokens}	64	80	144	128
	<i>M</i>	85	86	85	99
	<i>SD</i>	8	13	11	24

From Figure 5 on the following page it becomes apparent that the VOTs of the individual fortis plosives do not follow the typical pattern reported in earlier studies (see Docherty 1992 for a comprehensive overview, but also Major, 1992, for an L1 attrition study of VOTs): contrary to the previous findings, */t/* exhibits the longest VOTs. This may be

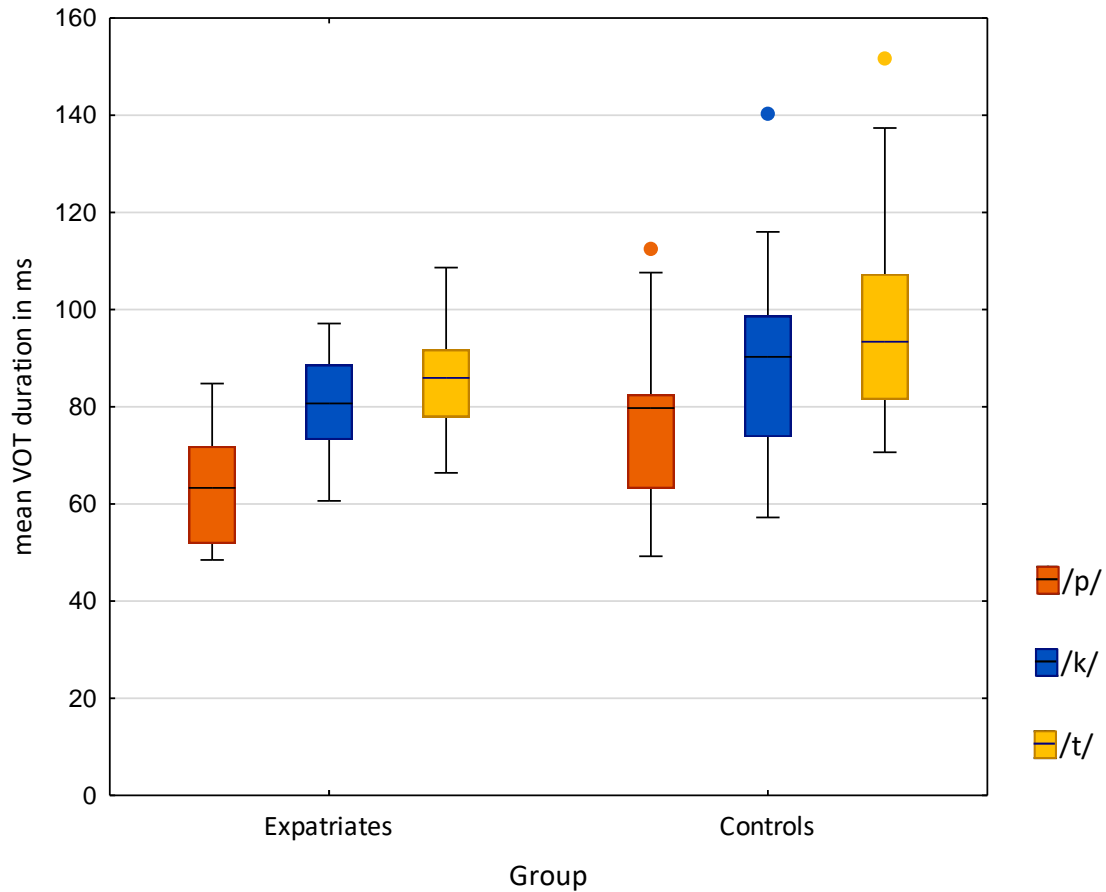


Figure 5. Boxplot of mean VOTs from the word-list reading task

caused by different vowel environments of the /t/ and /k/ test tokens. Alternatively, Docherty (1992: 173) suggests that “it is possible that in some cases the /t/-/k/ distributions are not in fact different,” given the small differences in the /t/ and /k/ VOT duration reported in the earlier literature.

Next, the control group consistently exhibits higher VOT means than the expatriate group. Another noticeable trend is that the expatriate group means are somehow more compact, i.e. with smaller overall as well as interquartile range. The control group, on the other hand, exhibits not only larger ranges, but also some outliers, which need to be

seriously considered. The outliers are more than *double* the mean values reported by Docherty (1992) for Southern British English and are located 1.9, 2.3 and 2.2 SD from the respective means. First, it was important to see whether this was caused by error in measurement. Therefore, the VOT measurements for the two control participants in question (CG06 and CG09) were checked, and no apparent measurement error was discovered. The two participants simply consistently exhibited long VOT patterns. As for the possible dialect/L2 interference, participant CG06, who was born in London, claimed to be a speaker of Southern English, did not report a high proficiency in any foreign language (FL), did not have any major FL input, and did not spend long periods of time abroad. Participant CG09 also identified his variety as Southern British; he was born and raised in South-East England. He had spent a year in Spanish and Portuguese speaking countries and reported a high degree of proficiency and regular input in both of these languages. However, both of these languages feature short-lag plosives (Macpherson, 1975; Major, 1992), so if any influence were to exhibit itself, it would most likely be *shortening*, not lengthening of VOTs (as documented by Major, 1992; and Flege, 1987). In summary, there is no apparent reason why these two participants should exhibit such long VOTs. It should be noted, however, that Docherty's (1992) otherwise very comprehensive study of VOTs in the English language featured a relatively limited sample of only 5 (male) participants, which cannot be said to be overly representative.

Dealing with outliers is in general a tricky matter. It appears that the obtained VOTs are legitimate values, and yet they distort the overall means and SDs. After careful consideration I decided to winsorize the data, i.e. replace the outlier participants' means

with the next highest value which is not an outlier (Field, 2014). Thus, CG09's /p/ mean VOT was changed from 113 ms to 108 ms, and CG06's mean /k/ VOT of 140 ms and /t/ VOT of 152 ms were changed to 116 ms and 137 ms respectively. Table 7 below details the newly obtained group means and SDs.

Table 7			
<i>Fortis plosives in the word-list reading task – descriptive statistics after winsorization (in ms)</i>			
plosive		Expatriates N = 18	Controls N = 16
/p/	<i>M</i>	63	77
	<i>SD</i>	11	18
/k/	<i>M</i>	81	89
	<i>SD</i>	10	18
/t/	<i>M</i>	85	98
	<i>SD</i>	11	23

These newly obtained means were examined as to the normality of distribution by a visual inspection of Q-Q plots and a series of Shapiro-Wilk tests, which all indicated meeting the normal distribution requirement of the t-test. The assumption of homogeneity of variances was tested using Levene's test, which uncovered unequal variances in case of /t/ means. A series of independent t-tests was then performed to compare the means of the two groups, utilizing Welch's t-test for unequal variances for /t/ VOTs. The results are displayed in Table 8, showing significant and marginally significant differences in /p/ and /t/ VOTs, with large effect sizes as indicated by Hedge's *g*.

plosive	<i>df</i>	<i>t</i>	<i>p</i>	Hedge's <i>g</i>
/p/	32	2.80	.009 sig.	.93
/k/	32	1.59	.121 non-sig.	-
/t/	20.9	2.07	.051 marginally sig.	.72

Given the fact that speakers of American English were unequally represented in the two groups (there being only 1 American English speaker within the control group), it was decided to conduct another series of t-tests, this time with British speakers only, so as to screen out the potential American English bias despite the fact that the within-group tests failed to show any significant difference between the two expatriate subgroups. Table 9 below displays the descriptive statistics (with winsorized means as utilized above) for speakers of British English only.

plosive		British expatriates N = 8	British controls N = 15
/p/	<i>M</i>	62	77
	<i>SD</i>	9	19
/k/	<i>M</i>	79	89
	<i>SD</i>	13	19
/t/	<i>M</i>	85	99
	<i>SD</i>	8	23

Upon comparison with Table 7, it transpires that the means do not change dramatically after removing the American English VOT values. For the purposes of the t-test the means were examined as to the normality of distribution by a visual inspection of Q-Q plots and a series of Shapiro-Wilk tests, which all indicated meeting the normal distribution requirement. The assumption of homogeneity of variances was tested using Levene's test, which again uncovered unequal variances in case of /t/ means. A series of independent t-tests (two-tailed) was then performed to compare the means of exhibited by the two groups; Welch's t-test for unequal variances was utilized for /t/ VOTs. The results are displayed in the Table 10 below, showing significant differences in /p/ and /t/ mean VOTs of the two groups with large effect sizes, as indicated by Hedge's *g*.

Table 10

British English speakers: t-test results for word-list reading fortis plosives VOTs

plosive	<i>df</i>	<i>t</i>	<i>p</i>	Hedge's <i>g</i>
/p/	21	2.09	.049 sig.	.88
/k/	21	1.32	.2 non-sig.	
/t/	19	2.09	.05 sig.	.7

Discussion

All VOT means are shorter in the expatriate group, the difference being statistically significant for /p/ and marginally significant for /t/. If means of the British speakers are considered separately to control for the potential variety effect, the pattern remains: both

/p/ and /t/ means are significantly shorter for the British expatriates. It remains unclear why /k/ mean VOTs do not exhibit any statistical difference. It is not unreasonable to assume that the trend would be more firm with a higher number of participants in each of the groups. It should be noted, however, that the expatriates do not exhibit any wholesale radical move towards Czech short-lag plosives: the shortening of aspiration is not noticeable with the naked ear. That said, Hedge's *g*'s indicate medium to large effect sizes. It may be concluded that in the present enquiry, the shortening of /p/ and /t/ mean VOTs under the influence of L2 reported in the previous body of research was replicated using the word-list reading task; this was not so, however, for /k/. One more detail is worth mentioning, namely the more restricted range of VOT means on the part of the expatriates which may be indicative of dialectal leveling reported in the in-depth interviews (see Section 6.4 for more details).

5.2.5.2 *Verbal fluency test fortis plosives*

The verbal fluency test (VFT), by nature a less formal and a less controlled task in which the participants name lexemes from a certain category in 60 seconds' time, presents a less guarded speech style than reading a word list (e.g. Labov, 1966).

In the present research, the VFT elicited altogether 443 eligible tokens (241 and 203 from the expatriate and control group respectively); i.e. word-initial prevocalic /p t k/ in monosyllabic lexemes. Upon transcription, however, it quickly became clear that the data could hardly be meaningfully compared, as some participants contributed with none or only very few tokens, and the tokens differed greatly in terms of the vowel environment. The sensitivity of VOT to its surrounding phonetic context (e.g. Higgins, Netsell,

& Schulte, 1998) would in high probability occlude any kind of L2 interference such as was seen in the preceding analysis, where the phonetic context was kept constant for each participant. However, not all was lost. There was one single lexeme which all participants³¹ utilized in the course of the VFT, namely the lexeme *cat*; therefore it was possible to compare the two groups' VOTs as produced when saying this particular lexeme. In cases when the participants produced this particular word more times than once, only the shortest VOT was included in the analysis. No other lexeme was produced by more than 50% of participants.

Figure 6 displays the boxplot of VOTs for /k/ in the lexeme *cat*. The expatriate group again exhibits a more restricted range than the control group. No outliers are present, but the upper whisker of the control group reaches to the region of 170 ms. A closer inspection of the data revealed that the participant responsible consistently exhibited longer than average VOTs without sounding overly hesitant or noticeably distinct. Given that the token does not lie in the outlier range, it was decided not to exclude it from the analysis. Table 11 below displays the descriptive statistics for both groups. As can be seen, both median and mean are higher for the control group.

		Expatriates			Controls
		British N = 8	Americans N = 9	pooled N = 17	pooled N = 16
/k/ in <i>cat</i>	<i>M</i>	80	77	78	103
	<i>SD</i>	20	18	18	35

³¹ VFT was not obtained from 1 expatriate participant

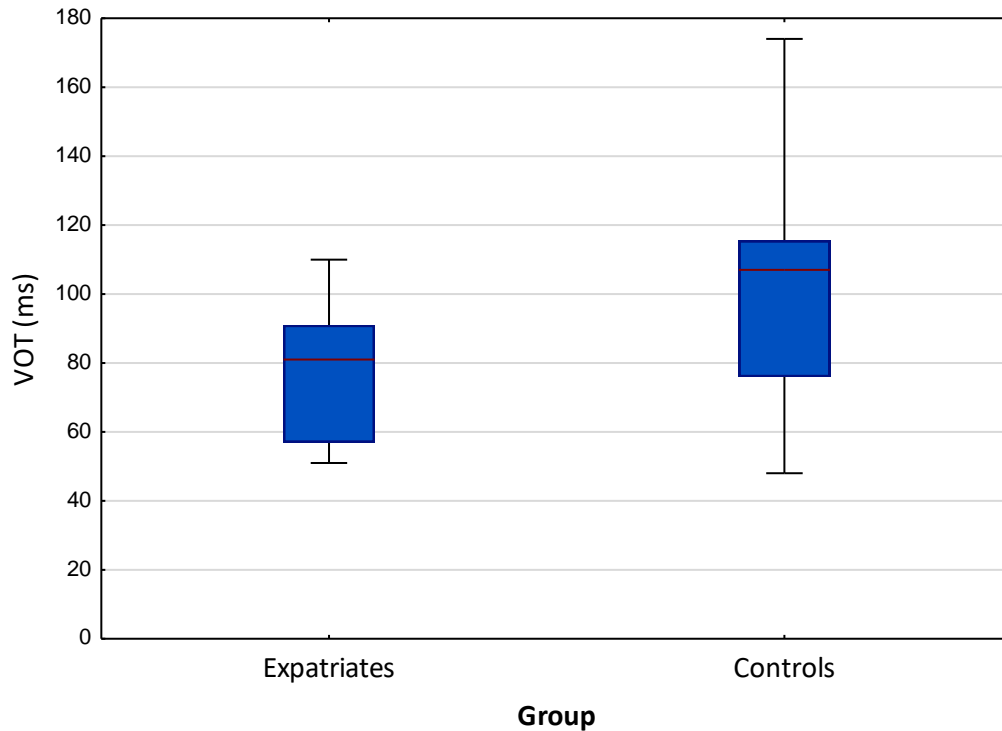


Figure 6. Boxplot of *cat* VOTs

The *cat* /k/ VOTs were examined as to the normality of distribution, using a visual inspection of the Q-Q plots and the Shapiro-Wilk test, which both indicated meeting the normal distribution requirement of the t-test. The assumption of homogeneity of variances was tested using Levene's test, the result of which indicated that the assumption was met. An independent t-test (two-tailed) was then conducted, indicating that a statistically significant difference existed between the two groups' means, $t(31) = 2.54$, $p = .016$, with a large effect size (Hedge's $g = .88$). When controlling for nationality, however, the t-test does not indicate any difference between the two groups ($t(21) = 1.64$; $p = .12$).

Discussion

In the less controlled verbal fluency test, the expatriate group displayed lower VOTs in the lexeme *cat* than the control group, supporting the hypothesis that Czech (and potentially Czenglish) short-lag plosives influence – shorten – the expatriates' L1 plosives. In this analysis, however, the statistical difference did not hold when controlling for the nationality of the participants. This may be caused by a much lower number of tokens entering the analysis (only one per participant). There was no indication of phonetic category divergence (i.e. lengthening VOTs in the expatriates in order to create a more contrasting category).

5.2.6 Discussion: fortis plosives

Voice onset time data elicited using the word-list reading task and the verbal fluency test (VFT) consistently follow the pattern of lower means in the expatriate group. The differences were shown to be statistically significant for /p/ and /t/ in the word-list reading task and for /k/ in the lexeme *cat* in VFT (here, however, the difference came out as non-significant when controlling for nationality), with large effect sizes. All in all, the data support the L1 attrition hypothesis that the expatriates' VOTs in fortis plosives shorten under the influence of Czech and possibly Czech-accented English, in both a highly formal and a less formal task. There was no evidence of phonetic category divergence (i.e. lengthening of VOTs in order to create a more contrasting category to the Czech short-lag fortis plosives) or hypercorrection on the part of the expatriates. Notably, a certain type of accent leveling can be observed in the expatriate data: the values fall within a much more

restricted range with smaller standard deviations than the control group means although the group comprises speakers of both British and American English.

Admittedly, both tasks are not exactly representative of “natural” everyday speech and present “guarded”, highly conscious speech styles. Both the controls and the expatriates may have felt incentivized to display “proper” pronunciation: the control group to represent the “unattrited”, “pure” English, and the expatriates (especially the teachers of English among them) to prove that their English did not “deteriorate”.

The shortening is best explained by Flege’s Speech Learning Model predictions: the expatriates’ fortis plosive VOTs have shifted towards the Czech short-lag ones; a shift towards which possibly contributed also the long-term daily exposure to the Czech-accented English. However, it needs to be kept in mind that fortis plosive VOTs present only a tiny feature of one’s speech production and of one’s foreign accent, with differences of 10-20 ms being virtually imperceptible with the naked ear.

5.2.7 Results: lenis plosives

5.2.7.1 Word list lenis plosives

After discarding 97 tokens (10% and 8% of tokens produced by the two respective groups) according to the criteria described above (5.2.4.2), 992 tokens (535 by the expatriate group, 457 by the control group) of pre-vocalic word-initial lenis plosives obtained through the word-list reading task remained for the analysis. Figure 7 below displays the percentage of negative (prevoiced) and positive short-lag VOTs as produced by the two respective groups. As can be observed from Figure 7, the expatriate group exhibit higher

proportion of negative VOTs in lenis plosives in the word-list reading task than the controls. This difference is statistically significant, as indicated by the chi square test ($\chi^2(1, N = 992) = 237.3; p < .001$), with a large effect size (Cramér's $V = .49$).

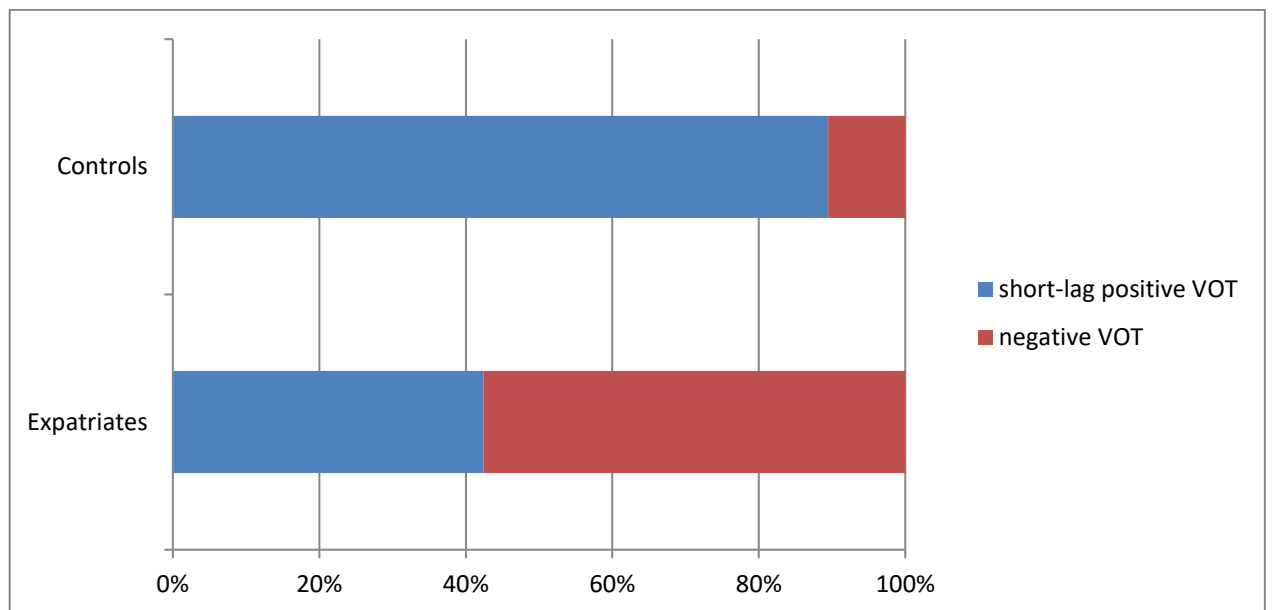


Figure 7. The percentage of negative and short-lag VOTs in lenis plosives produced by the expatriates and controls

However, given the different composition of the two groups as regards the two main varieties of English, it is important to analyze the data in greater detail to be able to disregard the possibility that the country of origin is the decisive variable here, rather than crosslinguistic influence. It is worth noting here that the research on both British and American English (Docherty, 1992 for an overview; Docherty, 1992 for Southern British English; Davidson, 2016, for American English) has shown that both prevoiced and short-lag realization of phrase initial /b d g/ exist in both varieties.

The plot in Figure 8 below breaks the dataset according to the group and country of origin, displaying the percentage of prevoiced plosives for each participant.

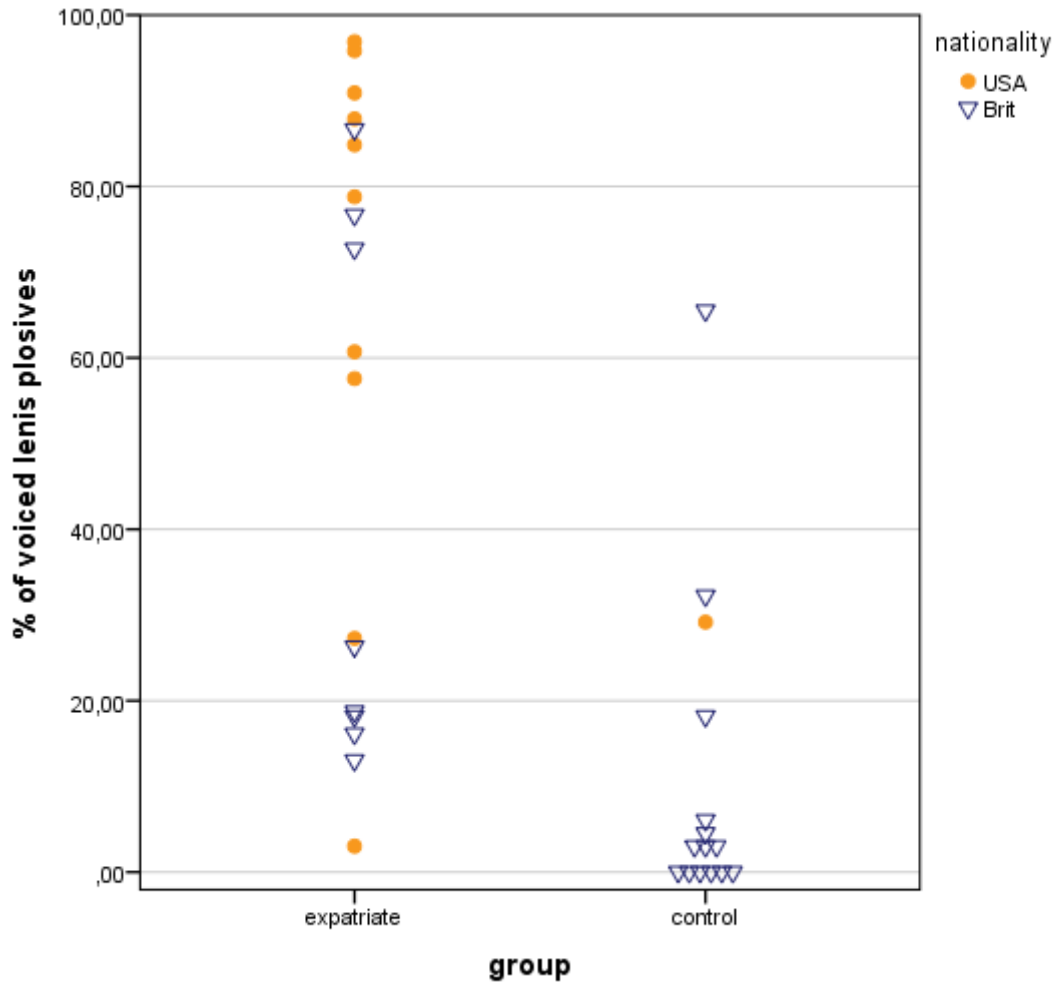


Figure 8. The percentage of word-initial prevoiced lenis plosives in individual participants grouped by country of origin and experimental group

Consistently, members of the expatriate group exhibit a higher percentage of prevoiced plosives. At the same time, Americans tend to have a higher percentage of negative VOTs than the British. To test whether the difference holds when controlling for dialect, another chi-square test was conducted, showing that British expatriates prevoice

lenis plosives significantly more often than the British controls: ($\chi^2(1, N = 664) = 98.8$; $p < .001$), with a medium effect size (Cramér's $V = .39$).

Discussion

Given the regular patterns in the data, it can be tentatively concluded that in the highly controlled word-list reading task, the expatriates differ from the controls in a higher percentage of negative VOTs – or prevoicing in plosives – which may be the influence of the Czech language or a sign of greater enunciation effort.

5.2.7.2 Verbal fluency test lenis plosives

As already stated above, the VFT presents a less formal task in which the participants recite items belonging to a certain category. Thus, while some participants may actually list identical items (the point in case being the lexeme *dog* here), it is by far not a rule.

Altogether 170 tokens of word-initial /b g d/ entered the analysis, 101 elicited from the expatriates, 69 from the controls. No eligible tokens were elicited from 1 control group participant (the only American); thus, the control sample comprises only British English tokens.

Figure 9 below displays the percentage of negative (prevoiced) and short-lag VOTs of the two respective groups as elicited through VFT. The distribution is similar to that of the word-list reading task, with the expatriates exhibiting a larger proportion of prevoiced word-initial lenis plosives, and the controls exhibiting no realizations of prevoiced lenis plosives. However, upon closer inspection it turns out that the main contributors of nega-

tive VOTs in the expatriate group are Americans, producing 80% of the prevoiced lenis-plosive tokens. Only 3 British expatriates produced prevoiced lenis plosives in this test, which, together with the fact that different number of tokens was produced by individual participants, does not allow for a meaningful statistical analysis comparing the expatriates and controls.

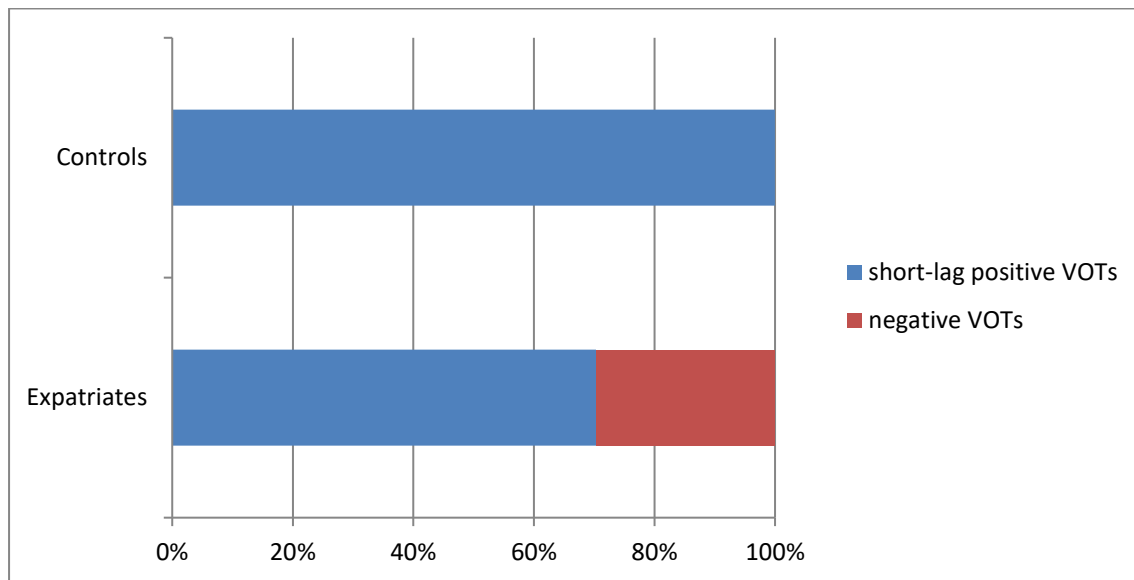


Figure 9. The percentage of negative and short-lag VOTs produced by the expatriates and controls in VFT

Discussion

The fact that there was overall a smaller percentage of word-initial prevoiced plosives, which arguably require greater production effort, indicates that VTF indeed presents a less “guarded”, more informal speech style than the word-list reading task.

As in the word-list reading task, the expatriate group exhibited a higher number of prevoiced lenis plosives in the tokens obtained through VTF; however, the dialectal composition of the two groups presents a confounding variable, rendering it impossible to

discern whether the differences in the realization of lenis plosive are caused by the variety of English, crosslinguistic influence or enunciation effort.

5.2.8 Discussion: lenis plosives

In the word-list reading task, which is highly controlled and induces high self-awareness on the part of participants, the data show a higher proportion of prevoiced word-initial lenis plosives in the expatriate group (regardless of the nationality of the participants) indicating either the L2 Czech influence or extra enunciation effort acquired as a habit over the years spent in the Czech Republic. The latter is perhaps more likely given the results of the study by Stoehr, Benders, van Hell, and Fikkert (2017), in which the participants did not adopt the more demanding realization of the L2 lenis plosives.

This conclusion, however, cannot be further supported with the VFT data, with much fewer tokens (of greater diversity than in the word-list reading task) entering the analysis.

5.3 Desonorization of word-final phonologically voiced plosives

5.3.1 Introduction

In the Czech language, phonologically voiced plosives are completely desonorized in word-final positions (Skarnitzl, 2011). However, some relatively recent investigations indicate that much like in other languages, the length of the preceding vowels differs slightly, with vowels preceding devoiced plosives being longer (Podlipský & Chládková, 2007; Podlipský as cited in Skarnitzl, 2011).

In English, the situation seems to be more complex, as already discussed in the section on VOTs in plosives (5.2.1). In word-final pre-pausal positions English lenis plosives are often desonorized as well, with the presence or duration of phonation not being the main perception clue as to the classification of the said plosives: pre-fortis clipping seems to be a much more salient perception clue (Roach, 2009). The plosion following the release of closure is sometimes very weak and neither audible (*ibid.*) nor visible in the oscillogram. Nevertheless, the actual presence and duration of phonation was investigated in English word-final plosives, or, more specifically, within the closure phase, with results indicating that there is a difference in duration of phonation, with lenis plosives exhibiting longer periods of phonation within the closure than fortis plosives (Docherty, 1992; Flege, Munro, & Skelton, 1992).

In Czech-accented English, devoicing of word-final consonants in positions where voicing is mandatory (mid-utterance pre-vowel positions) is a common feature, especially in less advanced students, and is rather salient: native speakers of English tend to perceive speech with such desonorization as heavily-accented (Tomková, 2008; and also as commented on by one of the expatriate participants in the present research).

To the best of the author's knowledge, no L1 attrition study has been conducted concerning the L2 → L1 influence on word-final plosives. In fact, Thomas (2011, p. 125) states that pre-pausal stop releases are "almost completely ignored by sociolinguists" (p. 125).

5.3.2 Hypothesis

The above outlined characterizations of Czech and English word-final plosives allow for the following hypothesis:

The expatriates' word-final pre-pausal plosives are completely desonorized under the influence of Czech and Czech-accented English.

5.3.3 Method

5.3.3.1 Material

The material for this analysis comes from the participants' reading of the word-list (Section 5.1.1 above and Appendix 4 for more details) and the verbal fluency test (VFT, Section 5.1.2). The following table (Table 12) provides the overview of the word-list items with word-final post-vocalic lenis plosives. As can be observed, all items are monosyllabic.

/b/ N = 7		/g/ N = 7		/d/ N = 10	
cab	robe	bag	neg	bed	mad
cob	slab	bug	pig	bud	need
cub		brogue		cod	pod
pub		dog		dead	Ted
rib		league		hid	thread

Due to a low number of monosyllabic tokens elicited by VFT, by nature a much less controlled task, disyllabic items ending with lenis plosives (e.g. the lexeme *mustard*) were admitted for the analysis as well.

5.3.3.2 Measurement

Initially, it was the duration of phonation during the closure period that was of interest to the author of the present dissertation, a method used by both Docherty (1992) and Flege, Munro, & Skelton (1992). The researcher's intention was to utilize PRAAT (Boersma & Weenink, 2014, 2018) function Voice Report which returns the percentage of locally *unvoiced* frames. However, it soon transpired that the quality of the recordings did not allow for such measurement: the vast majority of the plosives in question seemed to be voiced throughout the whole duration of the closure, which did not seem plausible considering the previous body of research. When the corresponding voiceless minimal pair items were checked, they displayed a considerable degree of voicing (of up to 60%) within the closure phase as well. The explanation is rather simple, but it had not been foreseen at the time of recording: reverberation. The different rooms in which the interviews, including the language tasks, were recorded created different levels of reverberation, thus preventing the above outlined method of voicing measurement.³² A purely auditory analysis was ruled out as too subjective. Nevertheless, not everything was lost. Some curious instances of clear post-release voicing were uncovered in some participants. Post-release voicing may be considered as a sign of very careful pronunciation, as extra effort is required on the part of the speaker. Thus, the word-list and VFT recordings were examined in PRAAT (Boersma & Weenink, 2014, 2018) for this specific phenomenon.

The target plosive realization with post-release voicing looked like the one in Figure 10, displaying the word *cab* best phonetically transcribed as [k^hæb^ə]. Only tokens

³² The presence of reverberation also prevented the analysis of word-final phonologically voiced fricatives.

with a prominent waveform amplitude (sometimes accompanied with very clear vertical striation in the spectrogram), an increase in intensity (shown in Figures 10-12 as the yellow line), and clear audible voicing were coded as exhibiting post-release voicing. In contrast, tokens like the one displayed in Figure 11 were not considered as post-release voiced: the amplitude and intensity gradually decrease and no extra voicing effort is neither audible nor discernible in the oscillogram and spectrogram; the blue vertical lines, which normally indicate phonation, are the manifestation of reverberation here. The plosives exhibiting no closure release (such as in Figure 12 below) were classified as “no burst” plosives; this realization is indicative of a less careful pronunciation. Word-final plosives with post-release voicing, on the other hand, may be considered as a feature of extra-careful pronunciation.

Several cases of plosives were excluded from the analysis due to the background noise (i.e. tapping onto the table), fricative or breathy realization without a clear burst, or when linked closely to the following word.

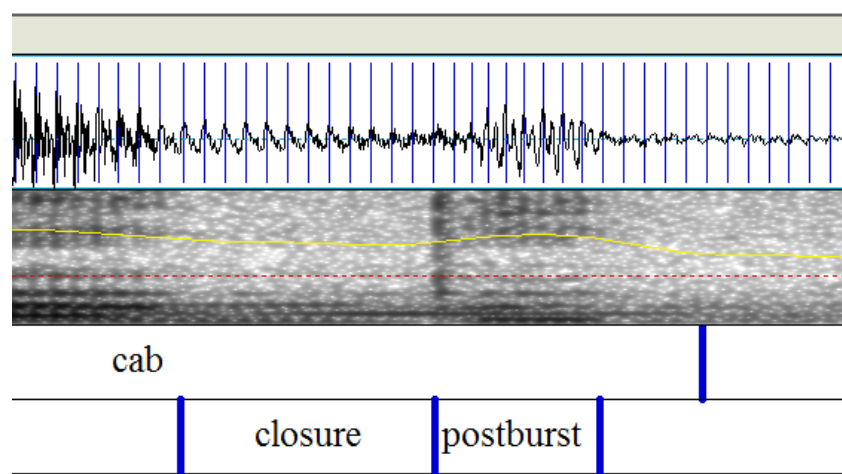


Figure 10. The lexeme *cab* with clear post-release voicing

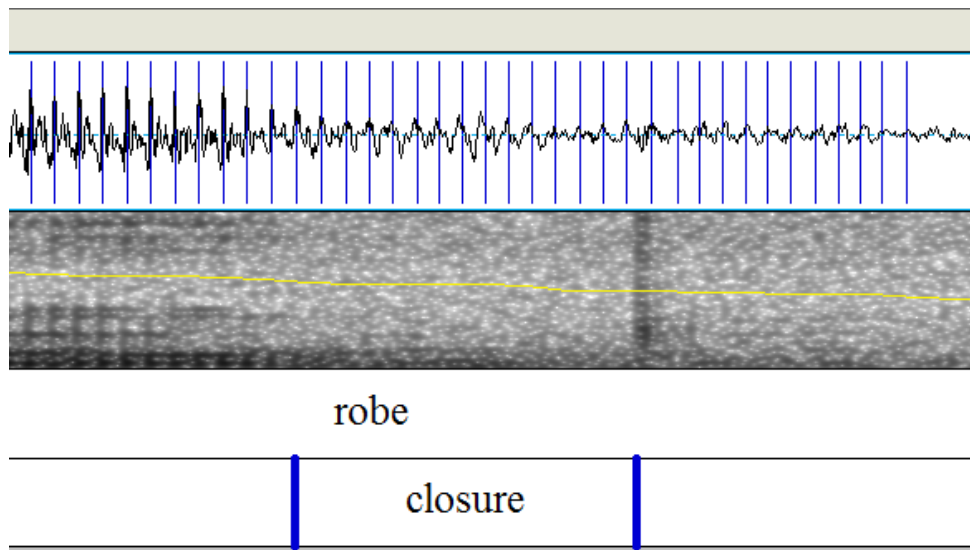


Figure 11. The lexeme *robe* with strong reverberation and no post-release voicing

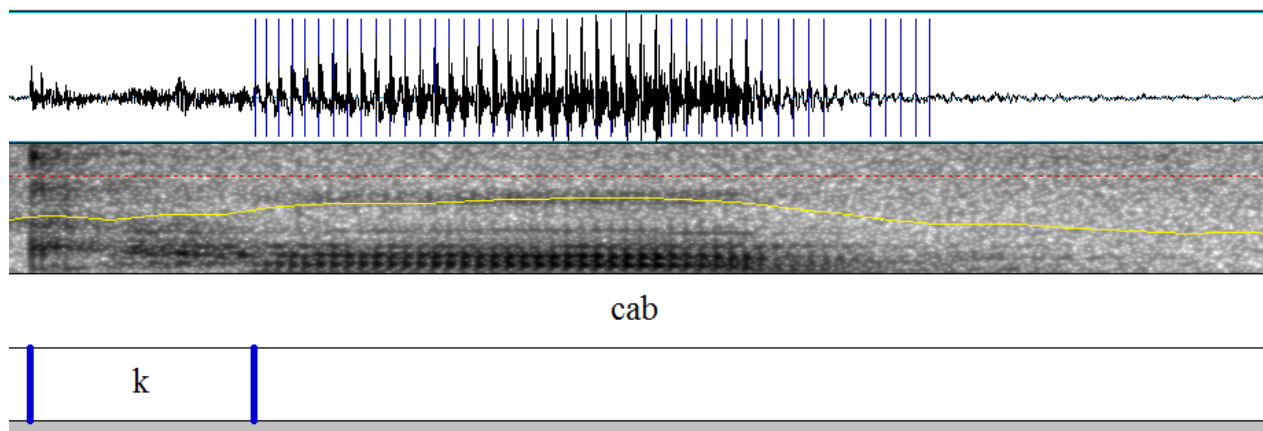


Figure 12. The lexeme *cab* with a missing word-final closure release

To evaluate the reliability of such classification, the measurements of 4 participants (or 12% of the plosives under investigation) were remeasured, with 98% agreement.

5.3.4 Results: word-final lenis plosives

5.3.4.1 Word-list word-final lenis plosives

Out of 793 word-list reading tokens, 753 entered the analysis (419 tokens elicited from the expatriate group, and 334 from the control group); the remaining tokens were excluded based on the criteria outlined in the previous section.

Figure 13 below displays the percentages of the three realizations of word-final plosives, i.e. with unreleased closure, canonical, and with post-release voicing. As can be observed, the expatriates overall exhibit a higher percentage of word-final fully voiced lenis plosives and lower percentage of unreleased plosives.

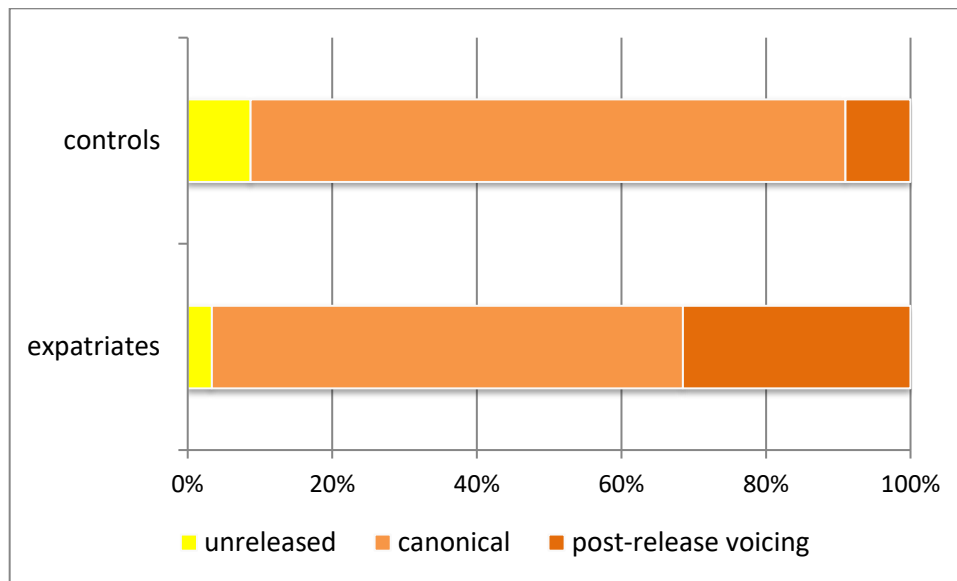


Figure 13. Word-final lenis plosives realizations in the word-list reading task

Figure 14 on the following page, in turn, displays the percentage of word-final lenis plosives with post-release voicing as realized by speakers of the two major varieties (British and American English). It becomes immediately apparent that it is mostly the

speakers of American English (represented by orange dots) who are responsible for the high percentage of the said realization within the expatriate group.

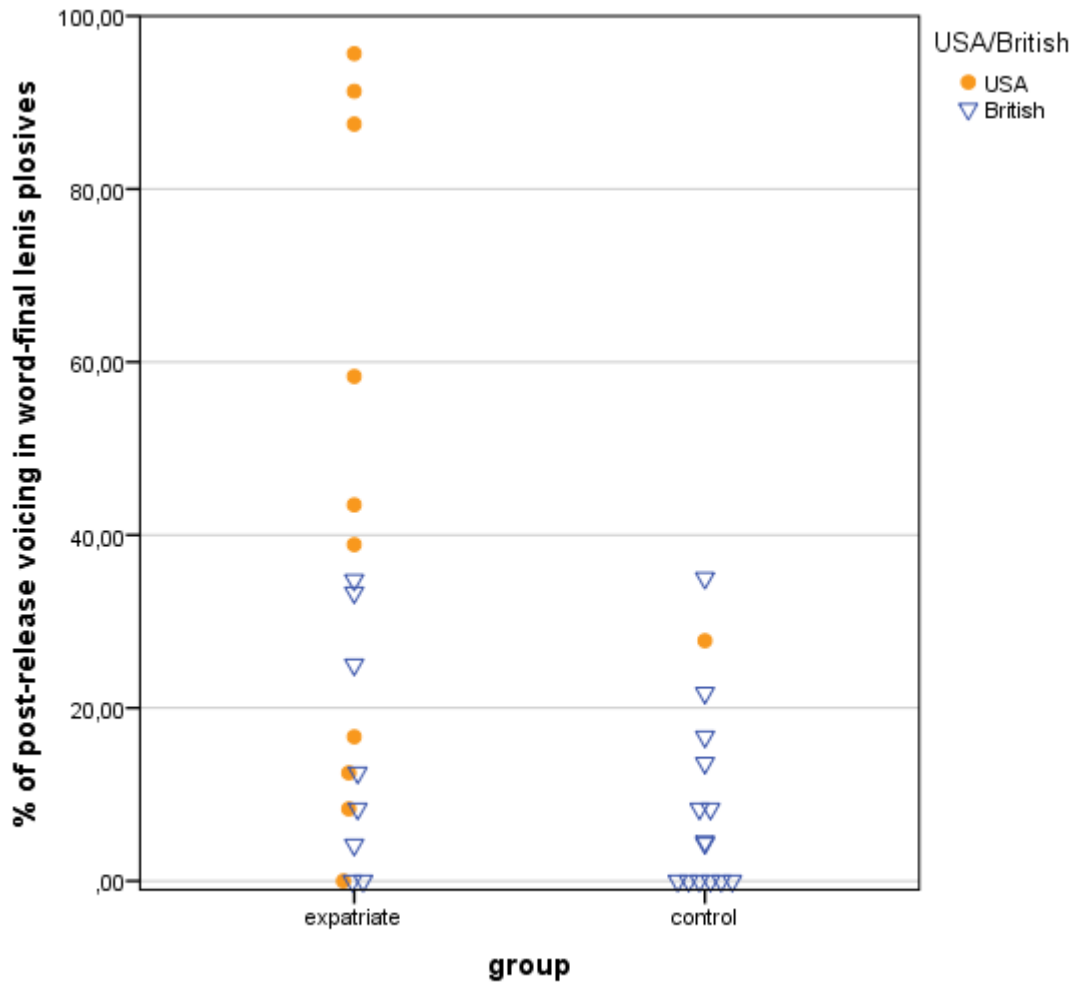


Figure 14. The percentage of word-list reading word-final lenis plosives with post-release voicing by nationality

With the native dialect being potentially a confounding variable, only the British English speakers' data were used for the following inferential statistical analysis. A chi-square test was calculated for the British expatriates and controls, indicating a statistically significant difference between the two groups, $\chi^2(2, N = 504) = 13.36, p = .001$, with a small

effect-size, Cramer's $V = .12$. The subsequent analysis of standardized residuals indicated that the expatriate Brits exhibit a significantly lower count of unreleased plosives than expected if the two groups were identical. Other standardized residuals, including the ones for the frequency of plosives with post-release voicing did not reach significance levels.

5.3.4.2 Verbal Fluency Test word-final lenis plosives

Altogether 131 tokens of mono- or disyllabic tokens ending with a phonologically voiced plosive were collected through the VFT, 73 from the expatriate group and 58 from the control group. Only two tokens per each group (each by a different participant) were realized without the burst. The following chart (Figure 15) displays the percentages of the three realizations of word-final plosives, i.e. with unreleased closure, canonical (with burst but no post-release voicing), and with post-release voicing as obtained through the VFT.

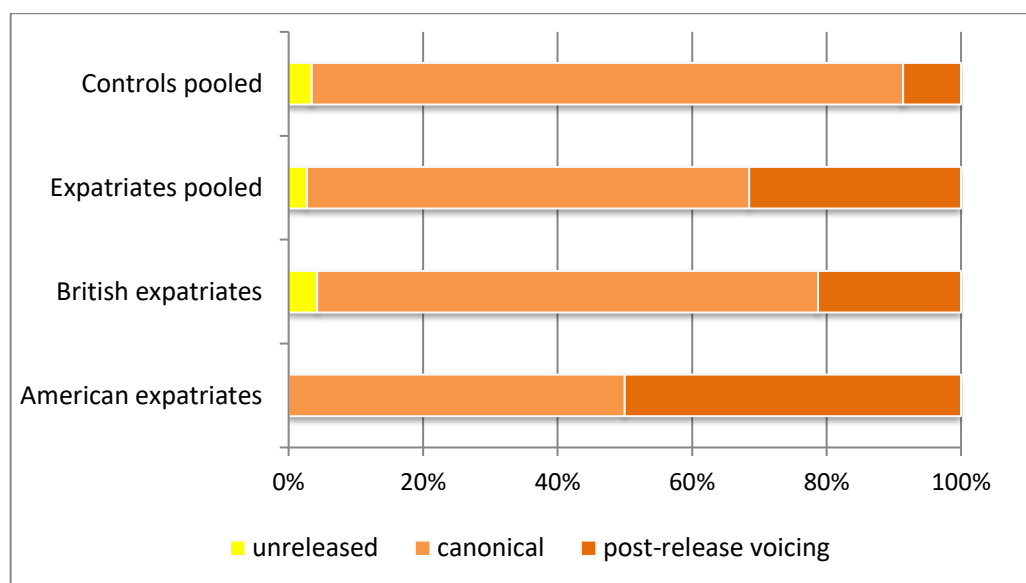


Figure 15. VFT word-final lenis plosives realizations in %

As can be observed from the chart in Figure 15, the control group exhibits a lower percentage of post-release voicing realization of word-final lenis plosives as compared to both expatriates as a group and to the American/British English speaker subgroups. The American expatriates again exhibit a higher frequency of post-release voicing. Fisher's exact test was conducted comparing the prevalence of the three different realizations of the word-final lenis plosives in British participants, indicating that there is a statistically significant difference between the British expatriates and controls, $p = .045$.

5.3.5 Discussion: word-final lenis plosives

As with the previous analysis of word-initial lenis plosives, the expatriates' English varieties seem to present a confounding variable, with the American (expatriate) speakers exhibiting a higher percentage of post-release voicing than the British. Given that the control group comprised almost entirely speakers of British English, inferential statistics were conducted only for the comparison of British expatriates and British controls.

The analysis of word-final lenis plosives obtained through the word-list reading task would suggest that the British expatriates exhibit a more careful pronunciation of word-final lenis plosives, realizing them with closure release more frequently than the British controls. Similarly, the British expatriates also appear to pronounce more carefully in the less formal task (VFT), exhibiting a higher proportion of post-release voiced plosives than the British controls. The highest proportion of post-release voicing, however, can be observed in the sample of American expatriates. Whether this is a feature of American

English pronunciation remains unclear, as I was unable to locate any study which would claim so.

The data presented above are not fully conclusive as to the potential L1 attrition since it was not possible to examine the amount of voicing in a more granular detail, i.e. during the closure phase of the plosive. The fact that the expatriates exhibit somewhat higher occurrence of word-final lenis plosives realized with a more careful, even slightly exaggerated pronunciation (i.e. with prominent post-release voicing) is probably best interpreted as a sign of enunciation effort (frequently mentioned in the qualitative interviews, see Section 6.4 for further discussion) or language maintenance effort aiming at “fighting off” the Czech accent. The latter is supported by participant’s EG06³³ narrative. When the American participant EG06 first arrived in the Czech Republic in the 90s, he found the Czech-accented English “ear-grating”, and speculated one of the reasons for this persisting impression was the ever-present devoicing of word-final obstruents by Czechs. Therefore, it is not unreasonable to assume that the motivation behind his careful pronunciation of not only word-final plosives (he produced almost 90% of word-list tokens with post-release voicing) but also of word-final fricatives (which he sometimes produced with a distinguishable schwa, as e.g. in *doze* [douz^ə]) was to consciously avoid sounding like a Czech user of English. This may have been the motivation of some other expatriate speakers as well, with the immediate context, i.e. data collection for dissertation on L1 attrition, only strengthening the potential desire to *not* sound like a Czech.

³³ Expatriate group participant nr. 6

5.4 Dental fricatives

5.4.1 Introduction

Dental fricatives /θ ð/ do not exist in the Czech phonetic system (Skaličková, 1974), which seems to be the case of the majority of the world's languages as well: only about 5% of languages feature them in their phonetic repertoires according to PHOIBLE Online, a repository of cross-linguistic phonological inventory data (Moran, McCloy, & Wright, 2014). It is no surprise that the two phonemes present a considerable challenge for most learners of English, including the Czech ones. This is especially the case of the voiced dental fricative in the Czech context (Tomková, 2008), which tends to be substituted with /d/. However, considerable variation exists among various sociolects and regional varieties of L1 English as well. Leaving aside Kachru's (1992) Outer Circle Englishes and focusing on the varieties within the Inner Circle, th-fronting (i.e. labio-dental realization) is a common feature of South-East dialects and Estuary English (Kerswill & Williams, 2002). Another realization, namely th-stopping (i.e. dental or alveolar plosive realization) is found e.g. in Liverpool (Watson, as cited in Drummond, 2018), some American varieties (e.g. in Cajun English; Dubois & Horvath, 1998), and some Irish varieties (Honeybone, as cited in Drummond, 2018). The affricate realization is equally commonplace, especially in the case of /ð/ in function words (Ogden, 2009). In fact, the canonical realization as a voiceless and voiced fricative may not be all that common, as shown in the study by Smith (2013) in which she analyzed /θ/ and /ð/ realizations by 4 Ohio speakers: only 55% and 20% of tokens respectively were realized canonically, other realizations included

stopping (16%, 18%), devoicing (9%), approximation (4% and 15%), nasal realization (2% and 23%) and affrication (3%, 1%).

To the best of my knowledge, there is no study focusing on dental fricatives in the L1 attrition context.

5.4.2 Hypothesis

The above outlined characterization of dental fricatives allows to hypothesize the following:

Anglophone expatriates exhibit L1 attrition in the form of higher occurrence of th-stopping under the influence of Czech and Czech-accented input.

5.4.3 Method

5.4.3.1 Material

The material for this experiment comes from the word-list reading task and the verbal fluency test. Table 13 on the following page provides the overview of the word-list items containing the two dental fricatives in question. As regards VFT tokens, all instances of /θ/ and /ð/ regardless of the position and the number of syllables were analyzed, with the exception of pre-consonant instances. The tokens differed from participant to participant given the nature of the task, with some participants contributing no tokens.

Table 13 <i>Word-list /θ/ and /ð/ items</i>		
<i>/θ/ N = 14</i>		<i>/ð/ only word-initially N = 5</i>
bath	thermometer	their
cloth	thistle	there
path	thief	those
teeth	think	these
thanks	thought	they
theory	thunder	
thermal	youth	

5.4.3.2 Measurement

The realizations of dental fricatives were categorized as either canonical, affricate, fronting (i.e. the manner of realization was closer to or identical with labiodental fricatives), stopping (i.e. the manner of realization was that of plosives) and sibilance, with voiced and voiceless realization for the phonologically voiced dental fricative. The method used for this categorization was a close auditory analysis for general impression, and a detailed visual inspection of the waveform and spectrogram, focusing on the presence of burst (or closure + burst sequence in word-final positions) and the presence or absence of friction. Table 14 on the opposite page summarizes the criteria for the categorization.

Excluded from the analysis were tokens with loud background noise preventing accurate categorization.

Table 14
Criteria for categorizing dental fricative realizations

Realization	Criteria
Canonical	The auditory impression is that of a dental fricative, the spectrogram does not show any burst in the first 25% of duration of the fricative. Voicing is preserved for more than 50% of the duration of /ð/
Affricate	The auditory impression is that of a dental fricative or an affricate, the spectrogram shows a burst at the onset of the fricative in word-initial fricatives, in word-final fricatives there is a closure period without fricative noise and a burst or a clear border between closure and onset of fricative noise without a prominent burst.
Fronting	The overall auditory impression is that of a labiodental fricative.
Stopping	The auditory impression is that of a plosive. No friction is audible, there is no or very little friction in the spectrogram. There is a clear burst or a series of bursts. The vowel which follows commences very shortly after the burst.
Sibilance	The auditory impression is that of a sibilant; the consonant is louder than a dental fricative, it has greater amplitude. The spectrogram shows greatest articulatory energy at 8,000 Hz and above.
Devoicing	The auditory impression is that of a voiceless consonant. The lack of voicing is indicated by the absence of pulses in the waveform and the absence voicing bar in the spectrogram. This analysis was conducted only for word-initial phonologically voiced dental fricatives due to interference of reverberation in other positions.

5.4.4 Results: voiceless dental fricative

5.4.4.1 Word-list voiceless dental fricatives

Having excluded 4 tokens, altogether 472 word-list tokens entered the analysis.

The following table (Table 15) displays the number of tokens and the corresponding percentage per each type of realization in each group.

Table 15
Word-list reading task: frequencies of different /θ/ realizations

Group	Realization				
	canonical	affricate	stopping	fronting	sibilance
Expatriates N = 18	192 (76%)	55 (22%)	4 (2%)	0	0
Controls N = 16	186 (84%)	33 (15%)	0	1 (0.5%)	1 (0.5%)

The control group display a slightly higher percentage of canonical realization than the expatriates, who in turn exhibit higher percentage of affricate realization. The other realizations were rare in both groups. Figure 16 on the opposite page displays the frequency of /θ/ canonical realizations by the speakers of British and American varieties of English, showing that in the expatriate group 3 American participants realized the voiceless dental fricative canonically in less than 50% of times. These non-canonical realizations were mostly affricates; there were in total only 4 instances of stopping. Other American expatriates did not exhibit /θ/ pronunciation patterns different from the speakers of British English. As regards the comparison to the control group, the plot shows that there were no differences between the British expatriates and controls. This is further confirmed by a chi-square test comparing the distributions of canonical and non-canonical realizations for the expatriate and control speakers of British English: $\chi^2(1, N = 321) = 0.002, p = .96$.

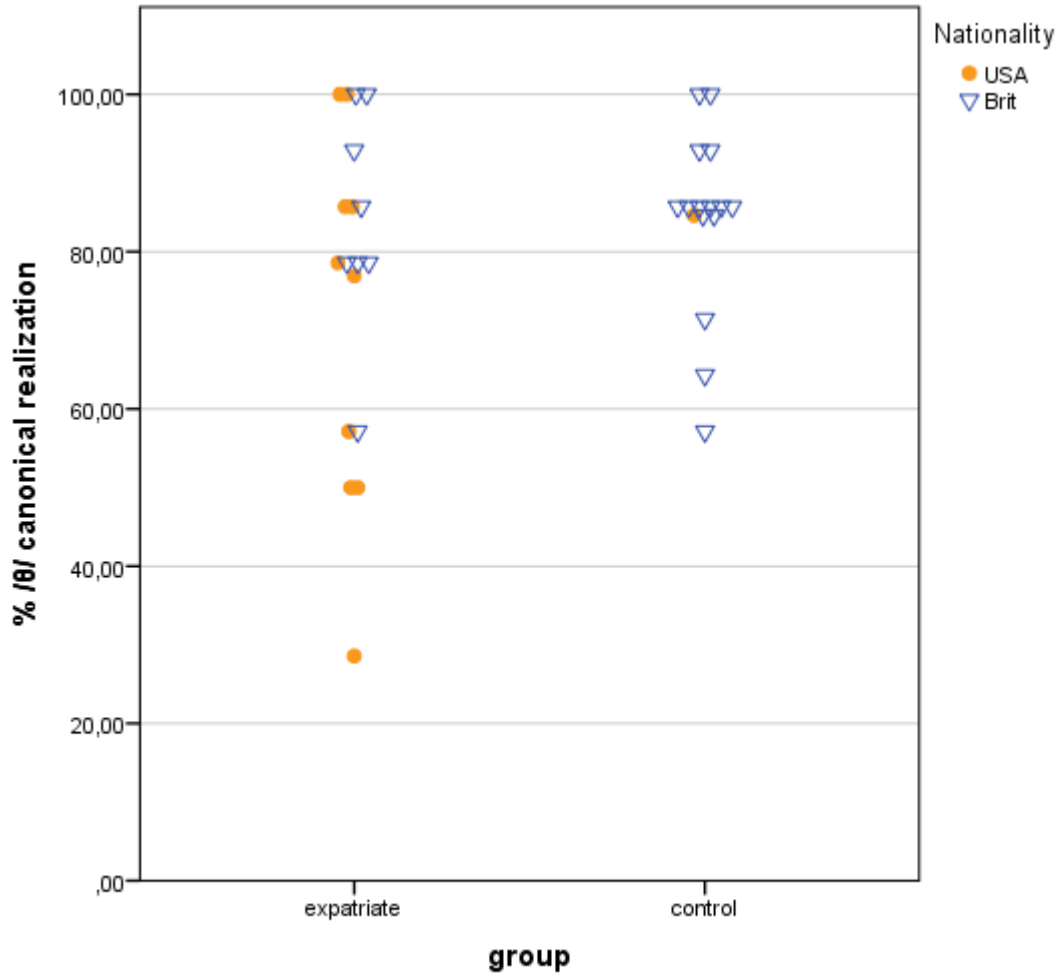


Figure 16. The percentage of /θ/ canonical realizations by the speakers of British and American English

5.4.4.2 Verbal fluency test voiceless dental fricatives

Table 16 on the following page provides frequencies of different /θ/ realizations as elicited through the VFT, altogether 63 tokens. No tokens were elicited from several participants; the majority of participants contributed with 1 or 2 tokens, with only 6 participants (2 controls and 4 expatriates) contributing with 5 and more tokens.

Table 16
VFT: frequencies of different /θ/ realizations

Group	Realization				
	canonical	affricate	stopping	fronting	sibilance
Expatriates N = 15 ^a	31 (82%)	6 (16%)	0	1 (3%)	0
Controls N = 12 ^b	20 (80%)	5 (20%)	0	0	0

^a no tokens were obtained from 3 expatriate group participants
^b no tokens were obtained from 4 control group participants

The dataset is too limited to allow for a meaningful comparison of the two groups, or indeed of individuals within the groups, especially with so many participants contributing no or only very few tokens. It is safe to say, however, that the distribution of the realization seems identical to that of the word-reading task presented above, with prevailing canonical realization, followed by affrication, with other realizations being negligible.

5.4.5 Discussion: voiceless dental fricative

The word-list reading data presented above show neither higher preference for non-canonical realizations (especially stopping) nor a tendency towards hypercorrect pronunciation of /θ/ in the expatriate group as compared to the controls. Within the expatriate group there are 3 speakers of American English who exhibited higher proportion of non-canonical realization than the rest of the expatriates; these realizations, however, were in vast majority affricates, which are in many cases perceptually very

similar to the canonical realizations and are most probably not a manifestation of L1 attrition. The VFT data follow a similar pattern as regards the type of realizations.

The data indicate neither L1 attrition in the direction of stopping (typical of Czech speakers of English) nor hypercorrection due to enunciation effort, L1 maintenance effort, or phonetic category dissimilation on the part of the expatriates. This would indicate that phonemes which do not have an L2 counterpart are immune to both assimilation and dissimilation in the L1 attrition context. At the same time, there is no evidence of convergence to the Czech speakers of English.

5.4.6 Results: voiced dental fricative

5.4.6.1 Word-list voiced dental fricatives

After excluding 3 tokens, 167 word-list word-initial /ð/ tokens entered the analysis (88 and 79 by the expatriates and control respectively). The following table (Table 17) displays the distributions of the realizations. As can be observed, canonical realizations prevail in both groups. The expatriates exhibit a higher proportion of canonical realizations. The most common non-canonical realizations in both groups are devoiced dental fricatives and affrication, the other realizations are rare. Regarding the distribution of non-canonical realizations among the participants, it is fairly evenly spread, with very few participants contributing only canonical tokens, very few contributing only non-canonical tokens, and very few contributing only one type of non-canonical realization.

Table 17

Word-list reading task: frequencies of different /ð/ realizations

Realization		Group	
		Expatriate <i>N</i> = 18	Control <i>N</i> = 16
dental fricative	voiced (canonical)	53 (60%)	33 (42%)
	devoiced	7 (8%)	16 (20%)
affricate	voiced	10 (11%)	9 (11%)
	devoiced	5 (6%)	15 (19%)
stopping	voiced	8 (9%)	0
	devoiced	2 (2%)	6 (8%)
fronting	voiced	2 (2%)	0
	devoiced	0	0
sibilance	voiced	1 (1%)	0
	devoiced	0	0
voiced realizations		74 (84%)	42 (53%)

The speakers of American English within the expatriate group showed a slightly higher preference for stopping, whereas the speakers of British English exhibited a slight preference for affrication. No such preference was observed among the speakers of British English within the control group. A chi-square test indicated higher tendency towards canonical realization (as opposed to non-canonical) in the expatriate group: $\chi^2(1, N = 167) = 5.68, p = .017$; with a small effect-size, Cramer's $V = .18$. Another trend than can be observed in Table 17 is a higher preference towards voiced realizations among the expatriate group, which is also statistically significant: as regards voiced versus devoiced realizations in case of word-initial tokens, the expatriates exhibit statistically higher proportion

of voiced realizations, $\chi^2(1, N = 167) = 18.77, p < .0001$, with a medium effect-size, Cramer's $V = .34$.

5.4.6.2 Verbal fluency test voiced dental fricatives

In VFT, only a handful of tokens were elicited from the control and expatriate group (10 and 12 respectively), with only several individuals from each group contributing to the totals. The majority of tokens were realized canonically, the other realizations included affrication, stopping and fronting. No further generalization seems to be possible from such a limited dataset. Of interest is perhaps the case of the expatriate participant EG09, who in the word-reading task realized all /ð/s canonically, but employed fronting in 2 (out of 4) word-initial tokens in VFT, which indicates that his pronunciation was indeed more guarded in the word-list task.

5.4.7 Discussion: voiced dental fricative

The fact that the expatriate group exhibited higher proportion of canonical and voiced non-canonical realizations of word-initial /ð/ than the controls may be interpreted as greater enunciation effort the expatriates claim in the qualitative interviews to be used to (see Section 6.4 for an in-depth discussion). Alternatively, it may indicate L1 maintenance effort, i.e. the effort to distinguishing their /ð/ realizations from the typical Czenlish realizations and maintain “proper” English pronunciation. The fact that stopping and fronting were not all that prevalent may be explained by the high degree of formality of the word-reading task (and, to a lesser degree of the VFT). In the qualitative interviews the expatriates often claimed having to abandon their local dialect in order to

be comprehensible to the Czech users of English, which is a further explanation of the relatively low proportion of non-canonical realizations. There is no evidence of L1 attrition in the sense of adopting Czenglish stopping in the process of phonetic assimilation towards the Czech language.

5.5 Cross-linguistic influence on individual phonemes – Conclusion

In this chapter of the present dissertation, the realizations of several phonemes were analyzed for signs of L1 attrition. The features investigated here included voice onset times (VOTs) of word-initial fortis plosives, voicing in word-initial lenis plosives, voicing in word-final phonologically voiced plosives, and the manner or realization of word-initial dental fricatives. The data for the analyses were obtained from two formal tasks, namely the word-list reading task and the less formal verbal fluency test. The hypotheses were formulated in terms of Flege's (e.g. 2002) Speech Learning Model, predicting phonetic category assimilation (i.e. becoming similar to the L2 phoneme) in case the L1 phoneme is identified as similar to the L2 one, and in terms of Communication Accommodation Theory predicting convergence towards the interlocutor in contexts when one wishes to enhance communication and come across as likeable (Beebe & Giles, 1984).

The analysis of word-initial /p t/ VOTs from the word-list reading task and the lexeme *cat* obtained in the VFT indicated that the expatriates' VOTs became slightly shorter in comparison to those of controls. This finding is in line with the previous body of research which shows that long-lag VOTs tend to shorten if the speaker finds themselves in a short-lag VOT linguistic environment. Additionally, a kind of dialectal leveling was

observed among the expatriate group: the expatriates exhibited a much more restricted VOT range than the controls.

Word-initial lenis plosives were analyzed with regard to the presence or absence of voicing before the release of the closure. In the word-list reading task the expatriates exhibited a higher proportion of prevoiced lenis plosives regardless of their nationality. Similar distributions were observed in VFT data; here, however, it was not possible to control for nationality. Given that the (scarce) literature seems to suggest that Czech language features prevoiced lenis plosives, the results may again be interpreted as L2 influence resulting in phonetic assimilation. More plausible, however, is the explanation that prevoicing of lenis plosives is the manifestation of enunciation effort on the part of the expatriates.

The expatriates also exhibited higher proportion of enunciated (i.e. with clear post-release voicing) word-final lenis plosives. This was especially the case of speakers of American varieties of English. However, the difference held even when controlled for this factor. Thus, the hypothesis that the expatriates devoice word-final plosives due to L2 phonetic interference was not supported. Instead, perhaps to distance themselves from the surrounding Czech-accented English, the expatriates pronounce the word-final plosives in a more prominent (and effortful) manner.

Finally, the realization of dental fricatives was examined. The two groups did not differ in the distribution of the various realizations of the voiceless dental fricative. As regards the voiced dental fricative, the expatriate group exhibited a higher frequency of canonical realization (as well as various types of other voiced realizations) than the control

group, which may again be interpreted as enunciation effort. The hypothesis that the expatriates adopt stopping under the influence of the Czech phonetic system was not supported.

In conclusion, the control and expatriated group differed in the realization of most of the phonemes (with the exception of /θ/) examined in this section of the dissertation. The expatriate group appeared to produce lenis plosives and the voiced dental fricative in a more effortful, more meticulous way. The expatriates' word-initial fortis plosives, however, featured shorter VOTs: a shortening most probably caused by the influence of the Czech and Czech-accented short-lag plosives. The question may arise why it is only VOTs in fortis plosives that exhibit movement towards Czech phonemes. It may be speculated that it is easier to control the extent of voicing and place and manner of articulation of the other phonemes investigated here than the duration of aspiration of fortis plosives. Therefore, even if the expatriates may aim for clear, "non-attrited" production of fortis plosive VOTs, they fall "short" of the target, unless they greatly exaggerate.

6 Crosslinguistic Influence on Global Accent

6.1 Introduction

The previous chapter presented some evidence of changes in the production of several phonemes, namely plosives and dental fricatives. Arguably, these are not the only phonemes undergoing changes in the expatriate native speakers of English. However, the very slight deviations from the “non-attrited” norm are in many cases extremely hard to identify with the naked ear and specialized software is needed for their analysis. In addition, it is the interplay of the individual phonemes and suprasegmentals (intonation, stress, and juncture) that creates the global accent impression. This chapter presents data from a foreign accent rating (FAR) experiment, in which a group of raters listened to the recordings of the expatriates and controls retelling a film clip (the Charlie Chaplin task) and assessed how native-like the accents of individual speakers sounded. This experiment was conducted to test the hypothesis that the expatriate participants had acquired a foreign accent over the period of their stay in the Czech Republic. The quantitative data from the FAR experiment are then complemented with the qualitative narrative data obtained through semi-structured interviews regarding the expatriates’ personal experience with L1 attrition, including attrition in the overall of accent.

6.1.1 Free speech data and sociolinguistic context

Free speech data, such as retelling of a story, feature several advantages over other types of linguistic material, such as words or sentences read in isolation and various other

language tests. Unlike these elicitation methods, free speech is the most natural way of language use and allows the study of “language properties that emerge only in connected speech, such as temporal reference or cohesiveness.” (Pavlenko, 2008, p. 311). The analysis in terms of complexity, accuracy, and fluency is possible on virtually all linguistic levels, including phonetics, morphology, lexicon, syntax, and pragmatics, as all of the subcomponents of language knowledge are activated at the same time (Schmid, 2011, p. 187). In bilingualism studies free speech is typically elicited using film or picture stimuli (an overview of existing methods can be found in Pavlenko, 2008). The Charlie Chaplin task is one such method commonly used in the field of L1 attrition (Schmid, 2011).

Schmid (*ibid.*) warns that even the free speech/naturalistic data are not devoid of the observer’s paradox and the participants are going to be aware (and perhaps feeling self-conscious as a result) of the fact their linguistic production is being recorded to be studied. Arguably, however, the participants pay much less attention to their language production than in more tightly controlled formal task, which is an idea going back to Labov’s early work (e.g. 1966).

In the context of the present dissertation, it is important to discuss the audience design (Bell, 1984) of the Charlie Chaplin task retelling. The addressee, i.e. the audience who is known, ratified, and addressed (Bell, 1984, p. 159), was the researcher, a highly proficient non-native speaker of English who recorded the retelling. In the informed consent forms (Appendices 7 and 8) the participants were informed of the future auditors, i.e. a known and ratified audience (Bell, 1984, p. 159), the foreign accent raters, whose L1 was not, however, specified. Given this fact, and the fact that prior to the Charlie Chaplin

task the expatriate participants were interviewed about their L1 attrition experience (including in the domain of phonetics), it is conceivable that some participants may have (consciously or unconsciously) attempted to hide the signs of L1 attrition in their speech or, alternatively, highlight them in order to please the friendly researcher, a behavior which has been termed the good-subject effect (e.g. Nichols & Maner, 2008). It is of great importance to consider all of these sociolinguistic factors when interpreting the results of both the Charlie Chaplin task and the in-depth interview narratives.

6.1.2 Global foreign accent and L1 attrition research

Global foreign accent is “the degree to which an L2 speaker’s productions are perceived to differ from those of a native speaker” (Riney, Takada, & Ota, 2000, p. 713). To date there have not been many studies focusing on the acquisition of a foreign accent in one’s *first* language (Bergmann, Nota, Sprenger, & Schmid, 2016). In Sancier and Fowler’s (1997) case study, their participant’s L1Portuguese read utterances were judged to be more accented after she had spent several months in the L2 country, the USA (more details on this study are provided in Section 5.2.2). De Leeuw (2008), by contrast, employed recordings of spontaneous speech and some of her sample of L1German speakers living in the USA and in the Netherlands were rated as sounding non-native-like. Similar results on both group and individual levels were reported in a recent study by Bergmann, Nota, Sprenger, and Schmid (2016) for native speakers of German residing in the USA and Canada. Hopp and Schmid (2013), on the other hand, found no difference on the group level between L1German monolinguals and L1German bilinguals living abroad. In a rather

small-scale accent rating study (Sučková, 2012) I reported some preliminary evidence suggesting there may be accent changes in Anglophone expatriates living in the Czech Republic. However, to the best of my knowledge, no other, large-scale foreign accent rating studies or accent intelligibility studies with English L1 attriters have been published to date (see also Bergmann, Nota, Sprenger, and Schmid 2016).

6.1.3 Hypotheses

Based on the previous research and anecdotal evidence (as related to the author before and during the course of the research), I formulate the following hypotheses:

- 1) the expatriates have acquired a slight foreign accent into their L1 English over the course of their stay in the Czech Republic;
- 2) the American expatriates have acquired a British accent;
- 3) the speech of the expatriate participants has become more legible due to the need to accommodate to non-native speakers of English.

6.2 Method

6.2.1 Participants – speakers

The sample of speakers retelling the Charlie Chaplin film clip consisted of three groups: L1English expatriates living in the Czech Republic ($N = 18$, see Section 4.3.1 for a detailed description of the expatriate sample), L1English controls living in the UK ($N = 16$, Section 4.3.2 for a detailed description of the expatriate sample), and L1Czech controls

($N = 5^{34}$; $M_{age} = 26$, $SD_{age} = 3.3$) – advanced Czech users of English. The Czech control group was included in order to provide a comparison of the expatriates' accents to those of highly proficient Czech speakers of English. The Czech controls had all been learning and using English since their early childhood, had visited English speaking countries regularly, and reported using English for 20-85% of their daily communication at the time of recording. They were recruited through personal contacts of the researcher. The informed consent form for this group of participants can be found in Appendix 10.

6.2.2 Charlie Chaplin task

To elicit free speech, the participants were asked to watch and then retell an 11-minute-long film extract from Charlie Chaplin's 1936 motion picture *Modern Times* while being recorded. The Charlie Chaplin task is a commonly used speech elicitation method in L1 attrition research (utilized e.g. by Schmid, 2007; de Leeuw, 2008; Dostert, 2009) because, apart from it being amusing and interesting for the participants to watch, it invites the use of a wide range of narrative tenses and lower-frequency lexis.

The synopsis of the film extract is the following. The main character, played by Charlie Chaplin, is freshly released from prison and finds a job at a ship-building company. However, he loses the job very quickly and is determined to go back to jail where life was easier. As he is wandering down the street, a hungry homeless woman, who has stolen a loaf of bread and is being chased by the police, runs into him. Charlie attempts to

³⁴ Originally, there were 6 Czech controls. However, it later transpired from the notes on the rating questionnaires (see below) that the majority of the raters were able to identify one person, having recognized her voice. Therefore, I decided to exclude the ratings obtained for this participant from the analysis and only present data of the remaining 5 Czech participants.

take the blame for the theft but fails, and the young woman is arrested. In a further attempt to get back to jail, Charlie orders a big meal in a cafeteria and does not pay the bill. For this he is eventually arrested and put in a police van where he meets the young woman again. The two of them manage to escape from the van and soon find themselves in a middle-class suburban area where they sit on a lawn and start daydreaming about what it would be like to live together in one of the houses. Charlie then exclaims that he is going to get a job to be able to make this dream come true.

The Charlie Chaplin task was the first linguistic test of the research battery. After completing the sociolinguistic interview, the participants were informed they were going to watch a short film clip and then retell the plot while being recorded. Next, the researcher played the clip on her laptop. After the clip finished, the researcher switched on the recording device and asked the participant to retell the story. The researcher did not interrupt the flow of speech, with the exception of when the participant could not remember the following event of the plot. Some participants were rather brief in their retelling of the plot, and in such cases the researcher asked the participants to try remember a particular part of the story which they omitted in their narrative (e.g. "Do you perhaps remember the daydream at the end of the film?") in order to obtain a longer stretch of speech.

The Charlie Chaplin task recordings were then utilized not only for foreign accent rating (FAR, the focus of the present chapter), but also for speech fluency and lexical diversity analysis (the focus of Chapter 7).

6.2.3 Speech samples

From each recording a short sample was extracted for the purposes of accent rating. These speech samples all contained the description of the opening scene, in which Charlie is being released from prison and applies for a job at a shipyard. The decision to include only one scene (as opposed to a random excerpt) was motivated by the need to standardize the samples as much as possible (de Leeuw, 2008) and to eliminate the possible intervening variable of surprise, confusion, and further cognitive strain on the part of the raters. The speech samples varied slightly in length (12 – 16 seconds) as it was decided, in accordance with de Leeuw (2008), to present naturally complete utterances and not cut the speaker off mid-sentence. In addition, pauses longer than 1s were clipped and stuttered utterances edited out in several samples due to their possible confounding influence on the accent perception (de Leeuw, 2008): the raters could potentially rate down a speaker based on a random stutter or a long pause when recalling the events, rather than their foreign-accentedness.

Finally, a single sound file (featuring all speech samples as described above) was created for the accent rating. The speech samples were pseudo-randomized, each was included only once. Each sample was introduced with a number (to allow for easier orientation in the foreign accent rating questionnaire) and featured 14 seconds of silence at the end in order to give the raters time to complete the corresponding entry. Two additional speech samples – training samples – were added to the beginning of the file to help manage the potential confusion at the start of rating. The order of the speech samples was the same for all raters. The overall duration of the foreign accent rating sound file was 21

minutes. As the speech samples featured quite varied maximum intensity peaks, the sound file was normalized utilizing audio level adjusting software The Levelator® 2 (Sharpe, Sharpe, Lorrain, & Kaye, n.d.).

6.2.4 Participants – raters

The raters were 87 university students or graduates of the English language and literature programme (64 females, 23 males; $M_{age} = 23.7$, $SD_{age} = 6.1$, $MOD_{age} = 21$) recruited by means of opportunity sampling and through personal contacts of the researcher. The raters were non-native speakers of English, their L1 was mostly Czech or Slovak; however, almost 60% of raters reported being near-native (C1) or native-like (C2) L2 users of English. All participants had received training in English phonetics.

While it would have been desirable to utilize L1 monolingual English speakers as raters, previous research has shown that L2 users of a language can reliably distinguish between native and non-native speakers of that language (Major & Baptista, 2009). Furthermore, Schmid and Hopp (2014) reported a high correlation ($r = .93$) between foreign accent ratings by native and non-native raters, with non-native raters showing also a high within group inter-rater reliability, indicating that non-native speakers perceive the degree of foreign accentedness in a very similar way to native speakers. However, non-native raters tended to judge monolingual native speakers as having a stronger foreign accent in comparison with native speakers' ratings. L1 attriters (i.e. long-term immigrants) and L2 learners received similar ratings from both native and non-native raters (ibid.).

6.2.5 FAR Questionnaire

The foreign accent rating (FAR) questionnaire was created following de Leeuw (2008)³⁵ for the raters to assess the level of global foreign accent of the speech samples from the three respective groups: Anglophone expatriates, Anglophone controls, and Czech controls. Figure 17 below displays the layout of the questionnaire (for full questionnaire including the instructions see Appendix 6).

speaker	1) native status	2) confidence	3) easy or hard to understand?	4) country	notes
speaker 1	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		
speaker 2	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		

Figure 17. FAR questionnaire layout

In Item 1, the raters were instructed to identify the speaker as either native or non-native. Subsequently, the raters were asked to indicate the level of confidence they had in their judgment (Item 2). Combining these two items provides the following 6-point Likert scale: “6 = certain of non-native speaker status, 5 = semi-certain of non-native speaker status, 4 = uncertain of non-native speaker status, 3 = uncertain of native speaker status, 2 = semi-certain of native speaker status, 1 = certain of native speaker status” (de Leeuw, 2008, p. 50). This design was shown to differentiate between L1 attriters and L2 users better than

³⁵ Who, in turn, adopted Moyer’s (1999, as cited in de Leeuw, 2008) approach.

other designs (see Schmid & Hopp, 2014, for a detailed analysis of different designs of FAR questionnaires). Item 3 was added to investigate the perceived intelligibility of the speakers and its potential relatedness to the level of global foreign accent. The motivation behind including this item was that in the in-depth interviews many expatriate informants claimed to have modified their accent to be more easily understood by Czech speakers of English. The answers to Item 3 may thus lend support to this claim. Item 4 asked the raters to indicate where they think the speaker originally comes from (thus revealing the potential Britishization or Czechization of native accents). The last (optional) item Notes provided space for the raters to comment on how they had arrived at their judgment and what they had based it on. Finally, at the very end of the questionnaire, the raters were asked to provide information about their age, gender, nationality, L1, and their English language proficiency.

The questionnaire was piloted with two volunteers to ensure clarity and user-friendliness.

6.2.6 Procedure

The majority of the raters listened to the Charlie Chaplin speech samples in one of several classroom group sessions, in which the samples were played through loudspeakers; in addition, 12 raters listened to the FAR samples on an individual basis through a set of headphones. The order of the samples was the same for all participants.

First, the researcher distributed the FAR questionnaire, explained the aim of the study, and described the structure of the questionnaire and the composition of the audio

file. The raters were instructed to fill in the questionnaire as they listen and told not to worry if they miss a speaker or two. Followed a brief Q+A session and the participants – raters were asked to sign the informed consent form (Appendix 9). Next, the FAR speech samples (as described in 6.2.3 above) were played either through loudspeakers to the whole group (in the group sessions) or through the headphones (in the individual sessions). After all speech samples had been played, the raters were asked to provide some basic demographic and sociolinguistic information on the last page of the FAR questionnaire (Appendix 6).

The raters were awarded for their time and effort with extra credit towards their final grade in one of their phonetics-related courses (when applicable) or some candy.

6.2.7 In-depth interviews – qualitative data

In order to obtain a more personal, qualitative perspective on L1 attrition the expatriates may be experiencing, I conducted semi-structured in-depth sociolinguistic interviews with this group. These interviews took place prior to the Charlie Chaplin task data collection. To obtain narratives on the potential accent changes, the following questions were asked: *Has your accent changed in any way since you have moved to the Czech Republic? Has anybody (your friends or family members back at home) ever told you that you sounded different now? Do you ever speak your native/regional dialect?* (see also Appendix 4). Further follow-up questions were then utilized so as to learn more details about the given experience or incident, e.g. *How did you feel when you were told you sound “different”? Do you think it’s true? Why do you choose not to speak your native dialect?*

The narratives were then transcribed and theme-coded with the aim to identify recurring themes, emotions and attitudes. One of the themes, the Britishization of the English of American expatriates, was used to inform the Britishization research question tested quantitatively in the FAR questionnaire.

6.3 Results – quantitative data from FAR questionnaires

6.3.1 Foreign accent rating (FAR) scores

Following de Leeuw (2008) and Schmid & Hopp (2014), the forced choice paradigm was utilized: the raters were asked whether the speaker is a native or non-native speaker of English (Item 1 of the FAR questionnaire), and how confident they were in their judgment on a three-point scale (certain, semi-certain, uncertain; Item 2 of the FAR questionnaire). Combining these two items provided a 6-point Likert scale (de Leeuw, 2008) shown in Figure 18, with the lowest point indicating a highly native-like accent and the highest point a highly non-native, or foreign, accent:

Score	1	2	3	4	5	6
	←		→			
	native accent					foreign accent
Item 1:	native	native	native	non-native	non-native	non-native
Item 2:	certain	semi- certain	uncertain	uncertain	semi- certain	certain

Figure 18. FAR 6-point Likert scale

Next, a mean FAR score was calculated for each participant. Missing datapoints ($N= 18$, not systematically distributed) were substituted with points closest to the speaker's mean FAR score. Figure 19 below displays the boxplot of FAR score for the three respective groups (the L1English controls, the expatriates, and the L1Czech controls). It can be observed that the L1English control group exhibit the lowest mean and median FAR scores, followed by the expatriate group and then the Czech controls, who have the highest (i.e. the most non-native) mean and median FAR scores. Descriptive statistics, including separate means for the British and American expatriates, are provided in Table 18 below.

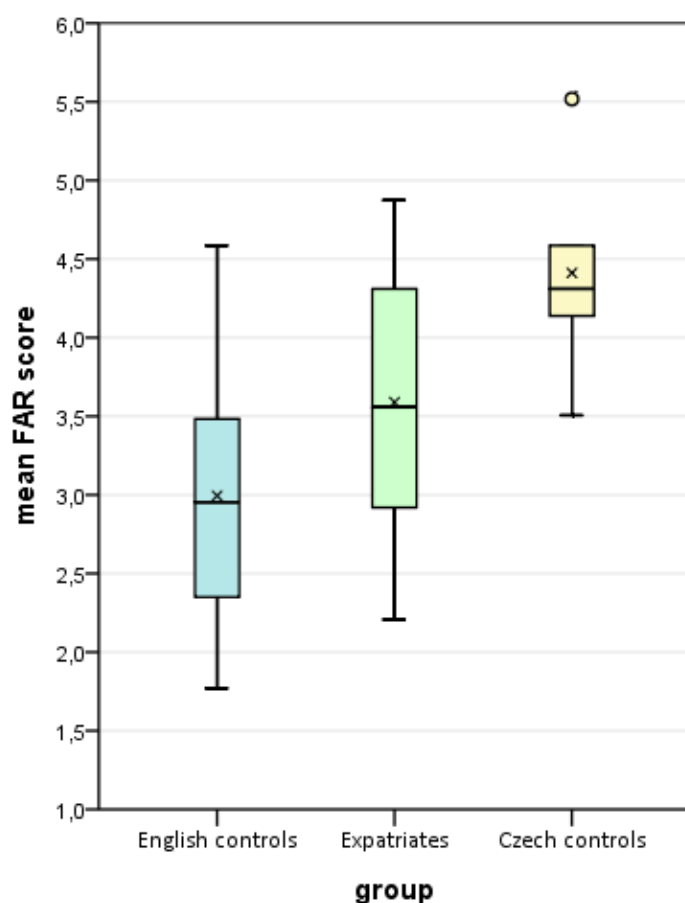


Figure 19. FAR scores boxplot

Table 18
Mean FAR scores – descriptive statistics

statistics	Expatriates			L1 English controls	Czech controls
	British	Americans	pooled	pooled	
<i>N</i>	8	10	18	16	5
<i>M</i>	3.38	3.76	3.59	2.99	4.41
<i>SD</i>	0.84	0.8	0.82	0.84	0.73

Next, the distributions of mean FAR scores were examined for normality. The expatriates' FAR scores histogram showed a clear bimodal distribution, and the Czech control sample was too small to reliably assess the mean FAR scores distribution. Therefore, although all Shapiro-Wilk tests of normality were non-significant (all p 's > .4), it was decided to utilize a non-parametric alternative to the t-test, namely the Mann-Whitney U test, to determine whether the differences between the three groups are statistically significant.

Given that the British expatriates exhibited a slightly lower (i.e. more native-like) mean FAR score than the American expatriates (see Table 18 above), it was important to test whether the two groups are maybe statistically different, in which case the country of origin would present a confounding variable. A Mann-Whitney U test was conducted, showing no statistical difference between the two subgroups of the expatriate group (the mean ranks of expatriate Brits and expatriate Americans were 8.1 and 10.6, respectively; $U = 29$, $Z = -0.98$, $p = .36$), as can also be observed from Figure 20 on p. 144.

Having established that the American and British expatriates do not exhibit statistically different FAR scores, a set of Mann–Whitney U tests was conducted to establish differences between the expatriates, the L1 English controls, and the Czech controls. The significance level was Bonferroni adjusted to $\alpha = .017$. The test did not indicate a statistically significant difference between the expatriates and the L1English controls (the mean ranks were 20.7 and 13.9 respectively; $U = 86.5$, $Z = -1.98$, $p = .046$). Likewise, no difference was found between the expatriates and the Czech controls (the mean ranks were 10.7 and 16.8, respectively; $U = 21$, $Z = -1.8$, $p = .08$). The only difference in mean FAR scores that was found to be statistically significant was between the Czech controls and the L1English controls (the mean ranks were 17.3 and 9.0, respectively; $U = 8.5$, $Z = -2.6$, $p = .006$).

Thus the hypothesis that the expatriates as a group have acquired a foreign accent as compared to the Anglophone controls was not supported. On the other hand, the tests also indicated that no difference exist between the FAR scores of the Czech controls and the expatriates. In such situations it is best to examine the data of individual participants. Figure 20 below displays the mean FAR scores of individual participants by group and by nationality. As can be seen, all expatriate scores are higher than the L1English control minimum at 1.8. Only 4 (25%) L1English controls obtained scores in the Czech controls' range, as compared to 9 (50%) expats. If we consider the Czech controls' score range to be a benchmark of having a (slight) foreign accent, then there clearly are expatriate informants whose accent does not appear to have been influenced by the prolonged stay in the Czech Republic, but also those who do sound like (very proficient) L2 users. As regards

the two L1English control participants with the highest mean FAR scores (over 4.5), one utilized a prominent hesitant rising intonation, which, according to the Notes item on the FAR questionnaire, led at least some participants to rate this speaker's accent as non-native; the other L1English control speaker with high mean FAR score is the only American in the control group, in other words a speaker living outside her native variety, which might have also given a rise to a "mixed" accent impression.

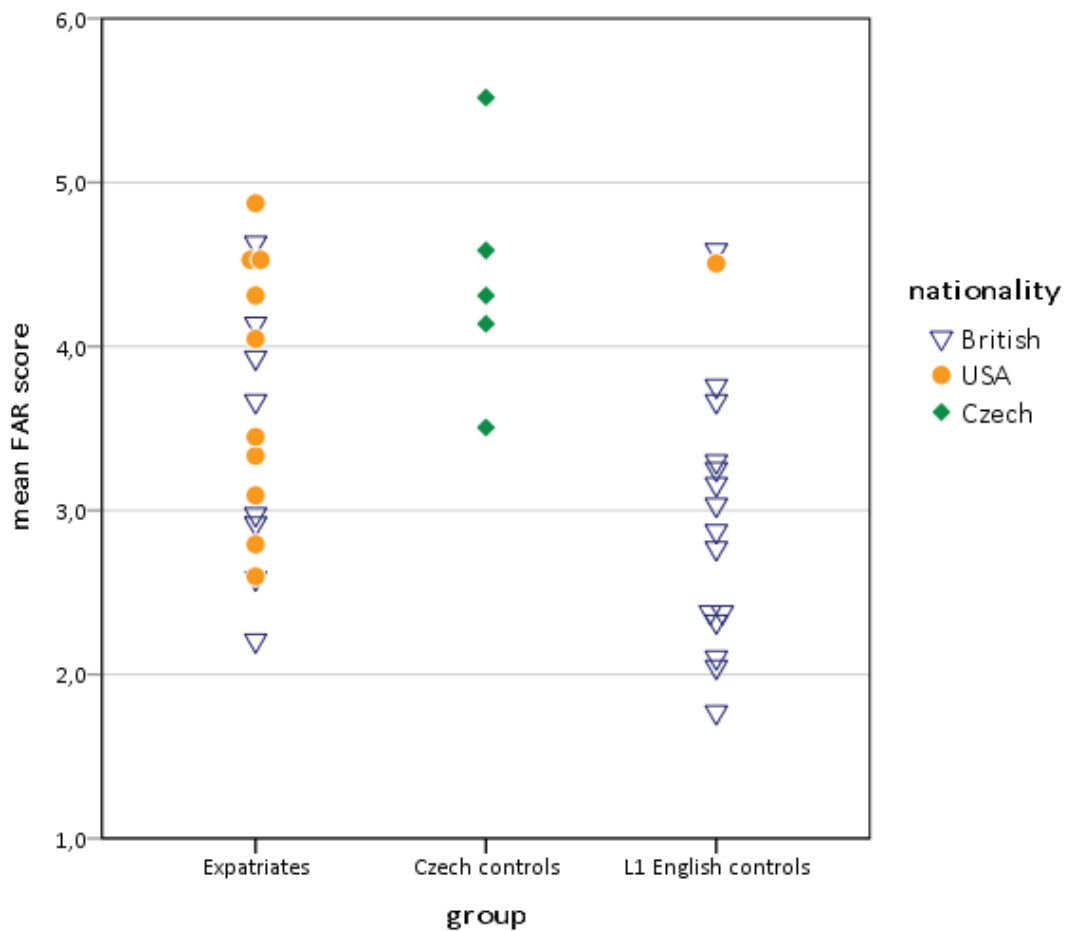


Figure 20. Individual mean FAR scores

Overall, then, although the hypothesis that the Anglophone expatriates acquired a foreign accent into their L1 was not supported on the group level, high mean FAR scores

indicate foreign accent acquisition in some individuals from the expatriate group, the level of which is comparable to that of highly proficient Czech users of English. This claim is further elaborated in Section 6.4 below, which provides the qualitative analysis of the in-depth interview data.

6.3.2 FAR scores and plosive realization correlations

Of interest is also the relationship between the global foreign accent (operationalized as mean FAR score) and changes in individual phonemes, as investigated e.g. by Sancier and Fowler (1997, more details on this study are provided in Section 3.3.4).

Table 19 below displays correlation coefficient of mean FAR scores and the duration of /k/ VOT in in the lexeme *cat* as produced in the verbal fluency test (as analyzed in Section 5.2.5.2), the percentage of word-initial pre-voiced lenis plosives in the word-list reading task (Section 5.2.7.1), and the percentage of word-final lenis plosives with post-release voicing (Section 5.3.4.1). Although the word-list reading task VOTs could have been utilized for the purposes of this analysis, the VFT *cat* VOTs were given preference as the data are more naturalistic. However, in VFT the participants produced unequal numbers of word-initial and word-final lenis plosive tokens, so it was decided to utilize word-list reading data in which the participants produced equal number of tokens. Only data from the expatriate group and L1English control group were included in this analysis. The significance level was Bonferroni adjusted to $\alpha = .017$.

Table 19						
<i>FAR scores and plosive realizations – correlation coefficients</i>						
Kendall's τ_B, p						
	/k/ <i>cat</i> VOT (ms)		% prevoiced word- initial lenis plosives		% fully voiced word- final lenis plosives	
FAR score	$\tau_B = -.14$	$p = .26$	$\tau_B = .2$	$p = .11$	$\tau_B = .11$	$p = .41$

As can be seen from Table 19, no statistically significant relationship was found between mean FAR scores and *cat* /k/ VOTs, the percentage of prevoiced word-initial lenis plosives, and the percentage of fully (post-release) voiced word-final lenis plosives. This indicates that plosives, while undergoing changes in the L2 (Czech) environment, are not as important for the global accent as other segmental or suprasegmental variables, which were not investigated in the present dissertation.

6.3.3 Intelligibility scores

Item 3 of the FAR questionnaire investigated the perceived intelligibility of the speakers on the scale from 1 (easy) to 5 (hard). For each participant, a mean intelligibility score was then calculated from the obtained ratings: the lower the mean intelligibility score, the greater the overall intelligibility. Figure 21 below displays the boxplot of the mean intelligibility scores for the three respective groups and Table 20 below provides the descriptive statistics, including statistics for the two subgroups (i.e. the British and the Americans) of the expatriate group.

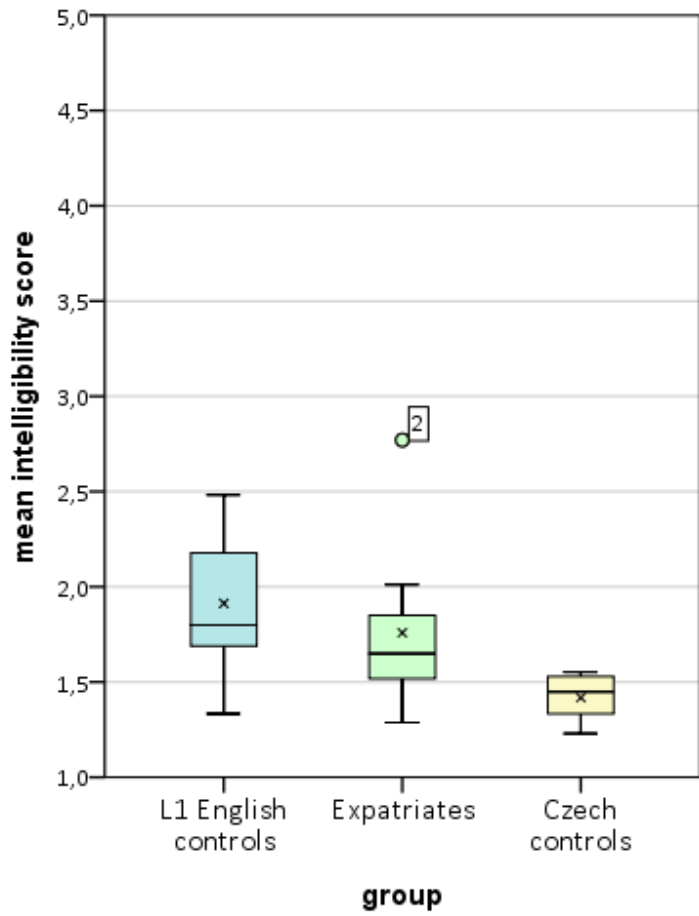


Figure 21. Mean intelligibility scores

Table 20
Mean intelligibility scores – descriptive statistics

statistics	Expatriates			L1 English controls	Czech controls
	British	Americans	pooled	pooled	
<i>N</i>	8	10	18	16	5
<i>M</i>	1.73	1.78	1.76	1.91	1.42
<i>SD</i>	0.45	0.41	0.41	0.35	0.14

As can be observed from Figure 21 and Table 20 on the previous page, the lowest mean and median intelligibility scores indicating the greatest intelligibility were obtained by the Czech control group, followed by the expatriates and then by the L1English controls. Overall, the raters did not find any of the speakers to be very hard to understand. The British and American expatriates do not exhibit any big differences in their intelligibility scores; in fact, each of these subgroups features an outlier (as seen in Figure 21). The American expatriate EG06 and the British expatriate EG09 obtained the highest mean intelligibility scores, i.e. were the hardest to understand. This may be explained by the fact that recordings of both speakers feature relatively fast stretches of speech with a high degree of word-linking. In addition, EG06's voice sounds somewhat "shaky", which probably made him slightly harder to understand.

The distributions of mean intelligibility scores were examined for normality. Both the expatriates' and L1English controls' intelligibility scores histogram showed a positive skew; in addition, the expatriates' Q-Q plot hinted at a deviation from normal distribution. This was also supported by the result of a Shapiro-Wilk test of normality ($p = .001$). The Czech control sample was too small to reliably assess the normality of mean intelligibility scores distribution. Therefore, it was decided to utilize a non-parametric alternative to the t-test, namely the Mann-Whitney U test, for assessing the differences between the groups.

A set of Mann-Whitney U tests was conducted in order to determine whether the differences between the three groups are statistically significant. The significance level was Bonferroni adjusted to $\alpha = .017$. The test did not indicate a difference between the expatriates and the L1English controls (the mean ranks were 14.8 and 20.6 respectively; $U = 94.5$,

$Z = -1.71, p = .088$). Likewise, no difference was found between the expatriates and the Czech controls (the mean ranks were 13.6 and 6.1, respectively; $U = 15.5, Z = -2.2, p = .024$). The only difference in mean intelligibility scores that was found to be statistically significant was between the Czech controls and the L1English controls (the mean ranks were 4.3 and 13.1, respectively; $U = 6.5, Z = -2.8, p = .003$). Thus, to the ear of (mostly) Czech and Slovak raters, advanced Czech users of English were the most intelligible group, there being no statistically significant difference between the L1English groups.

Of interest is the relationship between mean FAR scores and mean intelligibility scores: it is possible that the less intelligible speakers received more native-like ratings and vice versa. The result of a Kendall correlation, however, did not indicate any relationship between foreign accent and intelligibility (Kendall's $\tau_B = -.05, p = .65$). In other words, intelligibility does not seem to have played a role in the perception of speakers' global foreign accent.

6.3.4 Country of origin

Item 4 of the FAR questionnaire inquired about the possible country of origin of the individual speakers. Two hypotheses were being tested by this item: 1) Anglophone expatriates will be labeled as Czechs/Slovaks³⁶ more often than the Anglophone controls; 2) the American expatriates will be labeled as British more often than the British expat-

³⁶ While the raters were mainly Czechs, there was also a number of Slovaks among them. Slovakian accent in English does not differ greatly from Czech; in fact, there are many similarities. To the naked ear (of both native and non-native English speakers), a proficient Czech speaker of English may sound undistinguishable from a proficient Slovak speaker. Slovak raters were more prone to award "Slovak" labels, possibly because their home country would be the first to come to mind. When the data were being coded, it was decided to collapse the "Czech" and "Slovak" perceived country of origin labels into one category. Further, several instances of label "middle Europe" and "central Europe" were included in the cz/sk category as well.

riates as Americans. The latter hypothesis is based on the claim of some American expatriate participants that their English had become Britishized over their stay in the Czech Republic. In this section, only data from the expatriate and the L1English controls are analyzed.

Figure 22 below displays a bar chart for country of origin labels (in %) awarded to the expatriates and the L1English controls. The information provided by the raters was coded in the following manner: 1 – hit (the speaker’s country of origin was identified correctly³⁷), 2 – cz/sk²⁹ (Czech or Slovak Republic indicated as the country of origin), 3 – empty (no country of origin provided), 4 – other English-speaking country³⁸ (i.e. not the actual Anglophone country of origin), 5 – other (any other non-English speaking country).

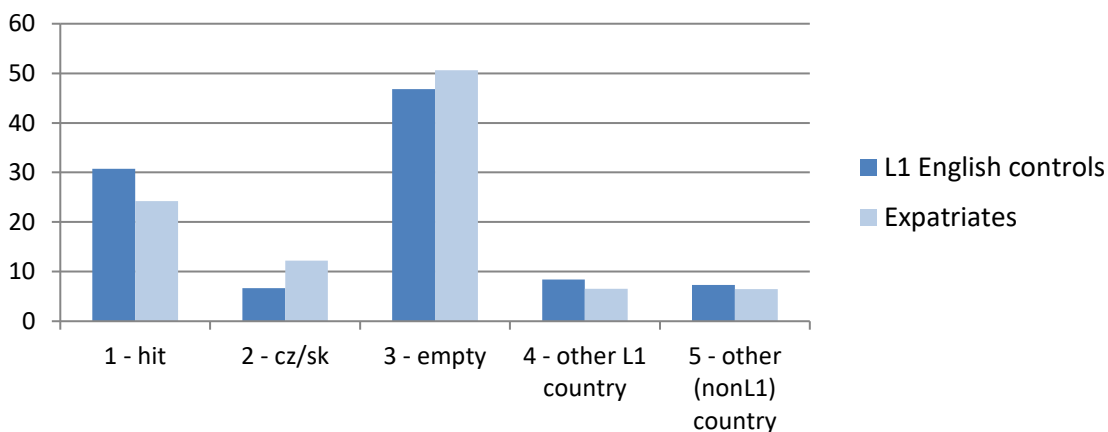


Figure 22. Country of origin (in %) of the L1English controls and the expatriates as perceived by the raters

³⁷ Canada and the USA were collapsed into one category for purposes of this analysis, as American and Canadian accent may be very similar in many instances.

³⁸ For the purposes of the present analysis, only Kachru’s (e.g. 1990) Inner Circle countries (i.e. the UK, the USA, Canada, Ireland, New Zealand, Australia and South Africa) are included under this label.

The bar chart indicates that it was often difficult for the raters to guess the country of origin of the speaker, as no country was provided almost 50% of the times (this also holds for the Czech control group whose data are not included in the chart). Regarding the differences between the two groups, the only one that is salient is the percentage of hit and cz/sk labels, with the expatriates (represented by light blue) receiving slightly more cz/sk labels (and, in turn, fewer hits and other L1 country labels) than the L1English controls (darker blue bars). These results are in keeping with the mean FAR score pattern (see Section 6.3.1), in which some expatriates were perceived as sounding less native-like (i.e. received a higher mean FAR score) than the L1English controls.

Another bar chart (Figure 23 below) was constructed to visualize the differences between the British and American expatriates as regards the perceived country of origin. The purpose of this analysis was to investigate whether the raters perceived any Britishization in the accents of American expatriates.

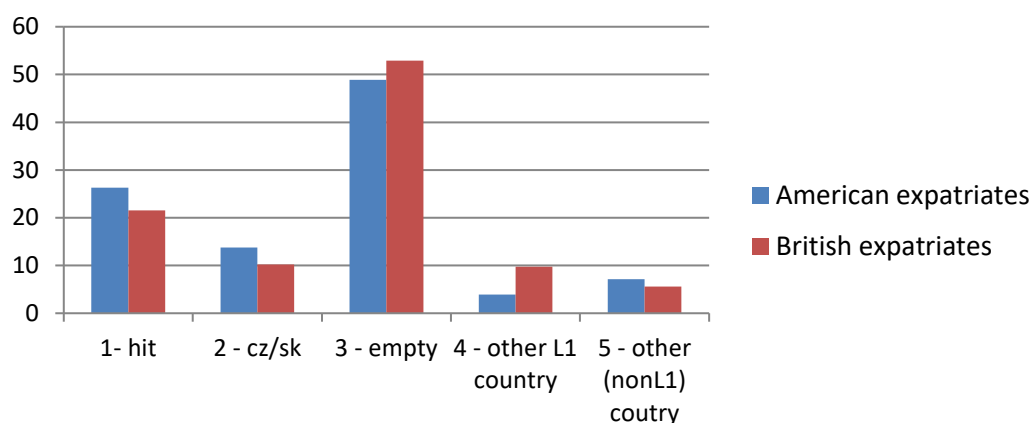


Figure 23. Country of origin (in %) of the British and American expatriates as perceived by the raters

Three (slight) differences can be observed: firstly, the Americans (represented by the blue bars) were identified correctly slightly more often than the British (red bars); secondly, they received fewer inaccurate Anglophone labels; and thirdly, Americans were more frequently considered to be Czechs than their British counterparts. These results do not indicate that the accent of American expatriates has become Britishized. The fact that the Americans received more cz/sk and nonL1 country of origin labels is in keeping with the slight (and statistically non-significant) difference in British and American expatriates' mean FAR score difference (see Section 6.3.1).

6.4 Results – qualitative analysis of the in-depth interviews

The idea for this research started several years ago when the researcher's friend from the expatriate community remarked that he spoke "like Dracula, too", comparing himself to another expatriate who had arrived a couple of years earlier. All too often researchers are guilty of brushing this kind of personal stories aside as mere "anecdotal evidence", or, on the other extreme, of relying solely on the personal narratives without employing more objective quantitative methods of enquiry. This section presents an attempt to analyze the personal narratives of the expatriate informants obtained through the in-depth sociolinguistic interviews and interconnect them with the quantitative foreign accent rating results.

To obtain narratives on the potential accent changes, the following questions were asked: *Has your accent changed in any way since you have moved to the Czech Republic? Has anybody (your friends or family members back at home) ever told you that you sounded different*

now? Do you ever speak your native/regional dialect? (see also Appendix 4). Further follow-up questions were then utilized so as to learn more details about the given experience or incident, e.g. How did you feel when you were told you sound “different”? Do you think it’s true? Why do you choose not to speak your native dialect?

6.4.1 Enunciation and slowing down

One of the most frequently recurring spoken language related themes mentioned by almost all expatriate informants was the need to slow down and speak more clearly, “enunciate”, in order to be more easily comprehended by the Czech users of English, including coworkers, students, and their partners’ families. Apparently, this is a conscious effort, and situations when one does not need to monitor the spoken output so closely may come as a relief to some, as this quote by participant EG10, a British expatriate, illustrates: “There is definitely a feeling when you find yourself in conversation with another native that you can relax. You can relax, take the brakes off, go at full speed.” However, this reported slowing down and enunciating is not mirrored in the above-reported results: the expatriates were not rated to be more easily intelligible than the L1English controls.

6.4.2 Abandoning the local dialect

Another theme that came up frequently was abandoning the local dialect in favor of Standard British English or General American for the same reason as above – to be more intelligible to the L2 users who may not be familiar with many regional varieties. As participant EG07 remarked about her accent, “It’s lost a lot of color, like local colors are

kind of washed out.” Another American expatriate participant described his current accent as sounding like “a weatherman”.

The American expatriates sometimes said that they felt their English was becoming Britishized (“I still sound like textbooks, except it’s New English File³⁹,” said EG04, an American teacher of English). However, the examples of such Britishization provided by the informants were predominantly from the domain of lexis, not phonetics. This showed in the FAR study results: there was no wholesale mistaking of the Americans for the British. EG14, another American teacher of English, commented thusly on the status of American English: “One Czech will feel that British English is more proper, which it isn’t [...], the other one will feel that American’s more money. So [...] I’ll get jobs because they feel that by speaking American they’ll get some kind of um I don’t know um business acumen.” One’s dialect then influences the job opportunities based on the students’ preferences.

6.4.3 Not sounding native-like

Finally, 6 out of 18 expatriate participants recalled an occasion when they were told by a member of family, a friend, or a complete stranger that they do not sound native-like. Additionally, further 3 expatriates remembered an occasion when they had been identified as coming from a different English-speaking country (EG07: “I sound native. But sometimes people were just confused about what native I am.”).

Participant EG12, an American teacher of English and an editor, shared the following story:

³⁹ A popular British English textbook series

There was another time, when I was having lunch, that I was speaking on the phone in English, and some old man – I told you about this – some man came up and yelled at me. And he was like ‘Speak Czech!’ like he thought I was Czech and I was putting on airs speaking English, like ‘What do you,’ you know, ‘speak your native language!’ And I told him I’m not Czech, I’m from America, and he didn’t believe me.

This story was related as one would tell an anecdote, with a lot of laughter, exaggerated gestures and facial expressions, and with several repetitions of what the stranger had said. This humorous attitude to and amusement at one’s first language attrition experiences (see also participant EG07’s New English File comment above) emerged as a common pattern in the narrative data and can be interpreted as a coping strategy in the face of a potentially threatening situation (here: having noticeably non-native features in one’s L1), as has been described by psychologists (e.g. Martin, 2007 for an overview).

Not all narratives carried an element of humor, however; some contained a sense of irritation. Participant EG13’s story is in stark contrast to that of EG12 quoted above: EG13 had been “accused a couple of times of being Danish, Scandinavian.” When I commented on the use of the word accused, she added, “Well, because I’m obviously not, and it’s just really weird.” The story also contains one other interesting detail. Unlike EG12 quoted above (who, in fact, provided the only narrative where it was implied he had a *Czech* accent), EG13 had been told she had an accent of a different country than the Czech Republic. Typically, however, the informants had had their accent described in much less specific way: they sounded “somewhat oddly”, spoke “different”, their accent

had “changed a little bit”. The British expatriate EG05 had been asked where he had learned his very good English, which implies that the interlocutor did not consider EG05 to be a native speaker of the language, but merely a very successful learner.

The narratives of having acquired a non-native accent systematically complement the FAR data: as is shown in Figure 24, the informants with stories of perceived change in accent cluster within the Czech controls’ mean FAR score range and no participant with mean FAR score outside of the Czech control range had any such experience. In other words, the narratives of foreign accent acquisition lend further support to the claim that some expatriates have acquired a non-native accent as indicated by high mean FAR score.

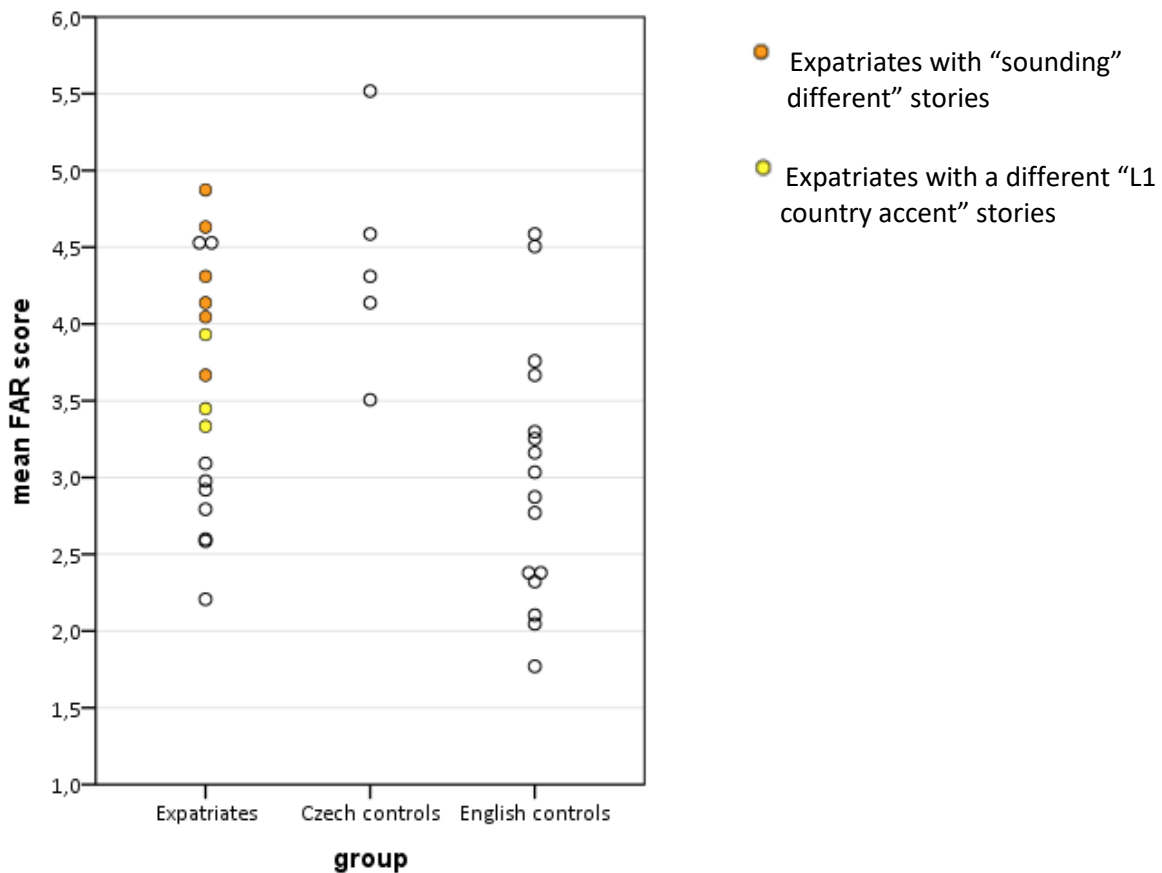


Figure 24. Individual mean FAR scores and the qualitative data

6.5 Discussion and conclusion

In this chapter, three hypotheses regarding the global accent of the Anglophone expatriates living in the Czech Republic were examined, namely that (a) the expatriates acquired a slight foreign accent into their L1; (b) the American expatriates acquired a British accent; and (c) the English of the expatriate participants has become more legible as compared to the controls. In order to test these hypotheses, a foreign accent rating experiment was conducted, whereby a group of raters listened to the recordings of the expatriates and two control group participants (L1Czech controls and L1English controls) and assessed them in terms the degree of foreign accent, intelligibility, and perceived country of origin. These quantitative data were then complemented with qualitative data obtained through in-depth interviews with the expatriate participants.

As regards the first hypothesis that the expatriates acquired a foreign accent into their L1 English, or, in other words, that they exhibit signs of L1 attrition in their accent, this was not supported on the group level, with the difference between the expatriates' and L1English controls' mean FAR scores not being statistically significant. At the same time, there was a statistically significant difference between the Czech controls and the L1English controls, but not between the expatriates and the Czech controls, hinting at the lack of statistical power of the tests conducted under Bonferroni correction. Thus, it may be speculated that with a bigger sample size of both the expatriates and the raters, the statistical tests would potentially reach significance. Additionally, as already stated in 6.2.4 above, according to the study by Schmid and Hopp (2014), non-native raters tend to judge

monolingual native speakers as having a stronger foreign accent in comparison with native speakers' ratings; employing native speakers as raters would probably again lead to a statistically significant difference between the two native English speaker groups. The complementary expatriates' narratives showed that the participants who in the past had been told that their accent had changed received higher mean FAR scores which were within the Czech control range. Those who did not report any such experience received lower (i.e. more native-like) ratings. These facts then lend the support to claim that at least some expatriate participants exhibit changes in their accent that to ears of some (be it their family and friends or the raters in the experiment) sound foreign. Unlike in the previous studies, however, the degree of foreign accent as indicated by FAR scores was not correlated with the duration of fortis plosive VOTs. Similarly, no correlation was found between FAR scores and voicing in lenis plosives.

The country of origin data obtained using the FAR questionnaire did not support the hypothesis that the accents of American expatriates became Britishized under the influence of the preferred dialect (i.e. Standard British English) in the host country. The changes towards the British standard (if any) possibly remain predominantly on the level of lexicon.

Finally, although slowing down and enunciating for the sake of the L2 interlocutor were frequently recurring themes in the expatriates' narratives, the FAR questionnaire data did not indicate greater intelligibility of the expatriates' accents as compared to the L1 controls. There may be several explanations to this disagreement of qualitative and quantitative results. Firstly, there was a statistically significant difference between the

Czech control group and the L1English controls, but not between the Czech controls and the expatriates, which suggests the lack of statistical power of the test utilized under Bonferroni correction. Secondly, it is quite likely that the expatriates accommodated their manner of speaking (the speed, the level of enunciation) “upwards” towards the researcher’s above-Czech-average proficiency in English. The English controls, who were interviewed in England, on the other hand, may have accommodated “downwards”, regarding the researcher as a foreigner with a discernible Eastern-European accent, thus meeting the expatriates midway. At the same time, both groups knew there would be further audience (i.e. the raters in the foreign accent rating experiment), so both could have accommodated in the same manner towards this imagined future audience. What should be also taken into consideration is the advanced level of English of the raters, who found all speech samples rather easy to understand, which created a ceiling effect. It may be speculated that the three groups would be better distinguished in terms of intelligibility with lower proficiency raters. Finally, there is the possibility that the expatriates believe that they do accommodate towards the less proficient Czech users of English (“subjective dimension of accommodation”, as proposed by Thakerar, Giles & Cheshire, as cited in Platt & Weber, 1984), but they in fact do not (“objective dimension of accommodation”, *ibid.*). This, however, does not seem plausible, as it would objectively lead not only to the inability to communicate the message, but also of coming across as a disrespectful, arrogant, and rude person, as was implied by several expatriates in the in-depth interviews.

7 Crosslinguistic Influence on Lexical Production

While a bilingual immigrant may typically not be aware of the subtle changes in the articulation of their L1 phonemes or the loss of their “native” accent, the changes in the mental lexicon (i.e. “the cognitive system that constitutes the capacity for conscious and unconscious lexical activity”, Jarema & Libben, 2007, p. 2) caused by the L2 acquisition and frequent use typically do not pass unnoticed. Having mastered two or more languages opens opportunities for code-switching in the conversation with other bilinguals, but may also take its toll in the form of lexical processing difficulties due to the combination of high activation threshold of the less frequently used lexical items of the L1 (Paradis, 2007) and the need to suppress the highly active lexical items of the other language (Green, 1998; Köpke, 2007; more details in Section 2.1). The inability to retrieve the target word is quite frustrating (and one does not quite expect it to happen in their L1) and may manifest itself in several ways:⁴⁰ (a) the speaker may openly admit difficulties and seek help from the interlocutor, perhaps by describing the object; (b) the speaker may code-switch to the L2 or use a more easily accessible L1 synonym or description; (c) the speaker may insert an empty or filled pause or repeat the previous part of the utterance to gain more time for lexical retrieval; or (d) utilize the combination of all of the above (Schmid, 2011). Apart from retrieval difficulties, other crosslinguistic influence processes may be observed in the mental lexicon of long-term immigrants, including **borrowing** and **restructuring** (Pavlenko, 2004).

⁴⁰ These strategies are actually not that different from the strategies L2 learners use when they are at a loss for a word.

Borrowing, which refers to the “addition of L2 elements into L1” (Pavlenko, 2004, p. 47), is, in fact, very common among immigrants as they encounter concepts for which there may not be fitting terms in their L1. These terms may be adopted by the whole community (Schmid, 2007). In the context of the present research, the examples provided by the expatriates in the in-depth interviews included words like *šalinkarta* (the tram pass, a dialectal lexeme used only in Brno) and *žákovská knížka* (“pupil book”, a booklet for recording a pupil’s grades). Pavlenko (2004) stresses that lexical borrowing is not necessarily a symptom of L1 **attrition** (which within Pavlenko’s framework refers to the temporary or permanent inability to produce a given linguistic item or structure) because the L1 equivalent may not exist or because the L2 item was chosen deliberately to convey another layer of meaning.

Restructuring is somehow more complex and less obvious. It is a process whereby L1 items are re-analyzed on the basis of the L2 (Pavlenko, as cited in Schmid, 2011). For example, the meaning or collocability of an L1 lexical item may be extended to match its L2 translation (ibid).

In addition to the above, the Anglophone expatriates, who frequently utilize the L1 with low proficiency L2 English users (e.g. students, Czech family members), may often have to suppress highly advanced, idiomatic, colloquial, and dialectal expressions with which their Czech interlocutors may not necessarily be familiar. Over time, this initially conscious “editing” may become a second nature, rendering the expatriates’ English less rich and diverse in terms of lexicon.

In order to determine whether and to what degree the above described changes manifest themselves in the spoken production of the Anglophone expatriates, the expatriates' and L1English controls' data from two tasks (the verbal fluency test and the Charlie Chaplin task) were transcribed, coded, compared and analyzed. In addition, the quantitative data are complemented with the qualitative analysis of the in-depth interviews with the expatriates.

7.1 Crosslinguistic influence on lexical production: verbal fluency test

7.1.1 Introduction

This subchapter analyses lexical data obtained through the verbal fluency test (VFT). First, the results of the previous research are reviewed, followed by the analysis of the quantitative data, i.e. the number of VFT items. Then several instances of the use of Czech and Czenglish are analyzed in terms of Pavlenko's (2004) CLI processes of borrowing and restructuring.

The verbal fluency test (VFT) is a simple task which involves the participants naming as many lexical items from a certain category (i.e. animals, words starting with the letter F) as they can remember in 60 seconds' time (Schmid, 2007). It has long been utilized in clinical setting to detect signs of neurological impairment (e.g. Tombaugh, Kozak, & Rees, 1999) and has also been adopted by researches in the field of bilingualism to assess language interference and (non-pathological) attrition in the domain of mental lexicon. More details on how the test was conducted are provided in Section 5.1.2.

In general, monolinguals tend to outperform bilinguals in this and similar tests, the possible explanations being the interference of the non-target language items and the subsequent need to suppress them, and slower activation of the target language items (Sandoval, Gollan, Ferreira, & Salmon, 2010). Findings within the field of L1 attrition include lower VFT scores in Turkish immigrants to Australia (Yağmur, 1997), Romanian immigrants to Canada (Cherciov, 2011), in German immigrants to Canada and the Netherlands (Schmid & Dusseldorp, 2010), in Dutch immigrants to Canada (Schmid & Keijzer, 2009; Schmid & Beers Fägersten, 2010), and Hungarian immigrants to Denmark (Varga, as cited in Schmid & Jarvis, 2014). On the other hand, Dostert (2009) did not observe any quantitative difference between L1 English immigrants to Germany and the monolingual controls, and neither did Schoofs (2013) in her sample of L1 English immigrants to Switzerland, indicating that the Anglophone immigrants may be immune to L1 attrition on the lexical level, perhaps due to the frequent L1 use.

7.1.2 Hypothesis

While a number of studies shows that monolinguals outperform bilinguals on VFT, investigations dealing with Anglophone immigrants (bilingual to a degree as well) failed to follow suit, suggesting that this particular group of bilinguals is different from other linguistic minorities. Given the fact that some participants in the present sample had only spent a year in the Czech Republic at the time of the research session, and the fact that some participants have very low proficiency in the Czech language (i.e. cannot be even considered “functional” bilinguals), it would be surprising if any difference in terms of

number of VFT items indeed surfaced. However, isolated instances of borrowing and restructuring may emerge.

7.1.3 Method

The semantic fields chosen for the semantic Verbal Fluency Task were “animals” and “things you find in a supermarket”, and for the formal (or phonemic) VFT were “words that start with the letter C” and “letter T”. The data collection procedures is described in Section 5.1.2 above. VFT data were not obtained from 1 expatriate participant. Further, 1 control group participant’s data were excluded from the analysis due to his highly active L2 resulting from the frequent use of L2 with his L2 partner (more details are provided in Section 4.3.2.2).

The data were then transcribed for each participant. In the process of data transcription (which took place relatively long after the data collection), I discovered an error I had made, namely an inconsistency in the order of word-list reading task and VFT within the expatriate group. With all CG participants, VFT was conducted before the word-list reading task; however, the order was the opposite for 60% of EG participants. The results of these participants could have been influenced by the priming effect, especially in the formal VFT (“letter C”, “letter T”), but also in the “animals” VFT (the wordlist contained 8 animal lexemes). Luckily, the priming effect for the “supermarket” VFT can be dismissed as negligible, as the word-list only contained 2 fairly common food lexemes (ketchup, pasta). Therefore, this category was retained for the analysis.⁴¹

⁴¹ The phonetic analysis concerning plosives and dental fricatives, however, was conducted on all VFT categories.

The “supermarket” items elicited from the participants were then transcribed, removing duplicates, words in Czech, and loans (e.g. *Balkan cheese* for *balkánský sýr*, feta-like cheese sold in the Czech Republic). Multiple-word items (e.g. *cans of beans*, *washing-up liquid*) were coded as a single item. VFT score was then calculated as the number of eligible “supermarket” items.

7.1.4 Results

Figure 25 below displays the boxplot of “supermarket” VFT scores for the two groups, expatriates and L1English controls. Further descriptive statistics are presented in Table 20.

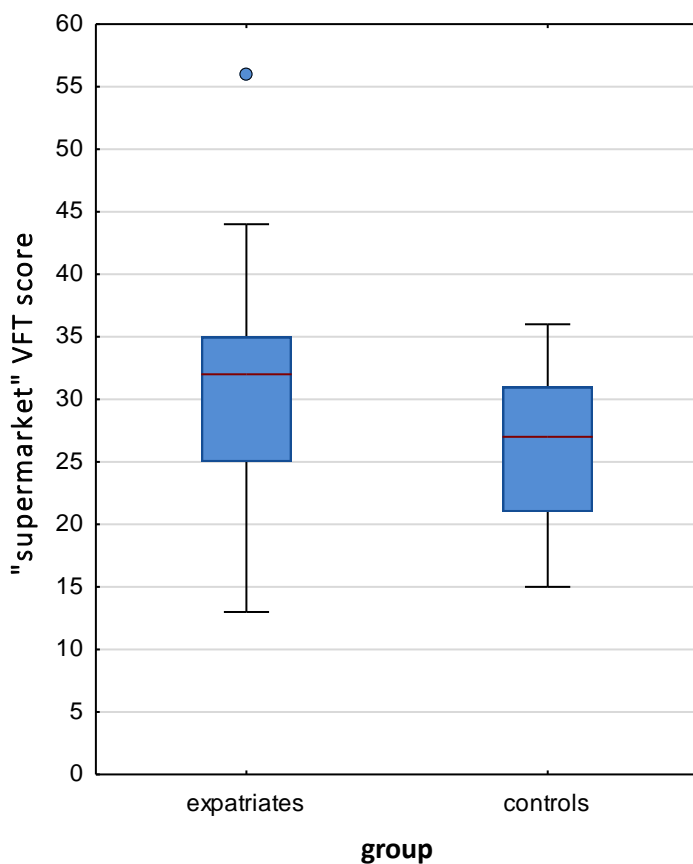


Figure 25. Boxplot of “supermarket” VFT scores

Table 21
VFT “supermarket” scores – descriptive statistics

statistics	Expatriates N = 17	Controls N = 15
M	31.8	25.9
SD	9.7	6.1

As can be established from Figure 25 and Table 21 above, the expatriate group exhibits a bigger range and also higher median and mean. One outlier score (56) can be observed within the expatriate dataset. This particular participant produced a large number of items in the other categories of VFT as well; thus, the score seems to genuinely reflect this participant’s word-retrieval abilities.

The examination of the histograms, Q-Q plots, as well as the results of Shapiro-Wilk tests of normality (expatriates: $p = 0.6$; controls: $p = 0.9$) indicate the data is normally distributed, despite the presence of the outlier. Having also met the assumption of equal variances (as indicated by Levene’s test, $p = .37$), the data were submitted to an independent groups t-test. The result of the two-tailed t-test ($t(30) = 2.01$; $p = .054$) shows that the difference between the two groups is on the verge of statistical significance.

7.1.5 Discussion

The result of the “supermarket” VFT does not point to the direction of L1 attrition among the expatriate group. In fact, with the expatriates display higher scores (with p on the brink of statistical significance), the opposite (i.e. a better accessibility of L1 lexical items) may be the case for the expatriate group, or at least for some participants within it.

The present results, albeit limited to only 1 round of VFT, thus replicate those of Dostert (2009) and Schoofs (2013).

There are several potential interpretations as to why this is so. Dostert (2009) offered the explanation that the expatriates performed better in terms of “fruit and vegetables” semantic tasks due to having experienced *two* culinary cultures; the same can arguably be said about supermarkets. This is further corroborated by a VFT utterance of one of the American expatriate participants: “Here: liquor,” where the inclusion of the word *here* clearly indicates that the participant was well aware of the existing supermarket cultural differences, so to speak. Further support for the “two cultures” explanation comes from the expatriate participants who included foods that are not commonly found in supermarkets in the Czech Republic, e.g. *okra* and *fried alligator*. Finally, the expatriates exhibited much wider food vocabulary, with only 6% of items named being non-food items, as opposed to 29% of the control group items (the controls frequently included e.g. electrical appliances and cleaning products in the “supermarket” VFT).

Perhaps more importantly, it is part of the job of the individuals who work as English teachers, translators, and editors to be able to retrieve words fairly quickly. That is to say, many expatriates may be more skilled in VFT-like tasks due to having greater experience in such activity through their profession. Furthermore, Schmid and Jarvis (2014) showed that the individuals who used their L1 in the workplace (which is the case of virtually all expatriate participants within the present sample) performed better in VFT. The explanation for this protective effect of L1 use in formal environment of workplace proposed by Schmid (as cited in Schmid, 2013) is that the individuals who use L1 at work

have obtained a greater skill at inhibiting the L2, thus preventing it from interfering with the L1 production. Further support for this explanation is lent by the fact that although the VFT category “supermarket” invites a lot of interference since food items are among the first to be acquired by learners of an L2, none was observed in terms of the speed of retrieval. Code-switches were also very rare, as is shown in the following section.

7.1.6 Code-switching, borrowing, convergence, and restructuring in VFT

Several instances borrowing, restructuring, and the use of Czech were observed within the expatriate group in the course of VFT (all rounds, i.e. “animals”, “supermarket”, “letter C”, and “letter T”). Their analysis is provided below.

Participant EG06 (US), “animals” VFT: *surikata*

While the lexeme *suricate* /'s(j)ʊərɪkət/, denoting a small African carnivorous animal, does exist in the English language, it is extremely rare: GloWbE corpus (1.9 billion words, Davies, 2013) gives the total of 5 occurrences in its entirety. A much more common lexeme denoting this animal is *meerkat*. It transpired that participant EG06, having moved to the Czech Republic in the early 90s (i.e. before this animal became popular and widely-known) was not familiar with the word *meerkat*, and utilized the Czech word *surikata* (with distinctly Czech pronunciation), thinking it applies to the English language as well. This presents an instance of restructuring (Pavlenko, 2004). Köfer (1991) in her categorization of L1 attrition phenomena termed this lack of keeping in touch with current language development **obsolescence**.

Participant EG06 (US), “animals” VFT: *lemur* [lemər]

This animal lexeme exists in both Czech and English. However, EG06’s pronunciation of the word was neither English nor Czech, giving an impression of a Czech learner’s of English attempt at the English pronunciation of this cognate. Participant EG06 was probably aware of the existence of the lexeme in both languages, but could not retrieve the correct English phonetic form, and so adjusted the Czech word as best as he could in the given moment. In Pavlenko’s framework (Pavlenko, 2004; Schmid, 2011), this would be a rare instance of **convergence**, i.e. a creation of a new item distinct from both L1 and L2.

Participant EG15 (US), “animals” VFT: *Co ještě? (What else?)*

While this speaker did not utilize any Czech items within the VFT, she used Czech to prompt herself for more items. It is unclear to what degree this was genuinely self-oriented L2 speech and to what degree this was meant to demonstrate knowledge of Czech for the ears of the researcher. The participant did not code-switch spontaneously on any other occasion within the VFT.

Participant EG02 (US), “supermarket” VFT: *Balkan cheese*

This loan translation of *balkánský sýr* (feta-like cheese commonly sold in the Czech Republic) was accompanied with laughter, indicating that participant EG02 was well aware of its non-existence in the English language. It also indicates that he was “mind-walking” a Czech supermarket, not an American one. Within Pavlenko’s (2004) framework, this loan translation is interpreted as an instance of borrowing.

Participants EG03 (US), EG13 (UK), “supermarket” VFT: *salad*

Even though *salad* is an English word and the two participants pronounced it as such, both admitted that what they had in mind was in fact the concept of *lettuce*, or *salát* in Czech (“I always forget the word lettuce!” said EG13). This instance of restructuring was also documented in Dostert (2009). It presents a common “Czenglish” mistake on the part of Czech learners of English, too.

Participant EG18 (UK), “supermarket” VFT: *knedlíky, bramborové knedlíky* [nedli:ki]
(*dumplings, potato dumplings*)

Participant EG18 started the “supermarket” VFT with these two typically Czech items, and then immediately code-switched into English and continued with fruit and vegetables. It is unclear why he did this (I did not ask); it is possible that he wanted to highlight the fact he was listing the items in a *Czech* supermarket; alternatively he may have wished to mention his favourite Czech side-dishes, to show off, or to make a joke. Somewhat surprisingly, as his Czech was quite advanced, he mispronounced the lexeme *knedlíky*, silencing the *k* in the English fashion. This would indicate that the sequence /kn/, which is very rare in the English language, presents a challenge even for advanced Anglophone learners of the Czech language.

Participant EG03 (US), “letter T” VFT: *tučňák* (*penguin*)

In the middle of the “letter t” VFT participant EG03 produced the lexeme *tučňák*, immediately noting that “it’s not not English um,” and continuing with English words only. This would hint at possible Czech lexicon inhibition difficulties EG03 may have been experiencing during the task rather than it being an instance of borrowing.

7.1.7 Conclusion

In the “supermarket” VFT, the expatriates did not exhibit any signs of L1 attrition in the sense of reduced accessibility of L1 lexicon (Pavlenko, 2004). In fact, the expatriates exhibited a higher mean VFT score than the controls, but this difference was only on the borderline of statistical significance. However, in the course of all four VFT tasks, some instances of other crosslinguistic influence processes were observed, namely borrowing (e.g. *knedlíky*), restructuring (e.g. *salad*), and convergence (*lemur* pronounced as [*lemər*]). It may be concluded that at least within the VFT, the expatriates’ L1 lexicons were shown to have been expanded and modified rather than diminished.

7.2 Crosslinguistic influence on lexical production: disfluencies in the Charlie Chaplin task

7.2.1 Introduction

“Spontaneous conversation is notoriously disfluent.”(Bortfeld, Leon, Bloom, Schober, & Brennan, 2001, p. 123). Arguably, the same is true for spontaneous narratives. Clark (2002) stresses that the speaker’s problem “is not planning *per se*, but planning *in time*” (p. 5) in order to communicate the message successfully. Therefore, the occurrence of disfluencies in spontaneous speech is of interest to L1 attrition research, as they may be indicators of retrieval difficulties in the less frequently accessed L1 (Schmid & Beers Fägersten, 2010). Nevertheless, there are only few studies dealing with disfluencies in the field of L1 attrition. Schmid (2007) analyzed empty and filled pauses, repetitions, and self-corrections in Charlie Chaplin task narratives as told by German speakers residing in

Canada and the Netherlands. The bilingual (attriter) groups differed significantly from the controls, producing more hesitation markers. In addition to the incidence of hesitation markers, Schmid (2007) investigated the relationship of frequency of L1 use in different language modes and the degree of L1 attrition (operationalized as, among other variables, the number of pauses etc.), only to find no correlation, suggesting the possibility that “frequency and recency of activation play a less prominent role in L1 attrition than they do in other bilingual or multilingual contexts.” (p. 150). Similar results as to the amount of disfluencies were reported by Schmid and Beers Fägersten (2010) who additionally employed Dutch speakers residing in Canada and a Dutch control group. Furthermore, Schmid and Beers Fägersten (2010) investigated the place of occurrence of the disfluencies, showing that in the immigrant groups the disfluencies appeared more frequently before nouns, articles, pronouns and, in case of Canada-based informants, before verbs. The authors concluded that hesitation strategies were mainly employed in connection with the retrieval of lexical information and not with content planning, as the distribution of hesitation markers at clause boundaries did not vary between the experimental and the control groups (p. 785). Finally, in Dostert’s 2009 dissertation on native speakers of English living in Germany (see Section 3.3.7 for more details), the immigrants differed from the controls in the (higher) amount of short and long silent pauses (the prevalence of other hesitation markers was also higher, but statistically non-significant).

In this section of the dissertation, I analyze the disfluencies in the Charlie Chaplin narratives by the expatriates and the L1English controls. First, the definition and measurement method of each type of disfluency (empty and filled pauses, repetitions, false starts,

and editing expressions) is provided. Next, the two groups are compared with regard to the prevalence of the said disfluencies. Lastly, the results are discussed in connection with previous research and the VFT results.

7.2.2 Hypothesis

Based on the results of the previous research reviewed above, I hypothesize the following: the native speakers of English living in the Czech Republic display a higher number of disfluencies (namely empty and filled pauses, editing expressions, repetitions, and false starts) than the L1 English controls.

7.2.3 Method

The **Charlie Chaplin task** is a speech-elicitation method commonly used in the field of L2 acquisition and L1 attrition (e.g. in Schmid, 2007; de Leeuw, 2008; Dostert, 2009). The participants are asked to watch and then retell an 11 minute-long extract from Charlie Chaplin's 1936 motion picture *Modern Times* (more details, including the synopsis of the film clip, are presented in Section 6.2.2). The retellings are recorded. In the test battery of the present dissertation, Charlie Chaplin task followed the sociolinguistic interview. Recall that one control group participant was excluded from this analysis on the grounds of living in a German-English bilingual household and thus possibly having a highly active L2 lexicon.

The recorded narratives were then transcribed, coded, and analyzed using two software tools, namely PRAAT (Boersma & Weenink, 2014, 2018) for the analysis of pauses

and hesitation sounds, and Dexter⁴² (Garretson, 2011) for the coding and analysis of false starts, repetitions, and editing expressions.

7.2.3.1 Empty and filled pauses

Empty and filled pauses were measured and coded in the phonetic analysis software PRAAT (Boersma & Weenink, 2014, 2018). An empty pause (EP) was defined as a period in the recording with no speech signal lasting longer than 500 ms, thus eliminating short pauses for taking breath. A filled pause (FP) was defined as an “er” or “um” sound inserted between words. Further classified as FPs were vowel sounds in words lasting longer than 400 ms (typically in a preposition or a pronoun), which gave the word in question a distinctly hesitant flavor, and articles pronounced as [eɪ] or [ði:] in front of a non-vowel sound, and, at the same time, clearly not utilized for contrastive purposes. Fox Tree and Clark (1997), who studied the occurrence of the prolonged realization of the definite article, were able to show that such realization was strongly associated with the use of other hesitation phenomena, including filled and empty pauses, repetitions and repairs. They concluded that the speakers chose this realization to help them deal with the problem of production and to signal “repairs to come” (p. 162). It seems reasonable to assume the same applies to the use of the strong form of the indefinite article (when not used to express contrast or emphasis).

⁴² Admittedly, this is not the tool of choice within the field of bilingualism. However, it is much more user friendly and less labor-intensive than the CHAT/CLAN system recommended by Schmid (2011) and was deemed suitable for the purposes of the present analysis.

7.2.3.2 *Repetitions, false starts, editing expressions*

The transcribed Charlie Chaplin narratives were coded and analyzed for repetitions, false starts and editing expressions (filler words) using the application Dexter (Garretson, 2011).

Repetitions (RPTs) were operationalized as a multiple co-occurrence of identical words (or groups of words) as in the following example (repetition underlined):

(1) EG02: his goal in life seems to be to be going back to jail

False starts (FSs), or repairs, were defined as unfinished phrases or sentences that the speaker abandoned in favor of a different formulation of the information (or, indeed, in favor of an altogether different piece of information):

(2) EG02: and in the end that falls apart because they realize they're not gonna they got the wrong guy

Editing expressions (EEs), or filler words (or, somewhat judgmentally, “verbal crutches”), were defined as often repeated words or phrases that did not contribute to the story and fulfilled the floor-holding function (Aijmer, 2002). Upon examination of the corpus of the retellings, the following list of editing expression was compiled (in alphabetical order): *kind of, like, obviously, or something, sort of, well, yeah, yep, you know*.

7.2.4 Results

7.2.4.1 *Empty and filled pauses*

The following boxplot (Figure 26) displays the distribution of empty and filled pauses and total number of pauses by group.

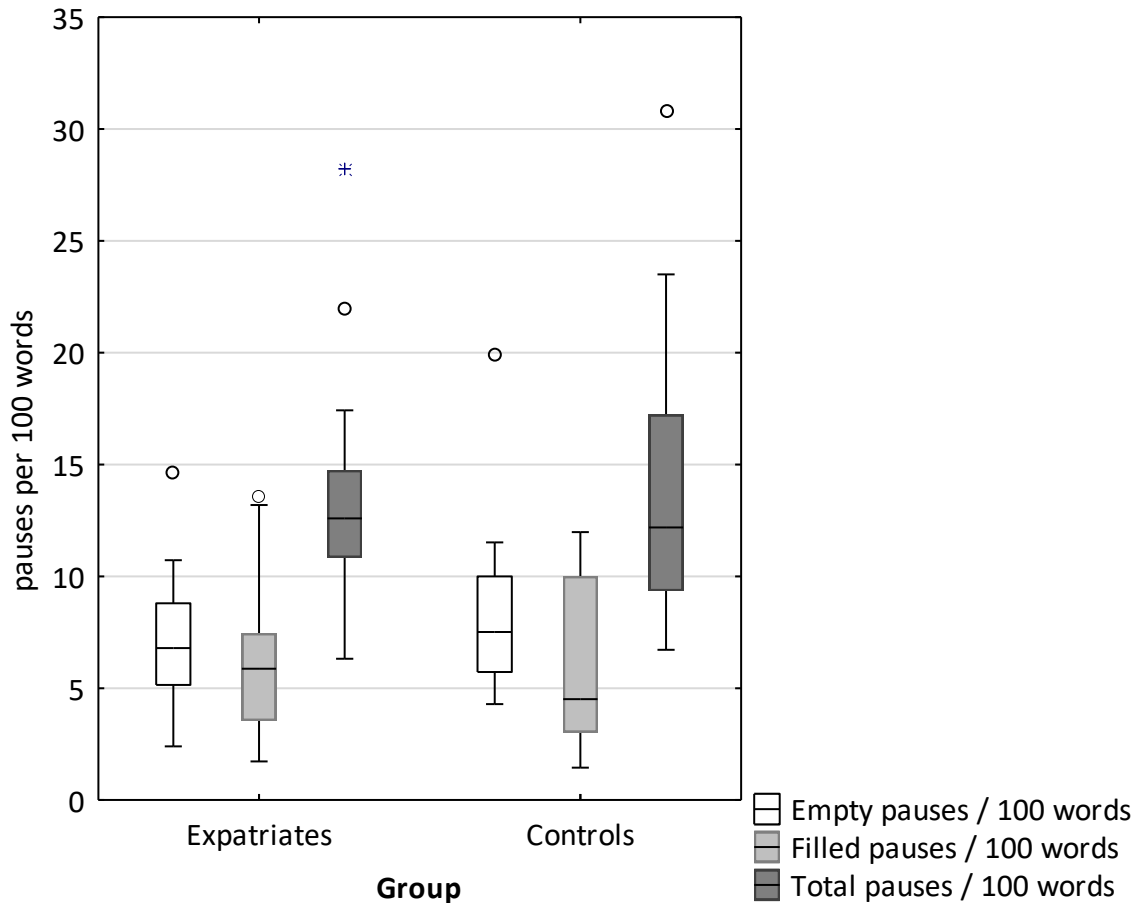


Figure 26. Box plot of empty, filled, and total pauses in the Charlie Chaplin retellings by group

Not many differences between the two groups can be observed from the boxplot in Figure 26. The medians are approximately the same for both groups and most distributions exhibit a positive skew. There are outliers in both groups; nonetheless, even the extreme expatriate outlier for Total Pauses/100 words (EPs and FPs per 100 words combined) does not reach the highest controls' score.

Table 22 below provides the descriptive statistics of pauses per 100 words in the Charlie Chaplin retellings. It reveals that the two groups' means differ only ever so

slightly, with the controls in fact exhibiting a higher number of EPs and TotalPs per 100 words than the expatriates.

Table 22			
<i>Pauses per 100 words in Charlie Chaplin task retellings – descriptive statistics</i>			
pauses		Expatriates N = 18	Controls N = 15
Empty	M	7.1	8.3
	SD	3	3.9
Filled	M	6.4	6
	SD	3.6	3.5
Total	M	13.4	14.3
	SD	5.2	6.5

Next, the data were examined for normality of distribution. Both the boxplot and histograms showed some positive skew, deviations from the normal distribution were also observed in the Q-Q plots. In addition, both groups featured outliers. The fact that the distributions are not normal was supported by the results of Shapiro-Wilk tests, which indicated normality only for the expatriates' EPs and the controls' FPs ($p = .66$ and $p = .09$, respectively). Therefore, it was decided to utilize a non-parametric alternative to the t-test, namely the Mann-Whitney U test, to assess the differences between the two groups. Table 23 on the following page provides the test statistics results.

Table 23
Charlie Chaplin retellings pauses: Mann-Whitney U tests results

Pauses	U	Z	p (two-tailed)
Empty	109	-.94	.35 non-sig.
Filled	123	-.43	.66 non-sig.
Total	129	-.22	.83 non-sig.

As can be observed from Table 23, the test statistics do not indicate any differences between the two groups. In other words, the expatriate group does not exhibit any signs of L1 attrition in comparison with L1 English controls in terms of frequency of pauses.

7.2.4.2 Repetitions, false starts, editing expressions

The boxplot on the opposite page (Figure 27) displays the distributions of repetitions (RPTs), false starts (FSs), editing expressions (EEs), and the three variables combined (Comb.) by group. As can be observed, most of the distributions exhibit a positive skew; in addition, the expatriate distributions contain outliers and extreme values. As with pauses, there are no immediately apparent differences between the groups; the expatriate values are well within the control ranges, with the exception of the two RPTs extreme values. Further descriptive statistics are provided in Table 24.

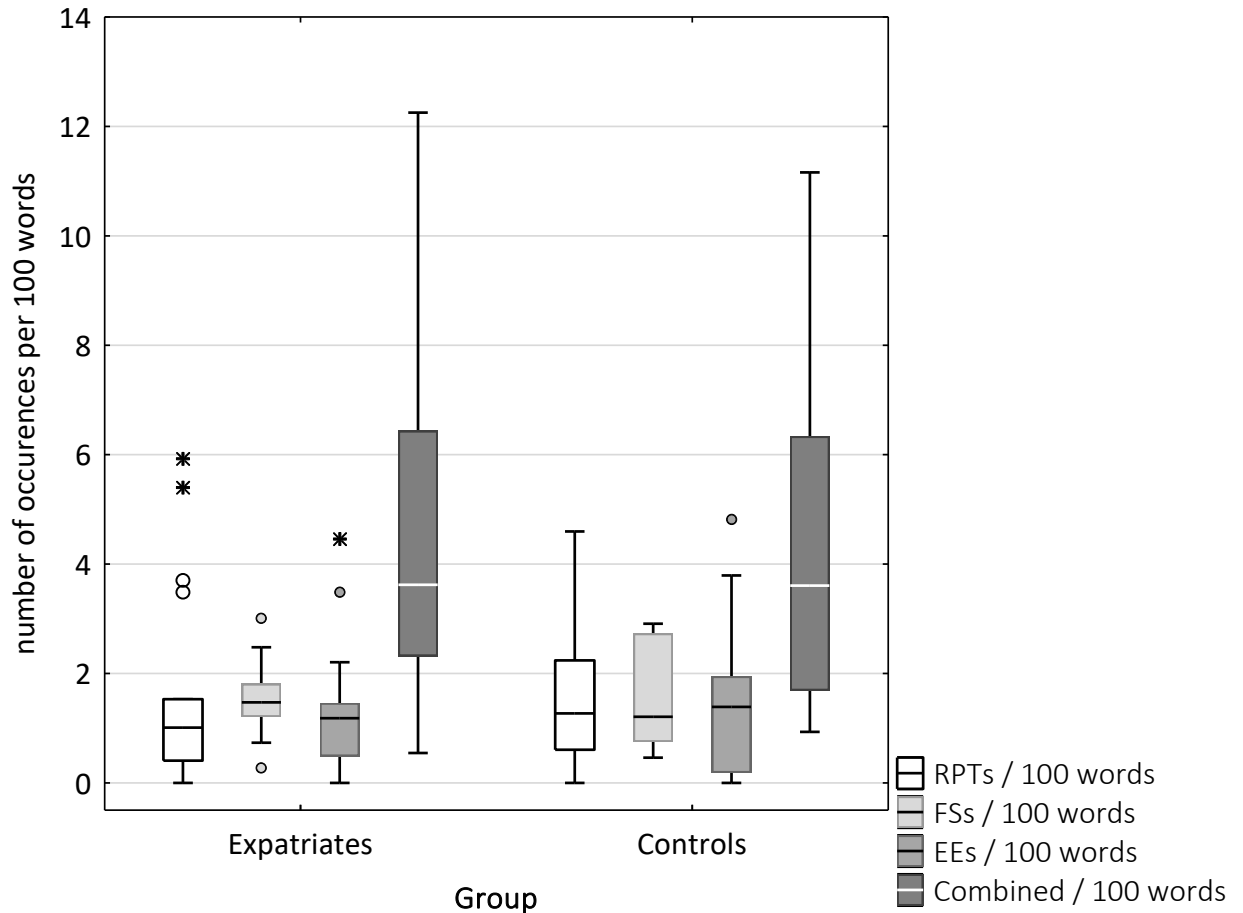


Figure 27. Box plot of repetitions, false starts, editing expressions, and all 3 combined in the Charlie Chaplin retellings by group

To assess the differences between the two groups the non-parametric Mann-Whitney U test was utilized, given the number of outliers and extreme values, positive skews in the distributions showed in the histograms, and deviations in the Q-Q plots. Table 25 on the following page provides the test statistics for the variables in questions. As expected, none of the minute differences between the two groups proved to be statistically significant; if anything, the *p*-values indicate that the two groups are remarkably similar, as can also be observed from Figure 27.

Table 24

Repetitions, false starts, editing expressions, and the 3 variables combined per 100 words in Charlie Chaplin task retellings – descriptive statistics

disfluencies		Expatriates N = 18	Controls N = 15
RPTs	M	1.7	1.5
	SD	1.8	1.2
FSs	M	1.5	1.6
	SD	0.7	0.9
EEs	M	1.3	1.4
	SD	1.2	1.4
Comb.	M	5.5	4.5
	SD	3.1	3.1

Table 25

Charlie Chaplin retellings repetitions, false starts, editing expressions, combined: Mann-Whitney U tests results

variable	U	Z	p (two-tailed)
RPTs	125.5	-.34	.73 non-sig.
FSs	131	-.15	.89 non-sig.
EEs	134	-.04	.97 non-sig.
Comb.	130	-.18	.86 non-sig.

7.2.5 Discussion

The two groups are remarkably similar in terms of the number of disfluencies, including empty and filled pauses, repetitions, false starts, and editing expressions (*sort of* and similar). No attrition is observable on the individual level either, none of the expatriate participants scored outside of the control range in any noticeably significant manner. These findings fail to replicate the previous research on disfluency in bilinguals in L1 attrition contexts. Most interestingly, Dostert's (2009) findings on the English and Irish living in Germany were not replicated. There may be several reasons for this. Firstly, Dostert only recruited participants who had stayed in Germany for over 10 years; this is not the case of the present dissertation in which only 50% of participants had resided in the Czech Republic for this period or longer. Further, it appears that the majority of Dostert's sample had an L2 partner and a fairly good knowledge of German, which cannot be said of the majority of the present sample. It is possible, then, that it was too "early" for the participants in the present research to develop retrieval problems of this magnitude. In addition, the participants working as teachers and those with children undoubtedly feel a strong pressure to remain fluent and to be the perfect language role models as is often required of them. It is also possible that the expatriates developed more covert strategies of coping with slower retrieval than the frequent use of pauses, repetitions and editing expressions, namely the use of high-frequency, easily accessible words. This hypothesis is going to be explored in greater detail in the following subchapter.

7.3 Crosslinguistic influence on lexical production: lexical diversity in the Charlie Chaplin task

7.3.1 Introduction

Lexical diversity (sometimes also referred to as lexical variability, lexical variation, and lexical variety) is “usually operationalized into measures designed to capture the proportion of words in a language sample that are not repetitions of words already encountered” (Jarvis, 2013, p. 88). In other words, this measure provides an insight into whether one uses a variety of synonyms, or adheres to a limited number of expressions which are therefore often reused. Although this type of measures arguably lack construct validity (Jarvis, 2013), they have been shown to correlate well with other constructs, such as language proficiency and vocabulary knowledge (see Jarvis, 2013 for references). By virtue of this and the fact they are (at least nowadays) relatively simple to obtain, they have been utilized widely within the fields of L2 acquisition, aphasia research, discourse analysis, and translation studies.

One of the most well-known and most commonly used operationalization of lexical diversity is type-token ration (henceforth TTR), which is calculated as the number of types (i.e. the number of different words) over the number of tokens (i.e. the word total) (Jarvis, 2002). Apart from the aforementioned construct validity, TTR suffers from one more short-coming: sensitivity to text length. There exist two techniques for utilizing TTR for texts of unequal length: establishing a cut-off point for the calculation of TTR (e.g. 200 words), or splitting the texts into segments of the same length and calculating a mean TTR from the segment TTRs (Jarvis, 2002). However, Jarvis (ibid.) demonstrated that these techniques

provide different results based on the location of the cut-off point in the former and the length of segments in the latter technique. Having tested several commonly used algebraic transformations of TTR, Jarvis (*ibid.*) concluded that Uber index (an algebraic transformation of TTR, adopted also in the present enquiry) and D index provided the closest fit to TTR curve for short texts of unequal lengths.

In his more recent paper on lexical diversity, Jarvis (2013) brought forward an original suggestion, namely that linguists should adopt measures of diversity from the field of ecology, as TTR and related measures do not fully capture the perceived lexical richness obtained from human raters. This new approach seems highly promising, but in need of extensive validation (*ibid.*). In addition, no readily available applications exist for the calculation of these measures, rendering any analysis along these lines extremely laborious.

7.3.2 Lexical diversity in L1 attrition studies

Researchers in the field of L1 attrition have traditionally been interested in the possible reduction in the attriters' mental lexicon, with lexical retrieval difficulties being one of the most frequent and most noticeable sign (at least to the attriters themselves) of this phenomenon. The theoretical underpinning is provided by the Activation Threshold Hypothesis, which holds that less frequently activated lexical items are more difficult to retrieve due to the increased activation threshold caused by the lack of L1 use (Paradis, 2007) and the interference from active L2 items (Köpke, 2007; see Section 2.1 for more details). According to this framework, reduced lexical diversity in L1 attrition is caused by

the inability to locate suitable less-frequently used synonymous expressions quickly and effortlessly, rather than by a complete forgetting of a given lexical item.

Apart from the hypothesized retrieval difficulties related to the non-use of the L1 and learning and use of the L2, there are also other reasons for the reduction of one's lexical diversity which have not received so much attention thus far. In the Anglophone expatriate population, communication accommodation may play an important role: having to communicate with less proficient L2 users of English (be it students, colleagues, friends, or Czech family members), the expatriates often need to "tone down" their English, finding themselves in the foreigner-talk or teacher-talk mode with simplified vocabulary (see Section 2.2 for details). After some period of time, this may become the dominant, unconsciously utilized mode of L1 use.

The results of lexical diversity investigation in L1 attriters have been mixed so far. In their review of seven L1 attrition studies using the traditional methods of assessing lexical diversity, Schmid and Jarvis (2014) noted that only studies with a higher number of participants (over 100) were able to demonstrate statistically significant differences in terms of lexical diversity between the attriting populations and the controls in free speech tasks. Of particular interest are the results of Doster's (2009) dissertation, in which it actually were the attriters who obtained higher D values in the Charlie Chaplin task retellings; this result was, however, not statistically significant.

Schmid and Jarvis (2014) were, to my knowledge, the first to adopt the measures existing in the field of ecology (as proposed in Jarvis, 2013) for L1 attrition data; their sample consisted of over 150 German speakers: 2 bilingual (attriter) groups, and a control

group. The study did not find any differences between the groups in terms of TTR based measures; the attriter groups, however, differed significantly (but with very weak effect size) from the controls in terms of evenness, dispersion and rarity in the interview data, but not in the more controlled Charlie Chaplin task data (p. 740). The study also looked at word-frequency, both within the corpus of the data and as compared to the large German-language corpus COSMAS II. The results of this analysis showed that “the attriters overuse the most and underuse the least frequent vocabulary when frequency is based on the present corpora alone, but not when it is based on a large corpus of German data of all types.”(ibid.). The authors further investigated which extralinguistic variables were predictors of the degree of L1 attrition, failing to establish any connection with the length of residence, age at immigration, L1 use, and L2 proficiency on the free speech lexical diversity measures.

7.3.3 Hypothesis

Although the review of literature shows mixed results, I hypothesize the following:

The expatriate group exhibits lower levels of lexical diversity (operationalized as U index) from the control group.

7.3.4 Method

To test the hypothesis that the lexical diversity levels in the narratives of the expatriates and the L1English controls differ, it was decided to utilize a traditional TTR-based method, mainly because it allows for comparison with the previous studies, especially Dostert (2009).

The narratives (cleared of repetitions, filled pause markers, and apostrophes for contracted forms – so that contractions such as *they're* were treated as one type, as opposed to two) were submitted to AntWordProfiler (Anthony, 2014), an application for assessing lexical diversity, in order to obtain the number of types and tokens. Given the various lengths of the narratives (ranging from 203 to 2,087 tokens), the Uber formula (Dugast, as discussed in Jarvis, 2002; and utilized for L1 attrition research in Dewaele & Pavlenko, 2003) was computed to compensate for the length effect:

$$\text{Uber formula (Jarvis, 2002): } U = \frac{(\log \text{tokens})^2}{(\log \text{tokens} - \log \text{types})}$$

The higher the U index, the higher the lexical diversity (i.e. the higher count of different lexical items per narrative).

7.3.5 Results

Figure 28 on the following page displays the distributions of U index computed for the two groups. The expatriate group exhibits a slightly higher median, as well as a greater range, but the differences are not dramatic in any way. Having met the assumptions of normality (established by the examination of the boxplots and Q-Q plots) and homogeneity of variance (as indicated by the non-significant result of Levene's test: $p = 0.08$), an independent sample t-test was conducted to compare the means of Uber index obtained from the expatriate group ($M = 19.6$, $SD = 2.4$) and the L1English control group ($M = 18.4$, $SD = 1.6$). The t-test indicated there is no significant difference between the two groups ($t(31) = 1.6$, $p = .12$). There are also no notable extreme values within the two groups.

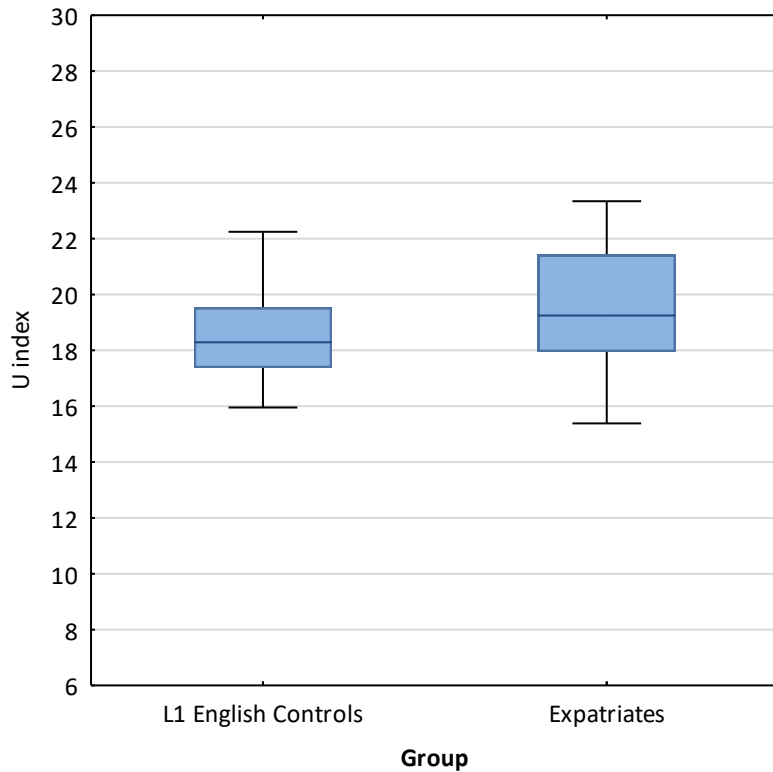


Figure 28. Boxplot of U index obtained from the Charlie Chaplin clip retellings

7.3.6 Discussion

The fact that the hypothesis was not confirmed is by no means surprising, given the similar findings in previous studies with a limited number of participants (see Schmid and Jarvis, 2014, for an overview). The results of the present study, on the other hand, corroborate those of Dostert (2009), whose sample of English immigrants also showed higher lexical diversity (but not statistically significant). The explanation for this would be firstly the immense pressure on L1 maintenance, resulting in both conscious and unconscious efforts to prevent L1 attrition. Secondly, some expatriates may have developed a speech style which *does* utilize synonyms as means of enhancing communication, with

the hope that the L2 interlocutor will understand at least one of the synonyms utilized. Finally, in the present expatriate sample there were several editors, translators, and hobby poets/writers: all these professions and past time activities require the skill of retrieving and utilizing synonyms, a skill which would undoubtedly show in tasks like the Charlie Chaplin film retelling.

7.3.7 Lexical choice in the Charlie Chaplin task

Arguably, TTR and similar measures do not provide sufficiently granular view of the actual lexis used in texts and narratives. To this end, following Olshtain and Barzilay (1991), Yağmur (1997), and Dostert (2009), a detailed comparative lexical analysis was conducted with the hope of uncovering qualitative differences in the lexical choices utilized by the two groups. The following key elements (partially overlapping with those analyzed in Dostert, 2009) of the Charlie Chaplin film clip were selected for the analysis (Table 26):

Table 26 <i>Key elements of the Charlie Chaplin film clip for qualitative lexical analysis</i>			
places	objects	persons	actions
shipyard	hammer	sheriff	releasing the wedge
restaurant	truncheon	superiors at the shipyard	releasing the boat
tobacconist's			encountering the main female character
police vehicle			escaping the police vehicle
			running away together

7.3.7.1 Lexical analysis: places

Shipyard

In the Charlie Chaplin film clip, the shipyard is the first place Charlie visits after having been released from prison. The lexical choices utilized to refer to this place are displayed in the Table 27 below.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)			
	shipyard	boatyard	not mentioned	other
Controls (N = 15)	2	5	4	boatbuilding/shipbuilding yard, shipbuilding company, docks, workyard
Expatriates (N = 18)	6	5	2	shipbuilding site/company, construction company, lumberyard, docks, dry dock

As can be observed from Table 27, the two groups utilized more or less identical lexemes to refer to the site where Charlie found employment. There were no apparent BrE/NAmE dialectal differences. However, 5 expatriate participants utilized verbal hedges with the term of choice (e.g. *some kind of* -, - *or something*), which indicates a degree of uncertainty. In addition, 1 expatriate participant (perhaps more technically minded) struggled while trying to come up with a precise technical term:

(3) EG02: it's somewhere in the docks, it was *um* what do you call those places where they build ships, I can't think of the name at the moment, it's a dry dock, is where they were building it, well, actually it was on land, it wasn't technically a dry dock.

Cafeteria

In the film, Charlie decided to get himself arrested again by having a big meal in a cafeteria and not paying for it.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)				
	restaurant	cafeteria	café	not mentioned	other
Controls (N = 15)	7	4	5	2	0
Expatriates (N = 18)	10	4	2	1	diner (2), canteen, shop, buffet, jídlna

The most frequently used lexeme to describe the place in question is *restaurant* in both groups, with some speakers combining it with one of the semantically narrower lexemes *cafeteria/café/canteen*. Curiously, while the control speakers do not show any preference for *cafeteria* or *café*, in the expatriate group it is only the Americans who utilize *cafeteria*; the word *café* was utilized only twice in total, once in combination with *restaurant*. One possible (but unlikely – given the control group data) explanation is frequency of use: in NAmE, the lexeme *cafeteria* is about three times more common than in BrE, whereas the word *café* is about 1.5 times more common in BrE according to Corpus of Global Web-Based English (GloWE; Davies, 2013). More plausibly, however, we may be observing here what Jarvis and Pavlenko (2008) refer to as restructuring, i.e. “a partial modification of already existing language-mediated conceptual categories” (p.160). In the Czech context, the lexeme *kavárna* (commonly translated into English as *café*; Fronek, 2000) denotes

a place where one buys primarily coffee and bears connotations of coziness and intellectual discussion. This is not what the lexeme *café* denotes in the UK and the USA according to Oxford Dictionaries.com: “1. a small restaurant selling light meals and drinks; 2. *North American* a bar or nightclub” (“Cafe,” n.d.). With the experience of small cozy “cafés” of the Czech Republic serving mostly coffee and cakes, the expatriates may have been reluctant to utilize the lexeme *café* to describe the canteen-type of place depicted in the film. Instead, we see a variety of other terms, including *diner* (used, curiously, by 2 British expatriates), *canteen*, *buffet*, and a code-switch *jídelna* (see 7.3.7.5 below for the analysis of code-switches). Unlike the control group participants, some expatriates (5) utilized hedging expressions (e.g. – *of some sorts*) with the word of choice, indicating possible insecurity about the right term.

Tobacconist’s

After having been arrested for not paying for his meal in the cafeteria, Charlie steals a cigar at a tobacconist’s while waiting for the police vehicle.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)		
	(newspaper, cigar) kiosk	not mentioned	other
Controls (N = 15)	3	8	newspaper vendor, newsstand, magazine stall, tobacco shop, tobacconist’s
Expatriates (N = 18)	3	8	magazine stand, tobacconist store, tobacconist, cigar counter, newsagent’s, convenience store, trafika, tabák

Altogether 16 participants either skipped the scene or did not use any lexical item denoting the place from which Charlie stole some cigars; in the expatriate group it was, for no obvious reason, mostly the Americans.

The most commonly utilized word was *kiosk*, followed by a wide range of other expressions. More verbal hedges were utilized by the expatriate group. I comment on the code-switches *trafika* and *tabák* in 7.3.7.5 below.

Dostert (2009) reported that the lexeme *kiosk* without any modification was used only by the attriter group (in 20% of cases), implying the influence of German. This is not so in the present research: the unmodified lexeme *kiosk* is only used by two British control group participants. The expatriates all used either a modifying expression or a hedge with this lexeme. While the word *kiosk* does exist in the Czech language, it is extremely rare (0.04 i.p.m. in SYN2015; Křen at al., 2015) and becoming obsolete: taken altogether, there are no grounds for speculating about Czech influence.

Police vehicle

Charlie and the young woman are arrested and thrown into an old-fashioned police vehicle.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)				
	(police) van	(paddy) wagon	(police) car	combi- nation	other
Controls (N = 15)	9	1	2	0	jail cart, prison van, police truck
Expatriates (N = 18)	5	9	3	6	police wagon, truck (3), police vehicle, prisoners' van

A clear dialectal divide surfaced in the lexical choice here: the American expatriates showed a strong preference for the lexeme *wagon* (in combination with *paddy* and *police*), whereas the British participant, be it the expatriates or controls, opted for the lexeme *van*. In Dostert's (2009) study, about a third of the "attriter" group participants utilized an old-fashioned BrE term *Black Maria*, while 20% of the British controls used the American English term *paddy wagon*. This was interpreted as "lagging behind" the recent trend of Americanization of British English on the part of the British living in Germany. In this study, only one British control participant used the word *wagon*, and the term *Black Maria* did not come up at all. The reason may be that Dostert's (2009) participants were on average about a generation older at the time of the data collection for the present dissertation, and in the meanwhile the term *Black Maria* had gone from old-fashioned to antiquated.

As regards hedging language, the same number of participants used some kind of verbal hedge in both groups. However, six expatriates utilized two or more different terms in the course of the narrative, showing what might be interpreted as either an attempt at greater lexical diversity or insecurity as to what term is more precise. The latter interpretation is further supported by the following expatriate participants' quotes:

(4) EG06: #⁴³ *um* he was in the[ðɪ:] # gosh ### the paddy wagon, no, I know, he was in the the police car *um* as much as you could call it that *um*

(5) EG16: they put him in the back of a police # truck or paddy wagon, I don't know how⁴⁴ you would call that #

⁴³ # denotes a pause

⁴⁴ Notice also the typical Czenglish error here: *how* instead of *what*.

7.3.7.2 Lexical analysis: objects

Mallet

When working in the shipyard, Charlie uses a mallet to obtain a wedge of wood.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)			
	mallet	hammer	not mentioned	other
Controls (N = 15)	2	2	11	0
Expatriates (N = 18)	1	2	14	sledge hammer

While many participants utilized a verb associated with the use of the mallet (e.g. *knock it out*), the tool itself was frequently omitted from the narrative, possibly due to redundancy rather than retrieval problems. No differences between the two groups were observed.

Truncheon

When escaping the site of the police van accident, Charlie hits the policeman with a truncheon in order to be able to escape.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)		
	truncheon	baton	not mentioned
Controls (N = 15)	2	1	12
Expatriates (N = 18)	2	1	15

No differences were observed between the two groups, and no participant used verbal hedging with the lexeme of choice. The lack of occurrence of this word in the narrative may again be explained by the fact that the verbs utilized (e.g. *hit over the head*) are specific enough and do not require further qualification. Unlike the word *hammer*, *baton* and *truncheon* are both much less frequent (according to GloWbE; Davies, 2013), so the omission is unsurprising. However, Dostert reported high percentage of the use of a lexeme denoting the object in question in both groups (higher, in fact, in the attriter group). It is not clear why the present sample would differ so much.

7.3.7.3 Lexical analysis: persons

Sheriff

At the beginning of the film clip, the sheriff releases Charlie from prison and gives him a letter of recommendation.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)				
	Sheriff	(prison) warden	they	not mentioned	other
Controls (N = 15)	6	1	1	5	policeman, (prison) officer (2), whoever's in charge of the prison
Expatriates (N = 18)	6	5	2	4	commissioner, the police

The two groups exhibit very similar data. The expatriates utilized the lexeme *warden* more often, but it is unclear why: the data do not indicate any interdialectal differences.

Employer

At the shipyard, this character reads Charlie's letter of recommendation and employs him.

Group (<i>N</i> participants)	Lexemes (number of participants utilizing the particular lexeme)		
	specific	general	not mentioned
Controls (<i>N</i> = 15)	the boss, potential employer	they, the guy, the guy who runs it	10
Expatriates (<i>N</i> = 18)	the boss, foreman (2), the supervisor	they, the guy, the man in charge	11

Foreman

At the shipyard the foreman tells Charlie to locate a wedge.

Group (<i>N</i> participants)	Lexemes (number of participants utilizing the particular lexeme)		
	specific	general	not mentioned
Controls (<i>N</i> = 15)	foreman (4)	they, the guy, the one in charge	8
Expatriates (<i>N</i> = 18)	foreman (4)	the man	13

As can be observed from Tables 34 and 35 above, there is no difference between the two groups as to the lexis utilized to refer to the two characters Charlie encounters in the docks; none of the participants used hedging language either. The participants who did

not use any lexeme to denote the two characters from the docks typically opted for the passive voice in their narration of this particular part of the story.

7.3.7.4 Lexical analysis: actions

Releasing the wedge

Charlie releases the wooden wedge from underneath the ship using a mallet.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)			
	take (out, from underneath)	knock out	not mentioned	other
Controls (N = 15)	3	2	5	dislodge, pull out, bash out, move (2)
Expatriates (N = 18)	2	3	9	get it loose, move, hammer out/away

Most of the participants opted for a combination of a verb and a preposition. No interdialectal differences were observed. The only difference between the two groups is that slightly more expatriate participants omitted this particular scene from their narrative.

Launching the ship

After Charlie releases the wedge, the unfinished ship is launched into the sea (Table 37).

The control group exhibits preference towards sentence constructions with the ship as the grammatical subject, while the expatriates preferred constructions with the ship as the grammatical object. It is not completely clear what the explanation for this may be. Both groups display a great lexical variety in their preferred types of sentence construction as well. Interestingly, 4 expatriates used the adverb *accidentally* to further characterize the

action. Together with one instance of hedging (*sort of*), this can be taken as evidence for insecurity as to how to describe the action as precisely as possible using only a verb.

Table 37			
<i>Charlie Chaplin task: launching the ship</i>			
Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)		
	the ship as the sentence subject	the ship as the object	not mentioned
Controls (N = 15)	8 launch into the sea be launched ride into the sea slide off into the ocean go off sailing into the sea go into the ocean disappear into the water run down the slip into the water	2 make it sink into the water knock it out of its docking station	5
Expatriates (N = 18)	5 go float off into the distance go (off) into the water/sea (3)	9 launch it (into the water) (2) release it (into the water) (4) allow it to sink into the sea send it out into the sea push it out to sea	4

Encountering the main female character

Charlie is wandering down the street when a young woman runs into him.

Table 38				
<i>Charlie Chaplin task: encountering the main female character</i>				
Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)			
	run into	bump into	not mentioned	other
Controls (N = 15)	5	5	4	collide into
Expatriates (N = 18)	11	2	3	hit, encounter

The expatriates display a strong preference for *run into*, which is in contrast with Dostert's (2009) data, where the expatriates exhibited higher use of *bump into* than the controls. Interdialectal differences do not seem to play a role here; more plausibly, with *run* being much more frequent than *bump* (GloWbE, Davies, 2013), we observe the expatriates utilize a more common expression, which is arguably more accessible in the mental lexicon and easier to comprehend on the part of Czech users of English.

Being thrown out of the police van

As the police van swerves violently to avoid an accident, Charlie and the young woman get thrown out.

Table 39					
<i>Charlie Chaplin task: being thrown out of the police van</i>					
Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)				
	escape (the van)	fall out/off (the van)	be/get thrown out	not mentioned	other
Controls (N = 15)	4	5	1	1	jump out, get flung out, (it) knocked them off, end up on the floor [sic]
Expatriates (N = 18)	0	8	2	6	force themselves out

The expatriates show preference towards the more frequent verb *fall* (GloWbE; Davies, 2013). In addition to the great degree of uniformity in the description of the event, one third of the expatriates omitted it altogether from their narrative. More variety can be

observed within the control group, who utilized a mix of lower and higher frequency lexemes. A slight word-choice error was observed in one of the controls, who used the lexeme *floor* instead of the more appropriate *ground*.

Running away

After having been thrown out of the police van, the couple escape from the scene.

Group (N participants)	Lexemes (number of participants utilizing the particular lexeme)				
	run away	run off	escape	combinations	other
Controls (N = 15)	0	1	6	8 escape + run away (3) escape + run off (2) escape + get away + run off go off + run off escape + make a run for it + go on the run	0
Expatriates (N = 18)	6	3	2	4 escape + run off flee + run off run off + run away leave+ run away	go off run flee

The trend towards a stronger preference for more frequent verbs in the expatriate group continues in the description of the main characters' escape, with the expatriates utilizing the verbs *run*, *go*, and *leave*. In only 6 instances the less frequent verbs (according to GloWbE; Davies, 2013) *escape* and *flee* were used. 13 control group participants, on the other hand, utilized the less frequent *escape*, either by itself or in combination with *run*. No interdialectal differences were observed.

7.3.7.5 Code-switching in the Charlie Chaplin task

Code-switching, or “the use of overt material (from single morphemes to entire sentences) from Language B in Language A discourse” (Backus & Dorleijn, 2009, p. 76), is commonplace in bilingual speakers. There are many reasons why bilinguals code-switch; in the context of L1 attrition research, one of the reasons why a speaker inserts an L2 lexeme may be that they are having difficulties retrieving the L1 item (Schmid, 2011). As Schmid (ibid.) admits, it may be difficult to pinpoint exactly why a person code-switched, but pauses, repetitions and editing expressions in the environment of the code-switched item may hint at retrieval difficulties as these strategies are used to signal that the speaker needs more time to formulate the message. Sometimes, as Schmid (ibid.) illustrates with several examples, the speaker may actually overtly comment on retrieval difficulties they are having.

In the Charlie Chaplin clip retellings the following code-switches appeared:

(6) EG06: I guess because this was Hollywood, so you get – see that kind of a house *um* ###⁴⁵ kind of *um* (5s giggle) podnikatelský baroko (laughter) yeah *um* kind of upper-middle class.

(7) EG17: *um* ultimately the policeman escorts him away # *um* # and # as he is leaving, there’s a^[e] *um* ##### a^[e] *um* ##### I can only think of the Czech word for it (9s pause, clicks his tongue), trafika.

RESEARCHER: (unintelligible) It’s fine.

⁴⁵ # denotes a pause, multiple # denote a long pause

EG17: Yeah? # *um* Convenience store, I guess, or something like ### something like that.

(8) EG14: Charlie Chaplin walks into a restaurant and piles food, it's like a jídelna, a canteen, and he goes through with all this food.

(9) EG14: The policeman is standing like next to him, and he stops at a tabák # and he gets a cigar.

In (6), having been prompted by the researcher, participant EG06 was describing Charlie Chaplin and his girlfriend's dream house. The multiple hesitation markers indicate that the participant was searching for the most fitting expression, only to come up with the Czech term *podnikatelský baroko* amidst giggle and laughter. The term refers to the homes commissioned by the newly emerged entrepreneurship class in the post-communist Czechoslovakia/Czech Republic in the early 1990s. The houses are characterized by chaotic use of a variety of styles, pompousness, and the resulting general tastelessness. Wikipedia (2019) lists several equivalent English terms: *McMansion*, *starter castle*, *executive homes*. There are several possible reasons why EG06 did not opt for one of the English terms. The Czech term may have come to mind first as the most fitting description, and it amused the speaker (as indicated by the giggles), who then shared this humorous description with the Czech researcher who was certain to be familiar with this term (but not necessarily with its English counterparts). It needs to be noted here that participant EG06 is a very proficient speaker of Czech, who first came to the Czech Republic in the 1990s. The fact that he used the term *podnikatelský baroko*, including the vernacular ending *-ý* instead of the standard

Czech –*é*, hints at his intimate knowledge of Czech cultural context and history, as well as familiarity with the appropriate use of standard and vernacular varieties. In conclusion, this code-switch was most probably utilized for reasons other than retrieval difficulties: to share a joke and to protect the researcher's face by grounding the narrative in the Czech context. In fact, given EG06's L2 proficiency and frequency of use and the fact that he reported frequent code-switching in the sociolinguistic interview, it is rather surprising that only one code-switch emerged in the course of the retelling. The high number of hesitation markers in his narrative (one of the highest among the expatriates) could indicate that a lot of resources were allocated to suppressing Czech – however, there is no way of knowing for certain.

The word *trafika* in (7), on the other hand, very likely presents a genuine instance of a code-switch facilitated by the inability to access the English equivalent (e.g. a news-agent's, kiosk, tobacconist's), as indicated by numerous hesitation markers and eventually of the participant admitting he could only provide the Czech word at that moment. After the researcher's reassurance that it was fine, the participant provided the lexeme *convenience store*, sensing that it was not the most accurate English counterpart, as indicated by the hedging expressions *I guess* and *something like that*. Similarly to EG06, EG17's L2 Czech proficiency and frequency of use were very high, and he exhibited the highest number of hesitation markers within the expatriate group; it is therefore possible he was struggling with L1 accessibility and L2 suppression in the Charlie Chaplin task.

Finally, participant EG14 in (8) and (9) didn't utilize any hesitation markers in the immediate environment of the code-switched words. In (8) he first referred to the place in

question as a *restaurant*, adding then a narrower Czech term *jídelna*, for which he immediately provided the English counterpart *canteen*. In (9) only the Czech word *tabák* (a tobaccoist's) is used; interestingly, and perhaps not coincidentally, the code-switch occurs in the same place in the narrative as EG17's in (7), but no hint is provided of retrieval difficulties. Participant EG14 is also a very proficient speaker of Czech, who, in his own words, code-switches "all day long, constantly", being clearly proud of his Czech and his English-Czech bilingualism. More plausibly than not, his code-switches are not indicators of L1 attrition, but a feature of his personal idiolect, which the researcher had the opportunity to observe throughout the sociolinguistic interview.

7.3.7.6 Summary and discussion

The detailed lexical analysis of expressions used to denote certain objects, people and actions in the Charlie Chaplin film clip retellings uncovered only a limited number of differences between the two L1English groups. The most consistent one was perhaps the preference of the expatriate group towards more frequent verbs when describing certain actions, which could be interpreted both as a sign of L1 attrition (lexemes with lower frequency are harder to retrieve) or as a sign of accommodation towards the non-native audience. The latter explanation is perhaps more likely given the verbal fluency test and U index results.

One instance of restructuring, i.e. modification of conceptual categories (Jarvis & Pavlenko, 2008, p.160) indicated by the reluctance to utilize the lexeme *café* was observed within the expatriate group. In the expatriates' mental lexicon *café* probably became asso-

ciated with a cozy place where coffee and cakes are served (as is typical for Central Europe) rather than with a canteen-like establishment serving cheap meals.

Interdialectal differences were observed only when referring to the police vehicle: the Americans showed preference towards the word *wagon*. The term *Black Maria*, utilized by some of Dostert's (2009) participants did not come up at all, possibly due to generational differences between the samples. Further deviation from Dostert's (2009) results include the utilization of the lexeme *kiosk* by both groups (not only by the expatriate group as in her work), much lower occurrence of the lexeme *truncheon* in both groups, and lower preference for the phrasal verb *bump into* by the expatriates.

Altogether 4 code-switches were observed in the expatriate group (a number comparable to that reported by Dostert (2009)). However, only one code-switch can be interpreted as a sign of attrition with any confidence as it was accompanied by an overt comment by the participant.

A serious limitation of the analysis presented above is the relatively small number of participants. With a bigger sample size and thus a bigger corpus of retellings, the lexical analysis would yield richer data and more substantiated findings, perhaps even backed by statistical analyses. Nevertheless, the findings presented herein indicate possible future direction of research, which should focus on lexical frequencies and perhaps sentence structure as regards the agent-grammatical subject relationship (given the differences between the two groups observed in the analysis of the action of launching the ship).

7.4 Crosslinguistic influence on lexical production: qualitative analysis of the in-depth interviews with the expatriates

In the semi-structured in-depth sociolinguistic interviews I attempted to obtain narratives about L1 attrition in from the expatriate participants. I asked the following questions focusing specifically on mental lexicon (see also Appendix 3 for the full list of the questions): *Have you ever had serious problems remembering English words? Do you ever code-switch, that is insert Czech words when you are speaking English? Have you ever caught yourself making a “Czenglish” mistake?* If the answer was affirmative, I asked follow-up questions to obtain more details: *Could you give me more details? What word was it? On what occasions do you code-switch? How often does it happen?* and similar. I then theme-coded the answers in order to discover recurring patterns and their interconnections.

7.4.1 Retrieval difficulties

The question about not being to remember a certain word received a wide spectrum of answers from the expatriates.

4 participants claimed to have no experience with such situation. These participants did not have much in common in terms of the major sociolinguistic variables suspected to influence L1 attrition (see Chapter 8 for more details), including the length of residence, profession, and L2 proficiency and use. Additional 2 participants admitted having experienced such situation, but felt it was commonplace even in their home-country. As participant EG11 explained: “I think it happens all the time in the States as well, it’s just that people don’t feel it so strangely.” When giving details of her experience,

however, it became apparent that EG11 also sometimes experienced L2 lexicon interference⁴⁶:

EG11: [...] It's funny that sometimes my brain will produce the Czech word. And I think "Really?" (*giggles*) That ---

RESEARCHER: You mean a Czech word instead of the English one?

EG11: Yeah. It--- it'll give me the Czech and and and not the English, and I think, "Really? Why?" (*giggles*) "That can't have been easier to find."

This kind of humorous approach to one's L1 changes was not uncommon in the narratives, serving potentially as a coping mechanism.

Two American expatriates experienced uncertainty about the proper usage of some words, rather than not being able to retrieve them. Their reaction was to seek clarification from family and friends abroad, as the following extract illustrates:

EG02: I become less sure about less frequently used vocabulary. Like the act of pushing two glasses together to say cheers---

RESEARCHER: Clinking?

EG02: See, and I don't like that. That bothers me a lot. I don't know whether that's a British phrase for it. I know that glasses---

RESEARCHER: I've heard it from a British speaker.

EG02: Ok. The glasses themselves clink. But the activity that I'm doing is not clinking.

RESEARCHER: Toasting?

EG02: Yeah, that's the best I've got but like I actually don't know. Like I need to remember to ask my American friends "What do you call what we just did. What do I do that?" so that I can hear their unvarnished unprepared response to that question. But I've become unsure about things like that. Occasionally I'm not sure

⁴⁶ Empty and filled pauses are not included in these transcripts, as they are not of interest in this analysis and may distract the reader. Repetitions, false starts (---) and editing expressions remain.

if that's the British word or not anymore, and so it's very weird in that sense, my English has become more fluid. I don't think it's become bad, I just think it's become more fluid.

In the above cited extract participant EG02 also mentions influence of British English upon his native variety. He is not alone: more American expatriates reported experiencing it. As participant EG04, an American teacher of English, explained: "I tend to speak more British because that's what we teach." This adoption of features of British English into the American variety was also reported in the study on Americans living in Finland by Latomaa (1998).

Participant EG06, the longest residing expatriate in the sample, was concerned about frequency of use and slightly unnatural word choices rather than retrieval difficulties: "Word frequency problems where I use a word that is--- that's technically not incorrect but it's just--- we tend to use something else. So *um* so yeah. Unusual vocabulary choices. [...] Pretty subtle things." This claim clearly supports Schmid and Jarvis's (2014) approach of investigating detailed word-frequency characteristics of the bilinguals' speech production.

The most common narrative, however, was that of more frequent occurrence of retrieval difficulties, or "tip-of-the-tongue" experiences, upon moving to the Czech Republic. When I enquired as to what the inaccessible words typically were, the usual answer was that it concerned less frequently used lexis. Participant EG04, an American teacher of English, mentioned retrieval difficulties in areas of mental lexicon she no longer actively used such as academic English and car vocabulary. These narratives support the

Activation Threshold Hypothesis, with less frequently used vocabulary being more difficult to access. As has been shown in the qualitative analysis of word-choice in the Charlie Chaplin retellings, in some cases the expatriates showed tendency towards higher frequency words as compared to the controls. However, to fully explore the hypothesis, a more sophisticated analysis like the one of Schmid and Jarvis (2014) would be needed.

Finally, there were two extreme narratives concerning significant changes in the expatriates' lives due to self-perceived L1 attrition. In the first narrative, participant EG05 described an occasion when could not retrieve the expression "driving license", a relatively common compound noun.

EG05: Yes. Yeah. Führerschein. I forgot the word Führerschein in English. I was--- I said I've got to get--- it's one of the reasons why I left the Czech Republic, because of--- do you do you know the word Führerschein?

RESEARCHER: No, I don't. I don't speak any German.

EG05: It's--- now, I remember now, it's driving license, but I could remember the word in German but not in English, this was while I was in the Czech Republic, and I thought, "That is weird, I think it's time to go back to an English speaking country [...] spend some time there aaand hopefully get back to normal.

RESEARCHER: So, you do actually mind the way your English is changing and it is important for you to maintain it? Did this incident motivate you to go back to---

EG05: [...] There were other factors as well, but that was a contributing factor to that move, yeah.

RESEARCHER: Did it help? Go back to an English speaking country?

EG05: It's very hard to say because I didn't have you studying my language progress.

RESEARCHER: (*laughter*) No, but how did you feel?

EG05: No, but I would I would imagine it did, yeah.

As it transpires from the narrative, the inability to retrieve a common L1 expression was one of the motivators for EG05, a teacher of English and an author, to make a radical change in his life and move back to an English speaking country for a couple of years, partially for the purpose of L1 maintenance. This seems to have been a successful strategy. At the time of data collection, however, EG05 had been living in the Czech Republic for a long stretch of time again and confessed that, when travelling, people did not recognize him as a native speaker of English.

The protagonist of the following interview excerpts had been noticing gradual changes in his ability to retrieve words and described his strategies for dealing with the situation. Eventually, the reduced L1 mental lexicon accessibility motivated him to make an important change to his life.

EG17: Yeah, so at first I would lose a lot of words. And and you combat it by speaking more simpler. [sic!]

RESEARCHER: Uh-huh. So as if not to show that you've lost some words.

EG17: Yeah. So rather than tackle the word, you learn to maneuver around the word in a simpler way. [...]

One of the main reasons why I left my last job is 'cause I felt like my English was getting worse.

RESEARCHER: Uh-huh. In what ways was it getting worse?

EG17: I was um losing vocabulary. I was um---

RESEARCHER: Like forgetting words?

EG17: Yeah. Of course I I I knew the meaning as well as before, but I found it more difficult to find the words. And the reason was that I I I felt like I was saying the same things over and over again. And if anything fell out of that line, I al--- almost found it difficult to respond and I I I noticed myself that my English was declining,

and so looked for a change of career, and I think it's actually starting get better now. Quite bizarre. [...]

There was--- there was a time, actually, when I started reading the dictionary. I didn't get very far, 'cause the dictionary was very very big, but I started like making steps to try and to try and improve my English 'cause I felt like it was declining.

Participant EG17 had always used Czech for communicating with his partner, and his job required only a limited set of L1 expressions. In such setting, he felt he was forgetting his L1. When he started having word-retrieval difficulties, he also learned how to mask them. As a maintenance strategy, EG17 decided to start reading a dictionary, but then resolved to find a profession which would allow him to utilize English in more contexts. This eventually seemed to have worked for him in terms of preventing further decline. It should be noted here that participant EG17 was the only person to actually exhibit retrieval difficulties in the Charlie Chaplin task, not being able to come up with a word for the tobacconist's store (see Section 7.3.7.5, extract (7)).

Despite the fact that the expatriate group was not found to differ from the control group on any of the indicators of lexical access (i.e. verbal fluency tests scores, U index, and the number of pauses, repetitions, false starts, and editing expressions), I nevertheless conducted the following analysis, hoping to uncover similar correspondence between the personal narratives and the quantitative measures as in subchapter 6.2.7 (in which higher global foreign accent scores corresponded with the experience of having been told one has acquired a foreign accent). If the scores clustered similarly as in 6.2.7, it would suggest

either unsuitability of the control sample, or type II statistical error, or the need for longitudinal investigation.

I plotted the mental lexicon access indicators (pauses per 100 words; false starts, editing expressions, and repetitions per 100 words combined; the number of supermarkets items in VFT, and U index; Figures 29, 30, 31, and 32 respectively), and color-coded the datapoints in the following manner: **green** for the expatriates with no experience of lexical access difficulties; and **yellow** for the expatriates who had experienced lexical access difficulties upon moving to the Czech Republic. The participants who experienced uncertainty about the proper use, or believe their experience of lexical retrieval difficulties is no worse than in their home-country, remain **white**. No narrative regarding this theme was obtained from one participant and his data are therefore not shown in the charts.

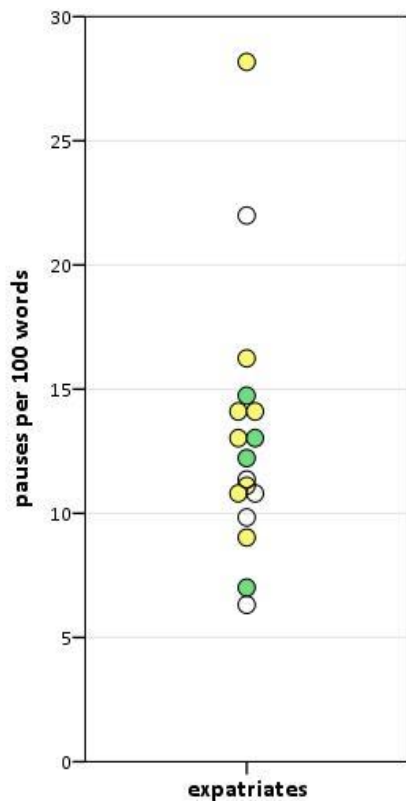


Figure 29. Pauses per 100 words and self-reported word-retrieval difficulties

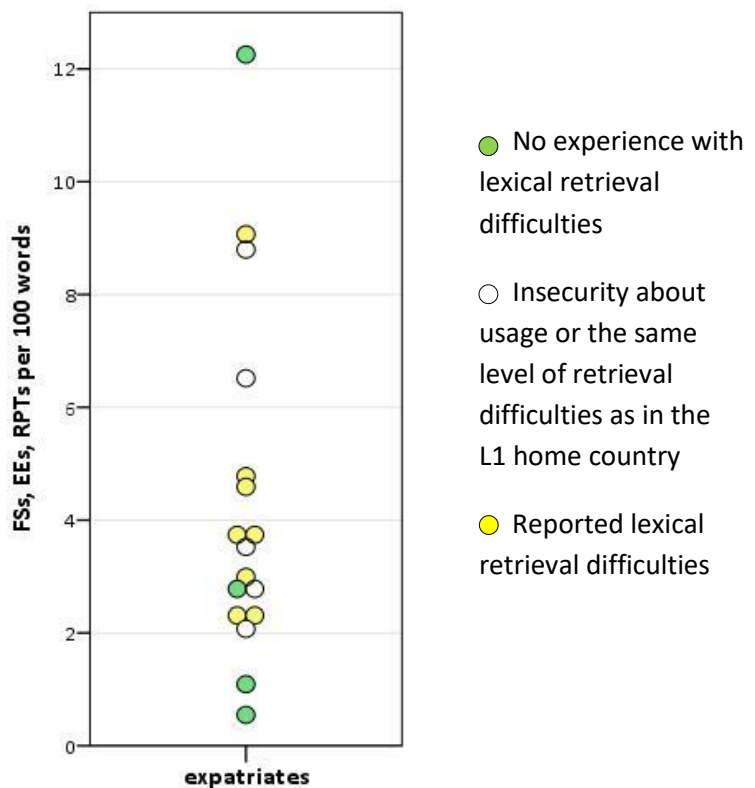


Figure 30. FSs, EEs, RPTs per 100 words combined and self-reported word-retrieval difficulties

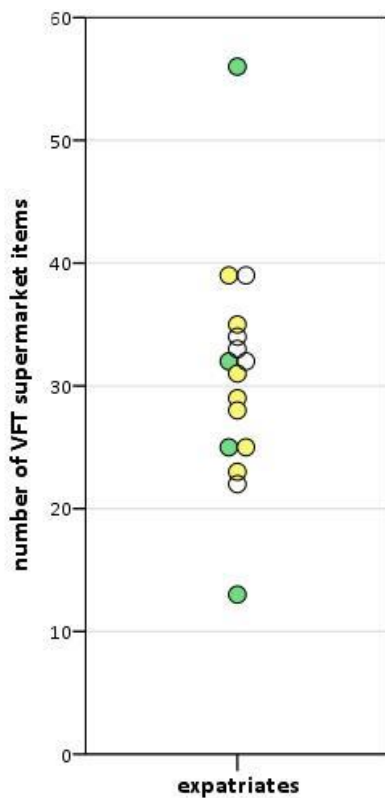


Figure 31. VTF score and self-reported word-retrieval difficulties

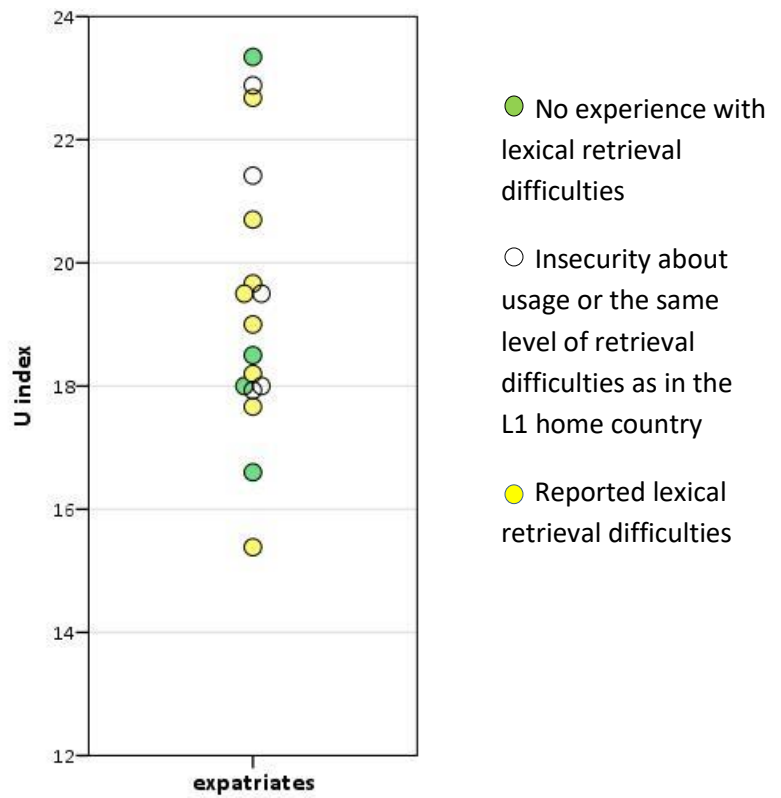


Figure 32. U index and self-reported word-retrieval difficulties

As can be seen from the charts above, there are no systematic differences in terms of quantitative data between those expatriates who noticed word-retrieval difficulties (displayed in yellow), those who have no such experience (displayed in green), and those who experienced semantic insecurity or believe their “tip-of-the-tongues” are no worse than in their home country (displayed in white). There may be several reasons for this. The qualitative data regarding lexical access difficulties are self-observation (unlike reporting having been told that one sounds foreign, non-native) and therefore need not be accurate. Given the fact that there were no quantitative differences between the controls and the expatriates, it is quite possible that the instances of “tip-of-the-tongue” simply become more salient and memorable, as was pointed out by participant EG11. However, the fact

that these retrieval difficulties do not pass unnoticed means that the possibility of L1 attrition is not something that the expatriates ignore, are unaware of, or take lightly. In fact, as was shown in the stories of participants EG05 and EG17, retrieval difficulties may sometimes present a source of profound worries.

7.4.2 Code-switching

Unsurprisingly, Anglophone expatriates living in the Czech Republic do code-switch, i.e. use “overt material (from single morphemes to entire sentences) from Language B in Language A discourse” (Backus & Dorleijn, 2009, p. 76). The interviews focused mainly on inserting Czech into the English language discourse. While the opposite also happens, it’s most commonly because the speaker does not know the appropriate Czech expression, so the English translation is provided to keep the conversation going.

In general, only very few spontaneous code-switches (as in (10) below) emerged in the course of the interview and test tasks. This would indicate that the expatriates are quite capable of keeping their L1 English and L2 Czech apart, at least in formal situations.

(10) RESEARCHER: Thank you. And there is the Czech proficiency test.

EG08: Jejda. [Oops]

The expatriates’ narratives indicate that code-switching in this particular group of Anglophone immigrants seldom happens by accident; only 3 participants reported having experienced accidentally using Czech words in the English language discourse. Notably, all three of them had very high Czech language proficiency and used the Czech language frequently. One of them, participant EG17, reported having to use a Czech word on couple

of occasions due to his inability to retrieve the English one (in fact, this also happened in the course of the Charlie Chaplin task, see 7.3.7.5 for the citation and analysis).

Participants EG01, EG04, and EG08, and reported frequent code-switching with specific speakers only: EG04 code-switched freely with her language-exchange⁴⁷ partner, EG01 with another native English speaker who also had a bilingual family, and EG08 with her Czech husband:

EG08: Weeell, I mean it's it's probably--- I don't if it's normal but we created our own language, so I might use an English word with a Czech noun ending or I might use an English verb with a Czech ending, so...

RESEARCHER: Can you give me an example?

EG08: Yeah, "Jdu jdu showerovat". Or "I ge- I put it do fridžu," or something like that, so we kind of we mix (*laugh*) the languages.
[I'm I'm going to shower][I put it into the fridge]

RESEARCHER: Do you understand each other?

EG08: Perfectly, yeah, yeah, yeah, yeah. Other people don't but we do, yeah.

Participants EG06 and EG14 reported frequent code-switching because they enjoyed the creative and humorous aspect of it. Although they were not specific as to in what situations they employed code-switching, I assume it was mostly in informal contexts; they did, however, insert a couple of code-switches (in the humorous and playful manner that they described) over the course of the relatively formal research session. The playful aspect of code-switching is also present in two toasting rituals that were mentioned by several expatriates.⁴⁸ One of the rituals involves saying the word *nádraží*

⁴⁷ Language learning practice when two speakers teach each other their respective languages for free

⁴⁸ Who, importantly, did not belong to the same network of friends

[railway station] when clinking glasses in otherwise English language discourse. The word *nádraží* is phonetically somewhat similar to *Nazdraví!*, the Czech equivalent of *Cheers!*, at least to the ears of newly arrived expatriates. What possibly started as an L2 Czech learner's error took on life of its own and became a kind of insider joke within the community, suggestive of the shared experience of learning a difficult foreign language. In one group of expatriates, the Czech word *nádraží* came to be replaced with translations from other languages (e.g. German *Bahnhof* and Croatian *kolodvor*). The second toasting ritual (perhaps less wide-spread) involves saying the Czech word *židle* [chairs]. According to the participant who told me about this ritual, it started with her Czech student asking why the English speakers talk about furniture when clinking glasses. The participant's group of friends then started clinking with *Chairs!*, and, when it grew "tiresome" after some years, began to use the Czech translation *židle*. This humorous code-switch presents a reference to the omnipresent Czenglish and, much like *Bahnhof* or *nádraží*, is virtually undecipherable to an outsider and serves as a ritualistic marker of this specific community of practice.

However, the most common code-switches reported in the interviews present references to items typical of the life in the Czech Republic: *rohlík* [a baguette-like bakery product] and various other food words, *panelák* [a communist period apartment building], *šalinkarta* [Brno dialect word for trampass], and *pivo* [beer]. The reason for using these and similar code-switches in otherwise English discourse is that sometimes there appears to be no precise translation (as is the case of e.g. *rohlík*), but also, as one participant explained, "those things are so specific that it just seems like the Czech word's more appropriate".

The fact that this kind of code-switches, whereby the expatriates display the effort to learn Czech and their affection for the Czech culture, serve as community practice markers is best illustrated by the following quote. It is important to note here that participant EG10 had only lived in the Czech Republic for one year prior to the interview:

EG10: Yes I sometimes use the Czech words while interacting with non-Czech friends. And I expect them to understand. I have one Dutch friend who's been here for over three years, who's made a point of not learning Czech, he's proud of his inability to speak Czech, and I use Czech words with him and he goes "I'm not bloody Czech, you know, I don't understand that." (*laughter*)

Lastly, among other common code-switches were reported to be words connected with experiences, situations and events experienced for the first time in the Czech Republic, typically after one had reached a certain level of Czech proficiency. These include parenting and school-related lexis, such as *papuče* [slippers worn at school], *stravenky* [lunch tickets], and *školka* [kindergarten]; finance, mortgage, and legal terminology, such as *listina* [a document, a deed] and *Finanční úřad* [the tax office]; and specific industry- and work-related terminology. Although for many (but certainly not all) words from the above mentioned areas there exist suitable English language equivalents, the experiences are so strong and so profoundly connected with life in the Czech Republic and the need to communicate in Czech in many of the above mentioned contexts, that the expatriates use the Czech words when speaking English (presumably not with non-members of the community, however).

In conclusion, code-switching does not seem to be very wide-spread among Anglophone expatriates living in the Czech Republic. The expatriates are very skilled at

keeping the two codes apart, as transpired from the linguistic tasks and the interviews. Accidental code-switches and code-switching due to retrieval difficulties are rare within the English language discourse. Code-switching may sometimes occur for the purposes of word-play and as a speech community identity marker. The latter type of code-switches included both words for which there are no precise English language equivalents, or concepts tightly connected to the life in the Czech Republic experiences. These findings are similar to those reported by Latomaa (1998).

There are several possible reasons why code-switching is relatively rare within this community. Firstly, the expatriates may feel the need to keep the two languages separated for professional reasons; this is especially the case of English teachers since they have a non-negligible motivation to be viewed as “authentic” speakers of the language (cf. Porte, 2003). As participant EG04 noted, she learned very soon after her arrival that being a native speaker of English was her “main selling point,” rather than her ability to actually teach the English language. Next, according to several accounts, Czechs seem to seize any opportunity to practice their L2 English “on” the expatriates, discouraging Czech or mixed-code conversation. In such situation, an expatriate who wishes to continue the dialogue in Czech conceivably does not insert English code-switches in order to indicate that their level of Czech proficiency is sufficient to carry out the exchange in Czech. Added to this is the pride that mastering Czech undoubtedly brings, which may prevent the speakers from mixing the two languages. Finally, the expatriates with children typically adopt the “one parent – one language” strategy. All these factors contribute to the relatively low frequency of code-switching among this particular population.

8 Predictor variables for L1 attrition

The previous chapter demonstrated that no quantitative differences exist between the expatriates and the L1English controls as regards lexical access (operationalized as the number of speech disfluencies in the Charlie Chaplin retellings, and the number of “supermarket items” in the verbal fluency test) and lexical diversity (operationalized as a type-token measure U index of the Charlie Chaplin task). However, on the level of phonetics, the expatriates exhibit voice onset time (VOT) shortening in word-initial fortis plosives (Chapter 5). Additionally, some expatriate participants acquired traces of Czech accent in their spoken English as discussed in Chapter 6. In the present chapter, I examine the sociolinguistic factors which may have influenced the degree of L1 attrition (operationalized as foreign accent rating score and voice onset time in *cat*⁴⁹), namely the length of residence, language used at home, profession, Czech proficiency, and the overall amount of spoken communication in English and in Czech. An important factor to consider for this particular immigrant population is also the exposure to L2 English; recall the hypothesis that frequent encounters with Czech-accented English (of partners, friends, students, and colleagues) may have as strong an influence as the use of and exposure to Czech.

After careful consideration, I decided not to include factors which are not directly related to the phonetic realization of language (such as inner speech and written language), variables that remain more or less similar across the sample (such as language

⁴⁹ This variable was selected as it was collected in the verbal fluency task, which is less controlled than the word-list reading task

use in shops and church membership), and variables which conceivably have smaller impact on L1 attrition or maintenance than, say, profession (e.g. L1/L2 media input). Further, I decided not to analyze the data in terms of language modes (i.e. the degrees of simultaneous activation of L1 and L2; Grosjean, 2008; utilized by e.g. Schmid, 2007), as fully bilingual and fully L2 monolingual modes seemed to be of a relatively rare occurrence within the present sample and appear to be correlated with the degree of L2 proficiency.

8.1 Factors influencing the degree of L1 attrition

8.1.1 Immediate context

The immediate context of the speech situation influences any linguistic output. L1 attrition thus may manifest itself more in some context than in others. There have, however, been very few studies based on “field observation” rather than on the relatively formal “laboratory” data collection. The latter is also the context of the present research: the non-native researcher with a slight Eastern-European accent (possibly inviting accommodation in the form of foreigner talk) recorded the participants in a rather formal setting in most cases, quite probably making them feeling self-conscious about their language use. All participants also knew of the future audience for their Charlie Chaplin retellings (i.e. the foreign accent raters). It should be emphasized here that this factor, i.e. the immediate context, was kept constant for both the expatriates and the L1 English controls.

It was suggested to me that the data collection should have been carried out by a native speaker of English in order to prevent accommodation to *my* L2 English abilities.

I agree to a certain extent – had a native speakers of English conducted the interviews with the controls, they might have utilized a faster speech tempo and use more colloquial expressions. However, I doubt that the results of verbal fluency test or the word-list reading task would be very different under the native-speaker interviewer condition. As for the interviews with the expatriates, a Czech non-native speaker of English presents *the most typical* interlocutor. It could be argued that certain aspects of speech production would be different with a native-speaker interviewer (e.g. faster speech, the use of more complex lexis, and fewer code-switches), but it is doubtful whether the traces of Czech and Czenglish phonetic influence would disappear altogether. While L1 attrition is generally thought no to be permanent, one's performance cannot be supposed to return to pre-immigration days within a two-hour session with a fellow L1 native speaker.

8.1.2 Length of residence

Intuitively, one would assume that the longer the stay in the L2 country, the more profound impact on the L1. However, this may not necessarily be so, as Schmid (2011) concluded after having reviewed the existing body of research, stating that “attrition studies investigating subjects with a period of residence of more than ten years generally find little or no time effects” (p. 79). Nevertheless, I decided to include this variable here, partly given its traditional standing in the discipline (after all, it does present a crude measure of L2 and Czenglish exposure) and partly because the present sample is quite diverse in terms of the length of residence (LOR), with half of the participants having resided in the Czech Republic for *less* than 10 years. Further, Dostert (2009) reported

a medium-size correlation between LOR and the L1 cloze-test scores, the number of pauses, and the number of code-switches in her sample of English speakers living in Germany (although it could be argued that stricter alpha levels should have been utilized in that particular study). In another dissertation with L1 English subjects, Schoofs (2013) also reported LOR to be of influence on the degree of L1 attrition. Finally, directly related to the present enquiry is the study of Kupske and Alvez (2016), in which the authors showed that VOTs in L1 Brazilian Portuguese voiceless plosives lengthen in correlation with the length of stay in the L2 environment.

8.1.3 Amount of L1 and L2 use

The amount of L1 and L2 use is notoriously difficult to measure; the participants' self-assessment and self-report have to be relied upon. Additionally, not all forms of L1 and L2 use are equal. Some immigrants may use the L1 with a variety of speakers in a variety of situations, while others may use L1 only with a limited number of interlocutors in a tightly-knit social network (Schmid, 2011). Attitudinal and emotional factors also have a non-negligible impact: the person may actively avoid using their L1 (Schmid, 2011) and possibly only reluctantly speak it "if worst comes to the worst". Further, the degree of simultaneous activation (i.e. Grosjean's language modes, as discussed in 2.1) may play a role (Schmid, 2011). Finally, the Anglophone expatriates may well be using their L1 exclusively, but if the interlocutors are less than fully proficient in English (e.g. a Czech partner, students in a language school, coworkers, etc.) this may conceivably have considerable impact on the expatriates' L1 as well.

In the end I opted for operationalizing L1 and L2 use by means of several variables, namely the percentage of L1 and L2 in spoken communication and language used at home (see Section 8.2 for more details).

8.1.4 Profession

Schmid and Jarvis (2014) showed that individuals who used their L1 in the workplace performed better in verbal fluency test. Schmid (as cited in Schmid, 2013) proposed that this protective effect of L1 use in the formal environment of workplace is thanks to the immigrants acquiring a greater skill at inhibiting the L2, thus preventing it from interfering with the L1 production.

The present sample does not allow for the comparison of the influence of use versus non-use of L1 in the workplace since virtually all participants use English as primary means of communication in the workplace. However, I hypothesize that while the Anglophone expatriates working on various positions in international corporations may benefit from the above cited L1 maintenance mechanism, the expatriates who primarily work as teachers might be at a risk of L1 attrition due to the high degree of exposure to the L2 users' English and the need to utilize teacher talk, especially with lower level students.

8.1.5 Czech proficiency

According to Jarvis and Pavlenko (2008, p. 201), “[s]tudies of reverse transfer⁵⁰ [...] suggest that L2 effects are most visible in L2 users with high levels of L2 fluency and

⁵⁰ i.e. L2 → L1 crosslinguistic influence in bilinguals, not necessarily in immigration context

proficiency.” However, L2 proficiency is all too often *not* included in the investigations of L1 attrition in adults, as also attested by Köpke (2007) and the fact that this variable is not discussed in Schmid’s (2011) otherwise very comprehensive methodological treatise. On the one hand, this makes a good sense as most studies in the field deal with participants who had resided in the L2 country for more than 10 years and had with high probability reached the end-state L2 proficiency. Alternatively, L2 proficiency may be considered relatively constant across the participants or implicitly conceptualized as length of residence or the amount of L2 use. On the other hand, the omission is rather surprising, given that, as Köpke (2007, p. 20) noted, different theories of bilingualism lead to opposite predictions as regards the influence of L2 proficiency: a high degree of language aptitude, a measure correlated with a success in L2 learning, would predict a low degree of L1 attrition, whereas Cook’s multicompetence model (see subchapter 1.3.4 of the present dissertation for more details) predicts higher degree of L1 attrition (or, rather, cross-linguistic influence) with higher L2 proficiency.

The following studies investigated the impact of L2 proficiency on L2 attrition. Major (1992) showed that the higher the L2 Portuguese proficiency (operationalized as the duration of L2 Portuguese VOTs), the greater the degree of L1 attrition (operationalized as the shortening of L1 English VOTs). Similarly, Flege (1987) demonstrated that the greater the experience with L2 French, the bigger the impact on L1 English VOTs. Dostert (2009) reported mixed results: a positive correlation of L2 proficiency with the number of hedges in the film retelling task indicative of L1 attrition; and, to the contrary, a negative correlation with the number of reformulations in the picture description task, indicative of L1

fluency enhancement. The correlations with multiple other variables (verbal fluency test results, English cloze test, lexical diversity, etc.) were non-significant (Dostert, 2009).

8.2 Method

L1 attrition is operationalized here as the foreign accent rating (FAR) score (see Chapter 6 for a detailed analysis) and VOT in the lexeme *cat* (see Chapter 5, and Section 5.2.5.2). The sociolinguistic data concerning the length of residence, the amount of L1 and L2 use, and profession were collected by means of sociolinguistic questionnaire (based on Keijzer (2007) and Dostert (2009), see subchapter 4.1 and Appendix 1 for more details).

The *length of residence (LOR)* is represented by Items 6 and 64 of the sociolinguistic questionnaire, and operationalized as the number of years the participant had lived in the Czech Republic. If the participant interrupted their stay by longer than 6 months, this period of time was not included in the total LOR.

The *amount of L1 and L2 use* was operationalized as percentage of L1 and L2 in spoken communication with various types of interlocutors (Items 80 and 81 of the sociolinguistic questionnaire) and the language used at home. The information about language use with the partner/spouse was collected by Items 20 and 21 of the questionnaire; the answers were coded on a scale from 0 (= only Czech) to 1 (= only English) (in accordance with Schmid, n.d.a). The same system of coding was utilized for the language use with children (Items 29, 30). In the present sample, all participants who were (or prior to data collection recently had been) in a relationship or married at the time of data collection had a Czech (or, in one case, another Slavic L1) partner, with whom they

either spoke exclusively English, or exclusively Czech (fully bilingual mode, i.e. using both languages at the same time was rare), depending on a number of factors (one of them being in what language the relationship had started). As regards language use with children, all participants with children ($N = 7$) opted for raising them bilingually, adopting the one-parent-one-language strategy. Only 1 participant later switched to using Czech with their offspring. An index was then calculated for each participant by averaging values obtained from Items 20, 21, 29, and 30 (when applicable), indicating the amount of English and Czech used within the family: the higher the index, the more frequent use of English and less frequent use of Czech, and vice versa.

Profession (Item 9 of the sociolinguistic questionnaire) was coded as a nominal variable of two categories thusly: teacher (if teaching presented the main occupation of the person), non-teacher (any other profession).

Czech language proficiency was operationalized as the combined score obtained from a multiple-choice test (kindly provided by Magdalena Karlová from Jazykové centrum Correct, n.d., slightly abridged for the purposes of the present research, see the first part of Appendix 5) and a cloze test (kindly provided by Darina Hradilová, FF UP, n.d., see the second part of Appendix 5). The participants were instructed to provide their best guess in items to which they felt they did not know the answer. The participants with very low Czech proficiency, who were unable to provide any answers past the first 20 or so items, did not complete the test in its entirety. The tests were scored in the following manner: one point was awarded for a correct answer in the multiple-choice part, one point was awarded for a correct answers in simple items (such as prepositions) in the cloze test, and

2 points were awarded for more difficult items in the cloze test (one for a correct *lexeme* and one for a correct *form* of the lexeme). The maximum possible score was 79 points (59 and 20 points from the two respective parts). To validate this test, the participants were also asked to assess their Czech proficiency using the English version of *Common European Framework of Reference for Languages self-assessment grid* (Council of Europe, n.d.). The self-assessment grid was completed before the Czech proficiency test, as the reverse order could possibly influence self-assessment. For each skill included in the self-assessment grid, a Likert-scale value was awarded in the following manner: A1=0, A2=1, B1=2, B2=3, C1=4, C2=5, which were then averaged. There was a strong correlation between the self-assessment grid average and the points obtained in the Czech proficiency test (Kendall's $\tau_B = .77, p < .001$), validating the Czech proficiency test and warranting its use in the present research.

8.3 Results

First, differences between the two expatriate profession subgroups (teachers vs. non-teachers) were examined. Figures 33 and 34 on the following pages display the FAR score and *cat* VOT distributions of the two subgroups.

Not many differences can be observed from the two charts, except that non-teachers display a slightly bigger range in both variables in question. Table 41 below provides the descriptive statistics, as well as the results of the test statistics (namely two-tailed t-tests) conducted to examine the differences between the two subgroups. The data were examined for normality of distribution by a visual inspection of Q-Q plots and a set

of Shapiro-Wilk tests (all p 's > .05), which all indicated meeting the normal distribution requirement. The assumption of homogeneity of variances was tested using a set of Levene's tests, the results of which indicated meeting the assumption (FAR: $p = .35$; cat VOT: $p = .44$).

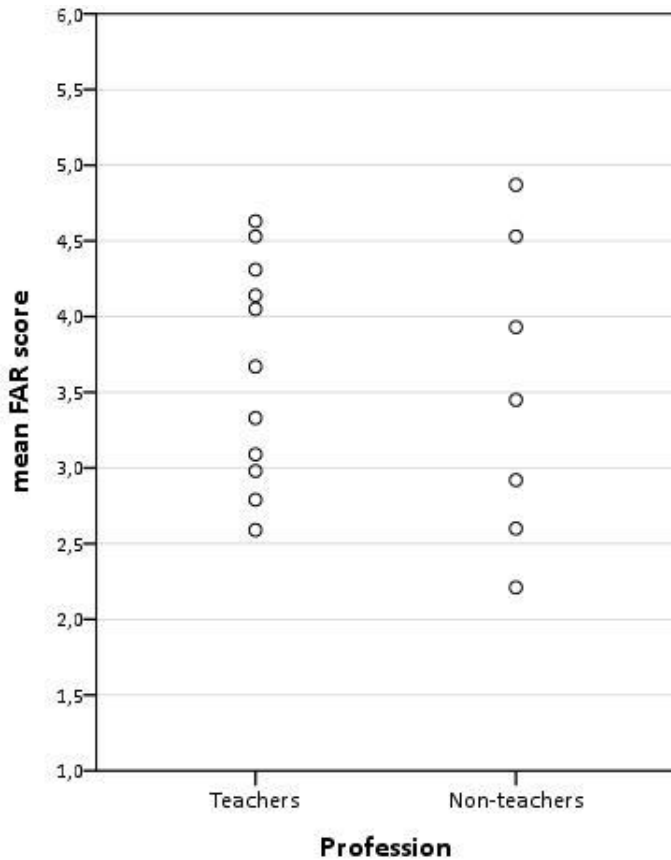


Figure 33. Expatriate teachers and non-teachers: mean FAR scores

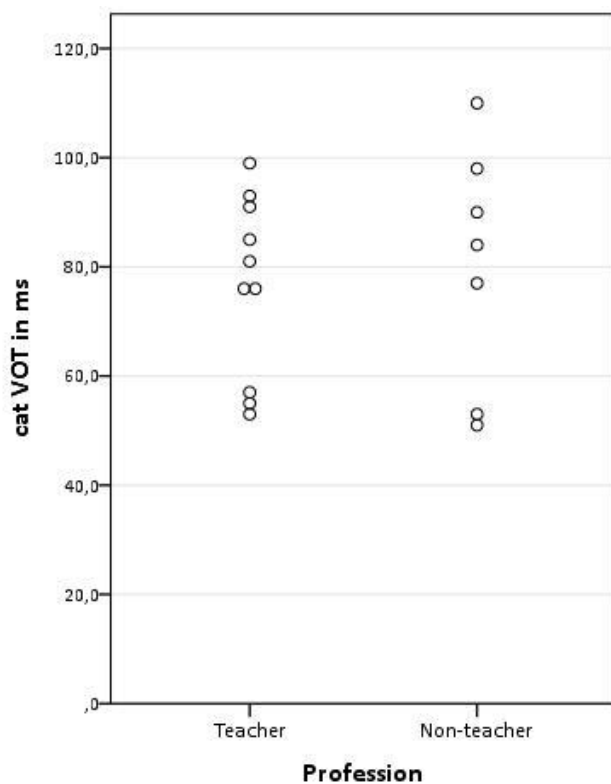


Figure 34. Expatriate teachers and non-teachers: *cat* VOT

Table 41				
<i>Teachers vs non-teachers: FAR scores and cat VOTs statistics</i>				
	teachers	non-teachers	<i>t</i>	<i>p</i> (two-tailed)
<i>M</i> FAR score	3.65	3.5	<i>t</i> (16) = 0.36	<i>p</i> = .73 non-sig.
<i>SD</i> FAR score	0.73	0.99		
<i>M cat</i> VOT (ms)	76.6	80.4	<i>t</i> (15) = 0.41	<i>p</i> = .69 non-sig.
<i>SD cat</i> VOT (ms)	16.6	22.1		

As can be observed from Table 41 above, no statistically significant differences in terms of foreign accent and the duration of voice onset times were uncovered between the expatriate teachers of English and those who work in other professions.

Table 42

Correlations of FAR scores and cat VOTs with selected predictor variables

		Length of residence	Czech proficiency	L1 use with L1 speakers	L1 use with L2 speakers	L2 use	Language at home
FAR score	Kendall's τ_B	.03	.18	-.08	-.35	.40	-.24
	<i>p</i> (two-tailed)	.88	.30	.67	.05	.026	.26
<i>cat</i> VOT	Kendall's τ_B	.14	.26	.29	-.10	-.04	-.34
	<i>p</i> (two-tailed)	.46	.15	.13	.59	.84	.13

Next we have a look at correlations between the L1 indicators (FAR scores and *cat* VOTs) and the length of residence, Czech proficiency, the amount of L1 and L2 use, and language use at home. Since some of these variables are measured on ordinal scale, it was decided to utilize non-parametric Kendall rank correlation. Table 42 on the previous page displays the results of the correlations; α has been Bonferroni adjusted to .004 to control for the family-wise error. As can be observed from Table 42, no correlation reached significance.

8.4 Discussion

Contrary to expectations, none of the examined predictor variables (the length of residence, profession, Czech language proficiency, the amount of L1 and L2 use, the language used at home) exhibited statistically significant correlation with the two variables on which the expatriates were showed to differ from the controls, namely the mean FAR score (an indicator of foreign-accentedness) and voice onset time duration in the lexeme *cat*. Most surprisingly, profession was shown to have no influence on the two L1 attrition indicators. This maybe because most of the teachers within the sample do not typically work with beginners and so do not have to modify their speech to a greater extent than the non-teachers. Another contributing factor is possibly the fact that the teachers of English devote more effort to language maintenance, knowing their livelihood depends on their L1 authenticity.

The reason why other correlations emerged as non-significant is probably the small sample size and low statistical power due to Bonferroni correction. A bigger sample size

would allow for more sophisticated statistical analysis such as multiple regression. Additionally, the present research is more *exploratory* in nature; a more tightly controlled sample characteristics (i.e. with more variables kept constant) or research design (e.g. comparing two extreme groups, such as L2 beginners and advanced users) would probably yield more decisive results.

9 Conclusion

My research started with the question whether Anglophone expatriates living in the Czech Republic display any changes in their language related to the new socio-linguistic environment, namely the exposure to and the acquisition of the Czech language, less contact with the home country English language, and high daily doses of Czenglish, the Czech learners' variety of English. I was also curious to know whether the expatriates themselves were aware of the potential cross-linguistic influence and how they perceived and coped with it.

The focus domains of the present investigation were phonetics and lexical processing. In phonetics I investigated the influence of Czech on the length of voice onset times in plosives, (de)voicing of word-final phonologically voiced plosives, and the realization of dental fricatives. Apart from these phonetic details I also examined first language attrition in the global accent of the expatriates in an accent perception experiment in which a group of listeners assessed the overall degree of foreign accentedness in the speech of the expatriate participants and two control groups: highly proficient Czech users of English and native speakers of English. Within the domain of lexical processing, I compared the two English native speaker groups (the expatriates and controls) in terms of lexical diversity and the speed of lexical retrieval. I also conducted a detailed analysis of word choices utilized by the participants, focusing on cross-linguistic influence phenomena such as loan translations and code-switching.

The linguistic material for the analysis was collected by means of several tasks standardly utilized in L1 attrition studies, namely the word-list reading task, the verbal fluency test (naming words from a certain category within the time limit of 1 minute), and the Charlie Chaplin film retelling task. The test battery also included a questionnaire designed to elicit important sociodemographic and sociolinguistic data, and a Czech proficiency test. In addition to quantitative data, in semi-structured in-depth interviews I collected also the expatriates' personal narratives regarding their experience with L1 attrition with the aim to provide a more complex picture of the phenomenon in question.

The hypotheses for the present research were formulated within the framework of several influential psycholinguistic and sociolinguistic theories, namely the Activation Threshold Hypothesis (e.g. Paradis, 2004), Speech Learning Model (Flege, 2002), and Communication Accommodation Theory (e.g. Beebe & Giles, 1984). Rather than contradict, these theories complement each other and offer a more dimensional perspective on the complex phenomenon that first language attrition presents.

In immigration context, speakers are typically faced with the lack of opportunities to utilize their L1. Activation Threshold Hypothesis predicts more laborious retrieval of less frequently used linguistic items due to their higher activation threshold, which is manifested in longer reaction times (Paradis, 2004). Yet, Anglophone immigrants often find themselves in a slightly different sociolinguistic setting: since they are speakers of a prestigious lingua franca, they typically continue using it both at work and at home. However, the majority of their interlocutors are non-native users of English, sometimes with very low proficiency. Communication Accommodation Theory predicts convergence

towards the interlocutor, i.e. becoming more similar in the language production, in situations when the speaker desires to obtain social approval, decrease social distance, and/or achieve a high level of communication efficiency (Beebe & Giles, 1984). The so-called foreigner talk (e.g. Freed, 1981) and teacher talk (e.g. Chaudron, 1988) are two well-documented instances of such convergence: the speakers use simple vocabulary, shorter utterances, slower tempo, more pauses, and clearer pronunciation. Foreigner talk has also been shown to feature the L2 users' errors (Snow, van Eeden, & Muysken, 1981). Arguably, upon relocating to a country like the Czech Republic, a speaker of English may get by without learning the language of the country, but will frequently find oneself in situations prompting foreigner talk or teacher talk (if one chooses to work as a teacher of English). The frequent convergence towards the L2 users' interlanguage may over time become a habit, a permanent feature of the expatriate's language production, increasing the activation threshold of less frequently utilized L1 items and rendering them harder to retrieve (as predicted by Activation Threshold Hypothesis).

Finally, Flege's Speech Learning Model provides very specific predictions as to the mutual influence of corresponding L1 and L2 phoneme counterparts. If the bilingual perceives two phonemes to be identical, they adopt an intermediate value for their speech production in both languages. If, on the other hand, the phonemes are perceived as different, in both languages they assume more extreme values, thus highlighting the difference (e.g. Flege, 2002). This shifting of various elements due to interlanguage differences and similarities, together with the above-mentioned convergence towards the

non-native variety may result in the overall impression of foreign accent in a native speaker of English residing abroad.

The first set of hypotheses investigated within my dissertation concerned individual phonemes, namely the realization of word-initial and word-final plosives, and dental fricatives. I based my hypotheses on the theories outlined above, the phonetic and phonological characteristics of Czech plosives (no aspiration in fortis plosives, prevoicing in word-initial lenis plosives, word-final devoicing of lenis plosives), the phonetic characteristics of Czech-accented English (word-final devoicing, th-stopping), and the body of previous research. I hypothesized that:

- the expatriates realize word-initial fortis plosives with shorter aspiration than the L1 controls;
- the expatriates realize word-initial lenis plosives with more prevoicing than the L1 controls;
- the expatriates display more devoicing in word-final lenis plosives;
- the expatriates display more th-stopping.

The first hypothesis was supported by the data from the word-list reading task, with the expatriates exhibiting shorter voice onset times in /p/ and /t/ (but not in /k/). Interestingly, neither the expatriates' nor the controls' data exhibited the pattern most commonly reported in the literature: the longest VOTs were present in /t/ rather than in /k/. The first hypothesis was also supported by the VOTs in lexeme *cat* as produced in the verbal fluency test. Here, however, the difference between the two groups did not reach

statistical significance when controlling for nationality of the speakers (the expatriate group comprised both British and American speakers, whereas there was only one American within the control group), possibly due to low number of tokens entering the analysis.

The realization of word-initial lenis plosives also differed in the expatriate group: the expatriates displayed more prevoicing in the word-initial lenis plosives than the controls. The Americans prevoiced lenis plosives more frequently than the British, but the difference between the two experimental groups held even when controlling for nationality. The results may be interpreted as both L2 plosives influence but also as enunciation effort on the parts of the expatriates. In the in-depth interviews, careful and clear pronunciation was frequently mentioned as one of the major changes upon immigration.

As regards word-final lenis plosives, the quality of the data did not allow for the measurement of the duration of phonation during the closure phase. Instead, I classified the realizations into three categories, namely plosives with missing closure release, plosives with realized closure release, and plosives with post-release phonation. The expatriates exhibited more careful pronunciation of the said plosives, either with frequent post-release phonation (the American expatriates; it was not, however, possible to compare the American expatriates' data to American controls) or with more frequent closure release (the British expatriates). Rather than converge to devoicing characteristic of the Czech language phonology and also Czech-accented English (e.g. Tomková, 2008), the expatriates display what could be termed hypercorrection in their realization of word-final plosives. The explanation is two-fold: the expatriates enunciate in order to achieve better

understanding in communication with Czechs, or, as a part of language maintenance effort, they consciously attempt to avoid a very noticeable Czech accent feature.

The last two phonemes under investigation were dental fricatives. The hypothesis that th-stopping realization becomes more prevalent within the expatriate group as a result of convergence was not supported, with the expatriates exhibiting the same amount proportion of canonical realizations as the controls. The most common non-canonical realization was affrication (perceptually sometimes indistinguishable from the canonical realization), th-stopping was very rare within the dataset. The expatriates, however, exhibited more frequent voiced realization of /ð/ than the controls, which I again interpret as enunciation.

All in all, then, the only phonemes exhibiting signs of L1 attrition in the expatriates are fortis plosives, which feature on average 10-15 ms shorter aspirations. The other phonemes under investigation either remain unchanged, as is the case of /θ/, or display signs of hypercorrection rather than L1 attrition: prevoicing of word-initial lenis plosives, and more careful realization of /ð/ and word-final lenis plosives. A question may arise why hypercorrection in the form of prolonged VOTs is not present in fortis plosives as well. I speculate that it is conceivably harder to estimate and control the length of one's aspiration (especially with the phonetic category assimilation process at work) than it is to control for voicing and place and manner of articulation of the other phonemes investigated herein. Therefore, even if the expatriates may aim for clear, "non-attributed" production of fortis plosive VOTs, they fall "short" of the target, unless they greatly exaggerate.

Apart from changes on the level of individual phonemes, I was interested in testing several hypotheses regarding the overall accent of the expatriates. I hypothesized the following:

- the expatriates have acquired a foreign flavor into their accent over the course of their stay in the Czech Republic;
- the expatriates have a more intelligible accent than the L1 controls;
- the American expatriates' accents have become Britishized.

The linguistic material for this investigation was collected by means of the Charlie Chaplin task: the participants were asked to watch and then to retell a short Charlie Chaplin (1936) movie clip. In order to be able to better evaluate the degree of foreign-accentedness in the expatriates, besides the L1 controls I also recorded a small control group of very proficient Czech users of the English language. Short extracts from the movie retellings were then played to a group of (mostly Czech) assessors, current or former university students of the English language. Upon listening to an extract, the assessors marked the speaker as either native or non-native and provided also the degree of confidence they had in this judgment. Further, the assessors were also asked to rate the intelligibility of each speaker and to guess their country of origin.

As regards the first hypothesis predicting the acquisition of a foreign accent by the expatriates, the data did not support it on the group level. While the L1 English controls received the most native-like rating, followed by the expatriates and then the Czech controls, who were rated as the most non-native-like, the only difference that was found to

be statistically significant was that between the L1English controls and Czech controls. The differences in ratings between the expatriates and the L1controls and the expatriates and Czech controls were not shown to be statistically significant. There may be several explanations for this counterintuitive result. Firstly, non-native assessors tend to give higher (i.e. more non-native) ratings to non-attriter controls than the native assessors (Schmid, & Hopp, 2014). Secondly, the samples of all three groups were rather limited in size. And last but not least, one of the two highest scoring L1English control participants was an American living in the UK and thus also under the influence of a non-native variety; the other highest-scoring control participant exhibited a prominent hesitant rising intonation, which led some assessors to rate her as non-native.

However, more expatriate participants (50%) scored within the Czech control range than the L1English participants (25%). In addition, in the in-depth socio-linguistic interviews some expatriate participants shared stories of not being recognized as native speakers of English, being identified as coming from a different Anglophone country, or simply being told they sounded “different”. It turned out that the participants with such experience received higher (i.e. more non-native) ratings than the participants with no such experience. It may be concluded that while foreign accent acquisition was not supported on the group level, the expatriate participants scoring within the Czech controls range have acquired a slight foreign accent into their spoken production, the degree of which is comparable to that of very proficient Czech speakers of English. It should be stressed here that these ever slight L1 changes do not in any way diminish the expatriates’ professional capacity.

Surprisingly and contrary to the findings reported in earlier studies, the foreign accent rating scores did not show any correlation with either fortis plosive voice onset times or voicing in lenis plosives. Interested in seeing which sociolinguistic variables are connected with the acquisition of foreign accent in the present sample, I further investigated the association between foreign accent rating scores and the profession, the length of residence, L2 Czech proficiency, the amount of spoken communication with native and non-native speakers in English, the amount of communication in Czech, and the language used at home. The analysis showed that none of the said variables exhibited statistically significant association with the FAR scores.

The second hypothesis regarding the greater intelligibility of the expatriates' accents was not supported by the quantitative data. The Czech controls exhibited the greatest accent intelligibility, followed by the expatriates and the L1English controls. The only statistically significant difference was found between the Czech and the L1English controls, indicating that the Czech accent is the most intelligible to the ears of Czech/Slovak raters. The expatriates' scores were not shown to be statistically different from either the L1controls or the Czech controls, although the majority of the expatriates claimed having to slow down in their speech, abandon the local variety, and speak more clearly, regardless of profession. There may be several explanations for this discrepancy of quantitative and qualitative data. It is unlikely that the expatriates do not accommodate towards Czech speakers of English, as the cost in terms of communication efficiency and interpersonal likeability would be too high. A more likely explanation is that the L1English controls accommodated towards the Czech researcher in the same that the

expatriates do on daily basis, slowing their speech rate and enunciating. Also, the assessors were all current or former university students of English and given their high proficiency they did not find any speaker to be particularly difficult to understand. A sample of lower proficiency L2 users of English would probably not exhibit such ceiling effect and would find especially the L1English controls to be harder to understand.

Finally, the hypothesis that the American expatriates acquire British English accent features into their English was not supported. The British influence is probably limited only to mental lexicon and perhaps some grammatical constructions.

To summarize, in the domain of phonetics the expatriates exhibit differences from the control group in the realization of individual phonemes (namely plosives). In addition the overall accent of at least some expatriate participants has acquired a slightly foreign flavoring, noticeable to non-expatriate speakers as well as the assessors in the FAR experiment. The design of the present investigation does not allow to ascertain whether the L1 attrition changes are due to the interaction of L1 and L2 phoneme features in the common phonological space resulting from learning Czech, or whether it is the result of convergence to the L2 users' English, or both. None of the sociolinguistic variables under investigation (profession, the length of residence, the language use at home, the amount of spoken communication with native and non-native speakers in English, L2 Czech proficiency, and the amount of communication in Czech) was found to correlate with either the duration of fortis plosive VOTs or the foreign accent rating scores. The reason why the correlations emerged as non-significant is probably the relatively small sample size and the *exploratory* nature of the present research. Given that first language attrition is a very

complex phenomenon, the degree of which results as the interplay of multiple variables (including the conscious language maintenance effort), a bigger sample of participants with more tightly controlled sociolinguistic characteristics would probably yield more decisive results.

Let us now turn to the findings concerning the mental lexicon and lexical processing. Based on the Activation Threshold Hypothesis (Paradis, 2004), the expatriates were hypothesized to exhibit lexical retrieval problems and reduced lexical diversity associated with the less frequent use of their L1 in general and the necessity to utilize the so-called teacher talk and foreigner talk, both featuring predominantly high frequency lexical items. The linguistic materials for testing the hypothesis was collected by means of the verbal fluency test (VFT, naming lexical items from a certain category within a time limit) and the Charlie Chaplin (1936) movie clip retelling.

The data obtained through the verbal fluency test and the Charlie Chaplin task did not support the L1 attrition hypothesis regarding mental lexicon. In the VFT, the expatriate participants actually produced *more* items within the time limit than the controls, with the difference being on the verge of statistical significance. The possible explanation is three-fold: firstly, many of the expatriates work in professions where fast vocabulary recall is important (translating, editing, and teaching); secondly, using L1 at work possibly helps develop efficient L2 inhibition strategies (Schmid, as cited in Schmid, 2013); and thirdly, the expatriates were drawing on their experience with *two* cultures, which helped them to contribute more items (Dostert, 2009).

In the Charlie Chaplin task, the expatriates and L1English controls did not differ in terms the number of pauses, repetitions, false starts, and editing expressions, indicating no overall retrieval difficulties. This finding is in line with the verbal fluency test results discussed above. Further, there was no difference in terms of lexical diversity (a measure of how rich and varied one's lexical production is). This is probably best explained by the fact that the expatriates work in professions or engage in hobbies requiring the use of synonyms (translating, editing, teaching, creative writing). It is also possible that, when speaking to lower-proficiency L2 users of English, the expatriates utilize a wide range of synonymous expressions in order to increase the likelihood of successful information transfer.

Nevertheless, the qualitative analysis of both the verbal fluency test data and the Charlie Chaplin task data did reveal some cross-linguistic influence of the Czech language on the expatriates' mental lexicons. In both tasks, there were several instances of code-switching (but only one code-switch was clearly due to the inability to retrieve the appropriate L1 lexeme), and several instances of cross-linguistic influence processes of borrowing (e.g. using a loan translation) and restructuring (notably of the concept of *café*). In the Charlie Chaplin task, the expatriates showed preference towards higher-frequency lexemes; however, more data would be needed to verify the trend. All in all, then, the expatriates exhibited modification of their mental lexicon rather than its inaccessibility. Nevertheless, in the interviews some expatriates complained about word-retrieval difficulties, and two participants had in the past taken some radical steps to resolve the problem. However, no relationship was found between the self-perceived retrieval

difficulties and the quantitative lexical access data. This may indicate that the expatriates are aware of the possibility of L1 attrition, take it very seriously, and are sensitive to what may be its symptoms. Consequently, they have developed both conscious and unconscious strategies that help them prevent it.

The qualitative interviews concerned also code-switching within the expatriate community. The code-switches are rarely long stretches of speech, most commonly they consist of isolated instances of inserting Czech words into the English discourse. Very infrequent are code-switches due to the inability to retrieve an L1 lexeme. Common are, on the other hand, code-switches concerning everyday items and concepts connected with the life in the Czech Republic, for which there may or may not exist English equivalents. Czech discourse markers also sometimes get inserted into the English discourse. Finally, some Anglophone expatriates enjoy the playful and humorous aspect of code-switching.

In summary, some instances of cross-linguistic influence of the Czech language were observed within the Anglophone expatriate sample. However, rather than the inability to access the L1 mental lexicon, they are better interpreted as modification and even enrichment (in the form of adoption of British lexemes by the American expatriates) of the L1 lexicon. This is in stark contrast to the observed changes on the phonetic level: some participants were shown to have acquired a slight foreign accent, and the expatriate group as a whole exhibited shortening of aspiration in lenis plosives under the influence of Czech and Czech accented English. One may ask whether this means that phonetics of a language is more unstable and susceptible to L1 attrition than the mental lexicon. I do not believe that this is necessarily so. From the language maintenance point of view, it is easier

to notice the reduced lexical retrieval ability indicated by frequent tip-of-the-tongues or involuntary code-switches and then devise L1 maintenance strategies to mitigate the problem. The more radical strategies may involve a change of profession or relocating, the less radical e.g. increased L1 input through the media. However, to detect subtle changes in one's own accent is much harder if not impossible: the information typically comes from other parties. In addition, it is equally difficult to pinpoint what exactly has changed and how to reverse the L2 influence. Thus, rather than being more susceptible to L1 attrition, the native pronunciation may be harder to maintain than other aspects of the L1.

In conclusion, I have shown that even the speakers of as prestigious a language as English are not immune to first language attrition despite the high frequency of L1 use, the protective effect of L1 use at work and the relatively low amount of code-switching. However, some researched questions remained unanswered and some new surfaced. For instance, it was not established which sociolinguistic variables contribute to the degree of L1 attrition among the expatriates, including the impact of learning and using L2 Czech and the amount of exposure to the Czech users' of English interlanguage. Next, a more detailed corpus-based lexical frequency analysis could potentially uncover some more subtle changes in the mental lexicon of the participants. The other directions of future research include longitudinal design, which would help reveal the impact of long-term L2 use and L2-accented English exposure in individual speakers. The election of Donald Trump the American president and Brexit, two major geopolitical events which happened over the course of finalizing the data collection, arguably presented a game-changer for many Anglophone expatriates living in the Czech Republic. It would be extremely

interesting to see in what ways have the language use patterns shifted within this community as a result of the said events. Another interesting direction of future research would be to focus on L1 enrichment rather than attrition. Finally, the findings concerning the successful L1 maintenance within the Anglophone community may serve to inform language maintenance strategies and programs for other immigrant groups wishing to retain a good level of their L1.

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Resumé

Předkládaná disertační práce se zabývá jevem pozvolného úbytku (uvadání) mateřského jazyka u rodilých mluvčích angličtiny žijících dlouhodobě v České Republice, konkrétněji změnami na rovině fonetické a rovině lexikální.

Na rovině fonetické byly ověřovány hypotézy týkající se nástupu hlasivkového tónu u iniciálních ploziv, desonorizace znělých ploziv na konci slova a způsobu realizace dentálních frikativ. V percepčním experimentu byla dále zkoumána hypotéza, že rodilí mluvčí angličtiny dlouhodobě žijící v ČR vykazují ve své mateřštině lehký cizí přízvuk. Na rovině lexikální byla předmětem zkoumání rychlost vybavování slov v mateřském jazyce a lexikální diverzita výpovědi.

Výzkumu se zúčastnilo celkem 18 rodilých mluvčích anglického jazyka žijících v České Republice a 16 rodilých mluvčích žijících v Anglii (kontrolní skupina). Jazykový materiál k ověření výše nastíněných hypotéz byl získán za pomoci následujících metod: čtení seznamu slov, testů verbální fluence a vyprávění děje krátkého filmu. Kvantitativní hledisko bylo doplněno kvalitativní analýzou hloubkových rozhovorů s expatrianty.

Srovnání dat dvou skupin rodilých mluvčích potvrdilo zkracování doby nástupu hlasivkového tónu u lenisových ploziv. U fortisových ploziv expatrianti vykazovali větší pečlivost výslovnosti spočívající v předznívání iniciálních fortisových ploziv a menší míře jejich desonorizace ve finální pozici. Žádné významné rozdíly nebyly nalezeny v realizaci dentálních frikativ. Co se týče výsledků percepčního experimentu, lehký cizí přízvuk byl zjištěn pouze u některých účastníků, nikoliv na úrovni celé skupiny.

V oblasti lexikální vykazali expatrianti vysokou míru retence mateřského jazyka: nebyly zjištěny žádné rozdíly co do lexikální diverzity a rychlosti vybavování. Kvalitativní analýza použitých lexikálních výrazů přesto ukázala na drobné změny v mentálním lexikonu.

Résumé

The present dissertation is concerned with first language attrition in native speakers of English residing in the Czech Republic, focusing on the changes in phonetic realization and lexical processing.

The phonetic hypotheses investigated herein concerned changes in voice onset times in word-initial plosives, desonorization of word-final lenis plosives, and the manner of dental fricatives realization. A foreign accent rating experiment was utilized to test the hypothesis that the Anglophone expatriates acquire a slight foreign accent in their speech over the course of their stay abroad. The focus of the lexical processing hypotheses was the speed of lexical retrieval and lexical diversity in narratives.

The sample of participants in the present research included 18 native speakers of English residing in the Czech Republic and 16 native speakers of English living in England (the control group). The language material for the purposes of testing the above hypotheses was collected by means of the following methods: a word-list reading task, the verbal fluency test, and a film clip retelling. The quantitative analysis was complemented with a qualitative perspective drawing on in-depth interviews with the expatriates.

The comparison of the two Anglophone groups revealed shortening of fortis plosive voice onset times in the expatriates. As regards lenis plosives, the expatriates exhibited more careful realizations, namely prevoicing in the word-initial positions and lesser degree of desonorization in the word-final positions. No differences were found in the manner of dental fricatives realization. The results of foreign accent rating experiment indicated several individual speakers have acquired a very slight foreign accent.

The expatriates exhibited a high degree of first language maintenance as regards mental lexicon access: no differences in terms of lexical diversity and the speed of retrieval surfaced between the expatriates and the controls. Nevertheless, a qualitative analysis of word choice uncovered instances of crosslinguistic influence in the expatriates' mental lexicons.

Appendices

Appendix 1: Sociolinguistic questionnaire for the expatriates

based on Keijzer (2007) and Dostert (2009)

Personal

- 1) What is your nationality? UK USA Canada other
- 2) Do you have Czech citizenship? no yes
- 3) What is your year of birth?
- 4) Where were you born: Village/Town:.....
County/state:.....Country:.....
- 5) What language(s) were you brought up with?
- 6) When did you come to the Czech Republic (year)?
- 7) Why did you come here and why to the Czech Republic in particular?
 job partner's job partner other, namely:
.....
.....
.....
- 8) In what regions of the Czech Republic have you lived?
Town/city/village..... region..... from.....to.....
Town/city/village..... region..... from.....to.....
Town/city/village..... region..... from.....to.....
- 9) What is your current profession? If you are retired, could you please indicate your last profession before retirement?.....
.....
- 10) If you have had several professions, could you indicate each one of them in chronological order? Could you also indicate what languages you used in these professions?
 - 1.....from.....until..... EN CZ EN & CZ
other.....
 - 2.....from.....until..... EN CZ EN & CZ
other.....
 - 3.....from.....until..... EN CZ EN & CZ
other.....

- 11) What is the highest level of education you have completed?
- primary school
 - secondary school
 - higher education, namely:
 - university, degree:
 - postgraduate, namely
- 12) Have you pursued further education while living in the Czech Republic (this does not have to be language-related) ? yes, for (number of years), what (field)..... no

You and your family in the Czech Republic

- 13) What is your current marital status?
- married separated/divorced widow/widower with a partner single
- 14) Do you and your partner live in the same household?
- yes no
- 15) If not, how often do you see each other?
- daily 2-3 times a week once a week once a month
- 16) What is the nationality of your partner?
- UK USA Canada CZ other
- 17) If he/she is not Czech, when did they come to the Czech Republic (year).....
- 18) With what language(s) was your (ex)partner brought up?
- Czech English other, namely:
- 19) If your (ex)partner is not a native speaker of English, what is his/her proficiency in English?
(0=none, 1=poor, 3=ok, intermediate, 5=very proficient, native-like): 0 1 2 3 4 5
- 20) What language or languages do you mostly use when talking to your (ex)partner?
- only English
 - both Czech and English, but mostly English
 - both Czech and English, without preference
 - both Czech and English, but mostly Czech
 - only Czech
 - other or no answer.....

21) What language or languages does your (ex)partner mostly use when talking to you?

- only English
- both Czech and English, but mostly English
- both Czech and English, without preference
- both Czech and English, but mostly Czech
- only Czech
- other or no answer.....

22) Do you encourage your partner to speak English?

- never
- very rarely
- sometimes
- regularly
- very often
- all the time

23) Do you encourage your partner to speak Czech?

- never
- very rarely
- sometimes
- regularly
- very often
- all the time

24) Does your partner encourage you to speak English?

- never
- very rarely
- sometimes
- regularly
- very often
- all the time

25) Does your partner encourage you to speak Czech?

- never
- very rarely
- sometimes
- regularly
- very often
- all the time

26) Do you have children?

no yes, number: they are.....years old

27) Do they live in the same household? yes no

28) If not, how often do you get to talk to them?

- daily
- 2-3 times a week
- once a week
- once a month
- rarely

29) What language or languages do you mostly use when talking to your children?

- only English
- both Czech and English, but mostly English
- both Czech and English, without preference
- both Czech and English, but mostly Czech
- only Czech
- other or no answer

30) What language or languages do your children mostly use when talking to you?

- only English
- both Czech and English, but mostly English
- both Czech and English, without preference
- both Czech and English, but mostly Czech
- only Czech
- other or no answer

- 31) How would you rate your children's proficiency in English?
(0=none, 1=poor, 3=ok, intermediate, 5=very proficient, native-like): 0 1 2 3 4 5
- 32) How would you rate your children's proficiency in Czech?
(0=none, 1=poor, 3=ok, intermediate, 5=very proficient, native-like): 0 1 2 3 4 5
- 33) Do you encourage your children to speak English?
 never very rarely sometimes regularly very often all the time
- 34) Do you encourage your children to speak Czech?
 never very rarely sometimes regularly very often all the time
- 35) Did /do you ever correct your children's English?
 never very rarely sometimes regularly very often all the time
- 36) If your children do not speak or understand English, do you regret that?
 not at all not much no opinion a bit very much no answer
- 37) How important is it for you that your children can speak and understand English?
 unimportant
 relatively unimportant
 not very important
 important
 very important
 crucial
- 38) How important is it for you that your children can speak and understand Czech?
 unimportant
 relatively unimportant
 not very important
 important
 very important
 crucial
- 39) Have your children ever attended your country of origin heritage classes or club?
 yes no
- 40) What school do/did your children attend? Czech international for Anglophone children only other
- 41) Do you have grandchildren?
 no yes, number: they are.....years old

- 42) How often do you get to talk to them?
 daily 2-3 times a week once a week once a month rarely
- 43) What language or languages do you mostly use when talking to your grandchildren?
 only English
 both Czech and English, but mostly English
 both Czech and English, without preference
 both Czech and English, but mostly Czech
 only Czech
 other or no answer
- 44) What language or languages do your grandchildren mostly use when talking to you?
 only English
 both Czech and English, but mostly English
 both Czech and English, without preference
 both Czech and English, but mostly Czech
 only Czech
 other or no answer
- 45) How would you rate your grandchildren's proficiency in English?
(0=none, 1=poor, 3=ok, intermediate, 5=very proficient, native-like): 0 1 2 3 4 5
- 46) How would you rate your grandchildren's proficiency in Czech?
(0=none, 1=poor, 3=ok, intermediate, 5=very proficient, native-like): 0 1 2 3 4 5
- 47) Do you encourage your grandchildren to speak English?
 never very rarely sometimes regularly very often all the time
- 48) Do you encourage your grandchildren to speak Czech?
 never very rarely sometimes regularly very often all the time
- 49) Did /do you ever correct your grandchildren's English?
 never very rarely sometimes regularly very often all the time
- 50) If your grandchildren do not speak or understand English, do you regret that?
 not at all not much no opinion a bit very much no answer
- 51) How important is it for you that your grandchildren can speak and understand English?
 unimportant
 relatively unimportant
 not very important
 important
 very important
 crucial

- 52) How important is it for you that your children can speak and understand Czech?
 unimportant
 relatively unimportant
 not very important
 important
 very important
 crucial
- 53) Have your grandchildren ever attended your country of origin heritage classes or club?
 yes no
- 54) What school do/did your children attend?
 Czech international for Anglophone children only other

You and your family and friends back at home

- 55) How often do you get in touch with relatives in your country of origin?
 daily 2-3 times a week once a week once a month rarely
- 56) How do you keep in touch with relatives back in your country of origin?
 telephone Skype or similar application letters e-mail another way, namely:

- 57) What language or languages do you mostly use to keep in touch with relatives back in your country of origin?
- 58) How often do you get in touch with friends back in your country of origin?
 daily 2-3 times a week once a week once a month rarely
- 59) How do you keep in touch with friends back in your country of origin?
 telephone Skype or similar application letters e-mail another way, namely:

- 60) What language or languages do you mostly use to keep in touch with friends back in your country of origin?
- 61) Have you ever been back to your home country since leaving for the Czech Republic?
 never
 seldom
 regularly, 1-2 times a year
 regularly, 3-5 times a year
 regularly, over 6 times a year
- 62) How long did you typically stay?

63) Have you ever been to other Anglophone countries since leaving for the Czech Republic? What country was it and how long was your visit?

.....
.....
.....

64) Apart from the Czech Republic, have you ever lived in a country other than your home country for a longer period of time (that is, more than 6 months)?

no (under 6 months)

less than 1 year, in: (country)..... from..... to.....

(country)..... from..... to.....

(country)..... from..... to.....

1 year or more, in: (country)..... from..... to.....

(country)..... from..... to.....

(country)..... from..... to.....

You and your friends here

65) What is the mother tongue of the majority of your friends in the Czech Republic?

English Czech equal another language, please specify

66) How did you meet most of these people?

through an English club or organisation

through mutual friends

through work

through the children's school

through church

through another way, namely:

67) Could you please fill in this table with information about your closest **Czech friends** (please include your current partner if applicable). You don't have to fill in the name of the person if you do not wish to.

Name (optional)	What is your relationship with this person?	How did you meet this person? How long have you known each other?	What language(s) does he/she use when speaking to you? In %	What language(s) do you use when speaking to him/her? In %	How would you rate the English proficiency of this person? (0=none, 1=poor 3=ok, intermediate 5=proficient, native-like)	How often do you speak to this person?
					0 1 2 3 4 5	<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
					0 1 2 3 4 5	<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
					0 1 2 3 4 5	<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
					0 1 2 3 4 5	<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
					0 1 2 3 4 5	<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely

68) In general, what language or languages do you mostly use when talking to your **Czech friends**?

- only English
- both Czech and English, but mostly English
- both Czech and English, without preference
- both Czech and English, but mostly Czech
- only Czech
- other or no answer

69) Could you please fill in those people- **Anglophone expats (friends or colleagues**, please include your partner if applicable) that you are most frequently in touch with in the following table? I wish to see through this table what your expat social network looks like. You don't have to fill in the name of the person if you do not wish to (however, the names stay only with me and would not be published. It would be extremely useful for me to be able to map your relationships in the Anglophone community in Brno/the Czech Republic).

Name (optional)	country of origin	What language(s) do you use when communicating with each other? In %	How did you meet this person?	How long have you known this person?	What is your relationship with this person?	How often do you speak to these people?
						<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
						<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
						<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
						<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely
						<input type="checkbox"/> daily <input type="checkbox"/> 2-3 times a week <input type="checkbox"/> once a week <input type="checkbox"/> once a month <input type="checkbox"/> rarely

70) In general, what language or languages do you mostly use when talking to your **Anglophone expat** friends?

- only English
- both Czech and English, but mostly English
- both Czech and English, without preference
- both Czech and English, but mostly Czech
- only Czech
- other or no answer

You and your professional life

You said you work as a

71) What language do you (did you) use most frequently in your current job?

EN CZ EN & CZ other

72) Could you now be more specific, please? What language do you use with your....

-clients/customers (other than students) EN CZ EN & CZ other

-suppliers: EN CZ EN & CZ other

-students: EN CZ EN & CZ other

-colleagues: EN CZ EN & CZ other

-superiors, managers: EN CZ EN & CZ other

73) How would you rate the English proficiency of the people you interact with in English at work?

(0=none,1=poor, 3=ok, intermediate, 5=very proficient, native-like) How often do you interact with these people?

-clients/customers 0 1 2 3 4 5

daily 2-3 times a week once a week once a month rarely

-suppliers 0 1 2 3 4 5

daily 2-3 times a week once a week once a month rarely

-students 0 1 2 3 4 5

daily 2-3 times a week once a week once a month rarely

-colleagues 0 1 2 3 4 5

daily 2-3 times a week once a week once a month rarely

-superiors 0 1 2 3 4 5

daily 2-3 times a week once a week once a month rarely

74) If you work as a teacher of English, could you please indicate how many teaching hours (45 mins) a week you spend teaching students of the following levels this academic year?

A1-beginners

A2-pre-intermediate

B1-intermediate

B2-upper-intermediate

C1-advanced

C2-native-like

You and foreign languages and Czech culture

75) Could you please indicate what languages you use in these situations?

	only English	mostly English	both	mostly Czech	only Czech	other
Language in which you think						
Language in which you dream						
Language in which you count/do maths						
Language in which you pray						

Language you are proficient in						
Language in which you have a rich vocabulary						
Language in which you have no pronunciation problems						
Language which you are able to use intuitively						
Language in which you are familiar with various dialects, slang						
Language in which you have an intuitive feeling what is "correct" and "incorrect"						
Language into which you are able to translate						
Language of which other people consider you a native speaker						

Language in which you can understand jokes						
Language in which you can make jokes						
Language in which you swear						
Language in which you say "I love you"						
Language you use when you are surprised						
Language you use when you are angry						

Language you use with your neighbours						
Language you use with your children's friends						
Language you use to talk to babies						
Language you use to talk to pets						
Language you use at church						
Language you use to talk to staff in restaurants, pubs and hotels						
Language you use in shops						

90) How important do you consider maintaining your English?

- unimportant
- relatively unimportant
- not very important
- important
- very important
- crucial

91) Do you feel more comfortable speaking Czech or English?

- English
- Czech
- no preference

92) Could you elaborate on your answer: why do you feel more comfortable speaking either Czech or English or why don't you have any preference?

.....
.....
.....

93) Did you attend any Czech classes before/after coming to the Czech Republic?

- no
- yes, less than 1 month
- yes, 2-6 months
- yes, 7-12 months
- yes, more than a year
- yes, more than 2 years

94) Did you study Czech by yourself/in an informal way before/after coming to the Czech Republic?

- no
- yes, less than 1 month
- yes, 2-6 months
- yes, 7-12 months
- yes, more than a year
- yes, more than 2 years

95) Did you have any contact with speakers of Czech before coming to the Czech Republic? Can you describe it?

.....
.....
.....

96) What variety of English did you speak while you lived back in your country of origin?

- RP
- Standard American
- a dialect, namely:

- 97) Do you ever listen to songs in English?
 yes, how often?..... no
- 98) Do you ever watch television programmes or youtube videos in English?
 yes, how often? no
- 99) Do you ever listen to radio programmes in English?
 yes, how often?..... no
- 100) Do you ever read newspapers, blogs, books or magazines in English?
 yes, how often?..... no
- 101) If you have indicated that you never listen to English songs or radio programmes, nor read English newspapers, books or magazines and that you don't watch English television programmes, could you indicate why you think that is?
.....
.....
.....
- 102) Do you ever listen to Czech songs?
 yes, how often?..... no
- 103) Do you ever watch Czech television programmes?
 yes, how often? no
- 104) Do you ever listen to Czech radio programmes?
 yes, how often?..... no
- 105) Do you ever read Czech newspapers, blogs, books or magazines?
 yes, how often?..... no
- 106) If you have indicated that you never listen to Czech songs or radio programmes, nor read Czech newspapers, books or magazines and that you don't watch Czech television programmes, could you indicate why you think that is?
.....
.....
.....
- 107) Do you feel more at home with Czech culture or with your country of origin culture?
 with Czech culture
 with both, but more with Czech culture
 with both cultures, equally
 with both, but more with my country of culture
 with my country of origin culture

108) Do you ever feel uncomfortable when speaking English with a person who has never spent a considerable amount of time in the Czech Republic? (i.e. who is not an expat) Why?
 yes, sometimes yes, but very rarely no, never

109) If you feel uncomfortable in such a situation, could you indicate whether this is also the case when you speak English with someone who, like you, has lived in the Czech Republic for a long time?
 yes, sometimes yes, but very rarely no

110) Do you ever intend to move back to your country of origin?
 yes, I would eventually like to move back
 no, I don't intend to ever return
 I have never really given it much thought
 I don't know

111) If you have indicated that you do not intend to ever move back to your country of origin, can you explain why you feel that way?
.....
.....
.....

112) Looking back, do you think you have made the right decision in moving to the Czech Republic?
 yes
 no, I wouldn't do it again if I had to make the choice again, because:
.....
.....
 I don't know, because
.....
.....

This is the end of sociolinguistic questionnaire

Appendix 2: Sociolinguistic questionnaire for the control group

Schmid & Dusseldorp (2010)

1. What is your date of birth?
2. Are you:
 Male Female
3. Where were you born?
Village/town:.....
Country:.....
4. What variety of English do you speak?
 RP
 Standard American
 A dialect, namely:.....
5. What is the highest level of education you have completed?
 Primary school
 Secondary school, level:.....
 Higher education, namely:.....
 University, degree:.....
 postgraduate, degree:.....
6. Apart from the UK, have you ever lived in another country for a longer period of time (i.e. more than 6 months)?
 No
 Yes, namely in.....for the duration of.....
7. What language(s) did you acquire before going to school?
 Only English
 (an)other language(s) as well, namely:.....
8. Did you attend any foreign language classes at school?
 No
 Yes, for the duration of (number of years):.....

9. What language or languages did you learn professionally or at school?

.....

10. What language or languages did you learn outside of an educational environment (so outside of school or work), if any?

.....

11. What is your current profession? If you are retired, could you please indicate your last profession before retirement?

.....

12. If you have had several professions, could you indicate each one of them in chronological order?

.....
.....
.....
.....

13. In general, how would you rate your foreign language proficiency at present?

- Very good
- Good
- Ok
- Fairly poor
- Very poor

14. Do you think it is important to have a good command of a foreign language, for example to engage in a discussion or to write formal letters?

- Very important
- Important
- No opinion
- unimportant
- Very unimportant

15. How important do you think it is to have a good command of English?

- Very unimportant
- unimportant
- No opinion
- Important
- Very important

16. Do you have any children?
 No Yes, how many and how old

.....

17. Do you think it is important that you children have a good command of English?
 Very unimportant
 Unimportant
 No opinion
 Important
 Very important

18. Do you ever correct your children's English?
 No, never
 Yes, sometimes
 Yes, often

19. Do you think it is important that you children have a good command of a foreign language?
 Very important
 Important
 No opinion
 Unimportant
 Very unimportant

22. Do you sometimes feel that English is encroaching itself more and more upon other languages?
 No
 Yes, I have the following opinion about it:

.....
.....
.....

23. What is your current marital status?
 Married
 Separated/divorced
 Widow/widower
 Living together unmarried
 Single

24. What language(s) does/did you (ex)partner speak?

.....

25. Do you think the English language is an important part of your identity?

.....
.....

26. Do you ever read books or magazines in a foreign language?

Yes, how often? No

27. Do you ever watch movies, videos or news in a foreign language?

Yes, how often? No

28. Do you ever listen to music in a foreign language?

Yes, how often? No

29. Could you please say why/why not?

30. Do you ever feel uncomfortable when speaking English to a learner of English
(for example, when a tourist asks you for directions)?

No, never
 Yes, sometimes

31. Do you know people in you own environment who have more or less recently
emigrated to a non- English-speaking country?

No Yes

32. Do you have an opinion about English/American emigrants who have moved to
an non-English-speaking country and who now speak with a heavy accent
when they revisit the UK/USA?

That annoys me
 No opinion
 It does not bother me

33. Have you ever considered emigrating yourself? If you have, what were your
reasons not to do it in the end?

No, I never thought about it
 Yes, but I haven't done it, because

Appendix 3: Qualitative interview questions for the expatriates

Qualitative questions

How is your English different now, upon having lived in the Czech Republic? What do you think is the reason for this transformation?

Do you ever speak your native/regional dialect around Czechs?

Do you sometimes perhaps feel that your English is no longer what it used to be? What makes you think so?

In what ways could possibly your students'/colleagues' English influence yours? Do you think it has happened?

Have you ever caught yourself making a Czenlish mistake?

Have you ever had serious problems remembering English words?

Has your accent changed in any way since you have moved to the Czech Republic? Has anybody (your friends or family members back at home) ever told you that you sounded different now?

Have you ever met an expatriate who did not sound like a native speaker of English?

Have you ever felt a pressure to learn Czech? To speak Czech?

Have you ever felt a pressure to speak English?

Do you ever speak Czech with other expats?

Are there any "bad" language habits that you have learnt from Czechs?

How has living in the Czech Republic and learning and speaking Czech language enriched you?

Do you ever code-switch, i.e. insert Czech words or sentences in between English sentences? Or vice versa? Can you remember a particular occasion? What makes you linguistically behave in this way?

Is there any linguistic ritual that you and your expat friends have? E.g. using a particular Czech word in a particular situation, mocking Czech English, making mistakes or purpose? Do you have any ritual like this with your Czech friends?

Has your pronunciation changed in any way since you moved here?

Do you think that you use English grammar differently since you moved here? Can you perhaps give me an example?

Appendix 4: Word list

With items adopted from Major (1992)

neat	discussion	allows	bath	mountain	gate
proof	thunder	thistle	execution	pig	his
save	prize	kept	pub	leave	these
great	cod	of	bay	pod	chair
day	leak	price	Ted	airplane	shallow
thermometer	safe	their	bug	ketchup	d
path	hour	pick	love	shock	hit
cap	leaf	bud	hid	bag	rib
thermal	economics	fist	paw	doze	slab
too	botch	economize	nephew	cab	open
went	new	opportunity	pup	cot	goo
b	goat	thief	t	rage	hotel
centre	behavior	train	phone	sister	competitive
cub	cease	dead	bed	rather	reeve
feather	off	development	neg	determine	caught
pet	brogue	dog	talented	run	through
back	bus	genetics	prove	honor	father
do	slap	robe	pay	toe	dose
forest	cob	dough	theory	pooch	dock
teeth	opera	flower	emergency	moon	a louse
adolescence	cloth	k	youth	think	nose
rip	event	mechanism	economy	graze	Japan
station	hiss	boat	key	meadow	get
grace	poach	p	bet	need	execute
represent	coo	cup	thought	star	fresh
coat	luff	there	boot	tot	they
product	ambiguity	gawk	league	take	reef
seize	garden	those	material	arm	cop
thanks	taught	horrible	pot	biology	rope
thread	got	neck	geese	figure	orienteering
buck	produce	broke	buck	bought	mad
mat	historical	peculiarity	buzz	three	pasta

Appendix 5: Czech proficiency test

Multiple choice by Karlová, Jazykové centrum Correct (n.d.); cloze by Hradilová, Department of Czech Studies, Palacký University Olomouc (n.d.)

1. Jak se jmenuješ?

- A) Eva B) Ne. C) Ano. D) 50Kč.

2. Mluvíte česky?

- A) Ano, trochu. B) Ne, nemám. C) Ano, díky. D) Ne, díky.

3. Odkud jste?

- A) Angličan. B) Z Anglie. C) Anglický. D) Angličtina.

4. Kdo je to?

- A) Kamarád. B) Tady. C) Zítra. D) Ne.

5. ... pracujeme ve velké firmě.

- A) Já B) Ty C) Vy D) My

6. Kde je šéf? ...

- A) Doma. B) V doma. C) V Amerika. D) V tady.

7. Ona ... studentka.

- A) je B) jsou C) jsem D) jsme

8. Petr je ...

- A) milá B) milové C) milé D) milý

9. Umíte dobře ... ?

- A) plaveme B) plavat C) plavu D) plave

10. Kdy lyžuješ?

- A) Zima. B) V zimě. C) Na zimě. D) Zimy.

11. Čí je ten počítač?

- A) Naše. B) Tvoje. C) Můj. D) Vaše.

12. Řeknete mi, kolik je hodin, ... ?

- A) třeba B) bohužel C) nevím D) prosím

13. Neumím moc česky, mluvte, prosím ...

- A) rychle B) ještě jednou C) pomalu D) více

14. ... Je mi 25 let.

- A) Jak starý? B) Kolik je ti let? C) Kolik je hodin? D) Kdy máš narozeniny?

15. Včera ... krásný den.

- A) byl B) byli C) bylo D) byla

16. Sestra a já ... klíče

- A) hledaly jsme B) jsme hledaly C) hledaly D) hledala

17. Nejdu nakupovat ... nemám peníze.

- A) proč B) tedy C) a proto D) protože

18. Dáš si kávu ... čaj?

- A) nebo B) a C) ani D) ale

19. ...nějakou dobrou kavárnu?

- A) Umíš B) Znáš C) Máš D) Víš

20. Znáš ...?

- A) David B) Davide C) Davida D) Davidu

21. ..., půjdeš s námi?

A) Jana B) Jano C) Janu D) Jany

22. V Jižních ... je mnoho rybníků a řek.

A) Čechách B) Čechů C) Čechů D) Čech

23. (Ty) ... zítra v kanceláři?

A) Půjdeš B) Chodíš C) Budeš D) Chceš

24. Máš horečku?

A) Ne, ale bolí ho hlava. B) Ne, ale bolí mě hlava. C) Ne, ale bolí hlava. D) ano, ale bolí mě hlava.

25. Co si o tom ... ?

A) myslíš B) vidíš C) chceš D) hledáš

26. Bratr mé matky je můj ...

A) bratranec B) tchán C) strýc D) dědeček

27. Sestřenice je dcera

A) mojí matky B) mojí tety C) mé babičky D) mého dědečka

28. Jezdit na koni je

A) zajímavý B) těžké C) šťastné D) velký

29. Budeš jezdit každý víkend domů? ...

A) Nepojedu. B) Nepůjdu. C) Nebudu D) Bude jezdit.

30. ... jsme les.

A) Prošli B) Zašli C) Vyšli D) Přišli

31. ... jsem most.

A) Obešel B) Přešel C) Zašel D) Přišel

32. Čekám na

A) tě B) těho C) tebe D) ti

33. Vidíš ...?

A) ji B) jim C) on D) si

34. Spal jsi ... babičky nebo ... kamaráda?

A) u, u B) u, od C) k, k D) pro, pro

35. Ten film jsem viděl ... kině.

A) u B) v C) z D) k

36. Chceš jít ... kina?

A) k B) v C) do D) pro

37. V lékárně kupuju

A) mléko B) léky C) papír D) jogurt

38. Jablko, broskev a pomeranč jsou ...

A) zelenina B) sladkosti C) pití D) ovoce

39. Rýže, hranolky a knedlíky jsou

A) přílohy B) předlohy C) vlohly D) nohy

40. Všechno nejlepší k ...

A) zlomeninám B) narozeninám C) Vánocům D) Velikonocům

41. Mohla ... mi pomoci?

A) bys B) bych C) by D) bysme

42. Zuzana si ... telefon doma.

A) zapomněl B) pomněl C) pomněla D) zapomněla

43. Zvoní telefon....

- A) Jdeš otevřít? B) Zavoláš? C) Zvedneš ho? D) Odpovíš?

44. Kam chodíme, když si chceme nechat ošříhat vlasy? ...

- A) Do kadeřnictví B) do samoobsluhy C) do železářství D) do střihařství

45. Dobrý den, tady John Black. Mohl, ... ?

- A) bych mluvit s Katkou? B) bych mluvit s Katka? C) bych mi dát Katku D) by Katka k telefonu

46. Mohla bys mi ... díru na tričku?

- A) sešít B) ušít C) přišít D) zašít

47. Vezmeš si ještě čaj? ...

- A) Ano, беру si. B) Vezme. C) Ano, vezmu si. D) Beru.

48. Co do seznamu nepatří?

- A) marmeláda B) bábovka C) bonbon D) tužka

49. Co do seznamu nepatří?

- A) kravata B) tričko C) bunda D) rohlík

50. Co do seznamu nepatří?

- A) panenka B) medvěd C) veverka D) had

51. William Shakespeare byl slavný

- A) úředník B) spisovatel C) dopisovatel D) spisovatelka

52. Budu bydlet v Praze od ... do ...

- A) dubnu, listopadu B) dubna, listopada C) dubna, listopadu D) duben, listopad

53. Dívala se na ... a mlčela.

- A) mě B) mně C) mje D) mňe

54. Můžu ... půjčit peníze.

- A) ti B) tě C) ti D) tebe

55. Chtěl bych se sejít v... .

- A) sobota B) sobotu C) soboty D) sobotek

56. Zkouška sirén probíhá první středu v

- A) měsíc B) měsíce C) měsícu D) měsíci

57. Doplňte pořekadlo: kdo pozdě chodí,... .

- A) sám sobě uškodí B) sám sobě škodí C) ten sám chodí D) chodí vždycky sám

58. Doplňte pořekadlo: Bez práce nejsou

- A) knedlíky B) prachy C) koláče D) peníze

59. Jak zní český idiom? (Mít štěstí) ...

- A) Mít kliku. B) Mít čtyřlístek. C) Mít zelenou. D) Být v kaši.

60. Doplňte slova podle smyslu.

Karel Čapek se 9. ledna 1890 v Malých Svatoňovicích. Byl nejmladší ze tří dětí. Josef vynikl jako malíř a spisovatel, sestra Helena autorkou knihy Moji milí bratři a dalších próz. Studoval gymnáziu v Hradci Králové, v Brně a v Praze, kde složil Studium na Filozofické fakultě Univerzity Karlovy v roce 1915 doktorátem.

..... ukončení vysoké školy byl Karel Čapek vychovatelem, knihovníkem v Národním muzeu a pak redaktorem v Národních listech a Lidových novinách. Ve Vinohradském divadle působil v letech 1921-1923 jako dramaturg a režisér. Karel Čapek do zahraničí, kde sbíral podněty pro své cestopisy. Byl zvolen prvním československého PEN-KLUBU. Ve své vinohradské vile organizoval Karel Čapek přátelské páteční besedy.

5. prosince 1938 na zápal plic. Je na Vyšehradském hřbitově.

Appendix 6: Foreign accent rating questionnaire

Based on de Leeuw (2008)

You will hear a series of recordings of speakers retelling a story in English.

For each speaker, please indicate:

- 1) if the person is a native or non-native speaker of English,
- 2) how confident you are in your judgment,
- 3) how easy or difficult it was to understand the speaker on the scale from 1 to 5,
- 4) where you think the person is from.

You may also note a particular sound, word, stress patten, intonation pattern, or other aspects of the language produced that led you to judge a particular speaker as non-native or coming from a certain country.

Finally, at the very end of the questionnaire, please provide your age, gender, nationality, and English proficiency.

speaker	1) native status	2) confidence	3) easy or hard to understand?	4) country	notes
speaker 1	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		
speaker 2	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		
speaker 3	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		

...

speaker 41	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		
speaker 42	<input type="checkbox"/> native <input type="checkbox"/> non-native	I am ... <input type="checkbox"/> certain <input type="checkbox"/> semicertain <input type="checkbox"/> uncertain	easy 1 2 3 4 5 hard		

Now I need some information about you. Could you please indicate the following:

Age:

Gender:

Nationality:

First language:

Proficiency in English on scale 1-6 : complete beginner 1 2 3 4 5 6 native-like

This is the end of the questionnaire. Thank you for participating!

Appendix 7: Informed consent form – expatriates

Informed consent

You are about to participate in a sociolinguistic and psycholinguistic PhD research project concerning the influence of Czech language and Czech linguistic environment on your first language – English.

Your participations will involve:

- 1) an interview regarding your sociolinguistic background, the ways you use English and Czech, and your attitudes to these two languages**
- 2) filling in a questionnaire regarding your use of Czech and English in various situations**
- 3) watching a short movie extract and retelling the story (Charlie Chaplin task)**
- 4) completing 3 short linguistic tests**
- 5) self-assessment of your proficiency in Czech**

The whole process will take approximately 2 hours.

The interview, the Charlie Chaplin task, and the linguistic tests will be recorded in order to allow for detailed analysis concerning your syntax, lexicon and pronunciation. Some parts of the recording will further be used for foreign accent rating, which means that a group of assessors will listen to the extract and rate the perceived foreign-accentedness.

I would like to assure you that this research is strictly confidential; your name, exact date of birth, address, and other sensitive details that could identify you will not be shared with anybody and will not appear in the text of the dissertation. The recordings taken will not be made public, with the exception of several short (about 1 min) extracts for the purposes of foreign accent rating.

You may chose not to answer some of the questions, should you find them too personal. Further, I would like to inform you that you may withdraw from the research anytime and without any penalization. Should that be the case, the recording and information obtained from you will be discarded.

By signing this document you confirm that you have been informed about and understand the purpose and duration of the research, its parts, the handling of the data collected, and the possibility not to answer or withdraw completely without penalization.

Name of participant

date

signature

Name of researcher

Mgr. Magda Sučková

Appendix 8: Informed consent form – L1English controls

Participant Information Sheet and Consent Form

Project: Control data collection for a dissertation on the first language attrition in Anglophone expatriates in the Czech Republic

In my dissertation I am looking at changes in the English of British and American expatriates living in the Czech Republic. The aim is to describe these changes and identify the factors influencing the degree of first language attrition in this group. The data collection battery I am using includes a sociolinguistic interview, a story-retelling task, a word-retrieval task, and a word-list reading task. In order to make any valid conclusions, however, a set of control data is needed. This involves conducting the above mentioned tasks and a shortened version of the sociolinguistics interview with native speakers of English residing in an English speaking country, and subsequently comparing the two datasets.

Your participations will involve:

- 1) an interview regarding your sociolinguistic background
- 2) watching a short movie extract and retelling the story (Charlie Chaplin task)
- 3) completing a simple word-retrieval task called verbal fluency test
- 4) reading a word list

The whole process will take approximately 1 hour.

The interview, the Charlie Chaplin task, the verbal fluency test and the word-list reading will be recorded in order to allow for detailed analysis concerning your syntax, lexicon and pronunciation. Some excerpts of the Charlie Chaplin task recording will further be used for foreign accent rating, which means that a group of assessors will listen to the extract and rate the perceived foreign-accentedness.

This research is strictly confidential; your name, exact date of birth, address, and other sensitive details that could identify you will not be shared with anybody and will not appear in the text of the dissertation and in the foreign accent rating experiment.

You may chose not to answer some of the questions, should you find them too personal. Further, I would like to inform you that you may withdraw from the research anytime and without any penalization. Should that be the case, the recording and information obtained from you will be discarded.

Please tick the appropriate boxes

Yes No

I have read and understood the project information given above.

I have been given the opportunity to ask questions about the project.

I agree to take part in the project. Taking part in the project will include participating in an experiment.

I understand that I can withdraw from this study at any time, without giving a reason for doing so.

I understand my personal details such as name and email address will not be revealed to people outside the project.

Name of participant [printed]

Signature

Date

Researcher [printed]

Signature

Date

Project contact details for further information:

Magda Sučková
Department of English and American Studies
Faculty of Arts, Masaryk University
Gorkého 7
Brno 602 00
Czech Republic
magda.suckova@seznam.cz
Phone: xxxxxxxxxxxxxxxxxxxx

Appendix 9: Informed consent form – FAR raters

You are about to participate in a foreign accent rating study, which is a part of a PhD research project concerning the influence of Czech language and Czech linguistic environment on native speakers of English.

Your participations will involve listening to short extracts of people retelling a short movie extract from a Charlie Chaplin film and subsequently assessing their accent and how easy/difficult it is to understand them. Further, I would also like to ask you to try to guess where these people are from. The whole process will not take longer than 30 minutes. As a thank you for your time and effort you will be granted ... points towards your final grade in

There are no correct or incorrect answers; all that matters is how you perceive the accents of the speakers. I am interested in how the speakers sound to others. This is not a test ☺

I would like to assure you that this research is **strictly confidential**; your name, and other sensitive details that could identify you will not be shared with anybody (I will only give the list of those who agreed to participate to your teacher in order for her to award the points; however, she will not see your response sheets at any point) and will not appear in the text of the dissertation. The response sheets are anonymous.

I would like to inform you that you may withdraw from the research anytime and without any penalization. Should that be the case, the information obtained from you will be discarded.

By signing this document you confirm that you have been informed about and understand the purpose and duration of the research, its parts, the handling of the data collected, and the possibility not to answer or withdraw completely without penalization.

Name of participant

date

signature

Name of researcher

Mgr. Magda Sučková

Department of English and American Studies, FF MU

Gorkého 7, Brno

Email: magda.suckova@seznam.cz

Phone: xxxxxxxxxxxxxxxxxxxx

Appendix 10: Informed consent form – Czech controls

You are about to participate in a sociolinguistic and psycholinguistic PhD research project concerning the influence of Czech language and Czech linguistic environment on native speakers of English.

To be able to say if the expats sound perhaps more like experienced Czech users of English, i.e. potentially with a slight Czech accent, I need short recordings of Czechs speaking English. Parts of these recordings will be used for foreign accent rating experiment, which means that a group of assessors will listen to the extract and rate the perceived foreign-accentedness.

Your participations will involve watching a short movie extract and retelling the story (Charlie Chaplin task), which will be recorded. I will also ask a couple of questions about you, your English language proficiency and language use. The whole process will not take longer than **20 minutes**.

I would like to assure you that this research is **strictly confidential**; your name, date of birth, and other sensitive details that could identify you will not be shared with anybody and will not appear in the text of the dissertation. The recording taken will not be made public, with the exception of a short (about 20 seconds long) extract for the purposes of foreign accent rating.

You may chose not to answer some of the questions, should you find them too personal. Further, I would like to inform you that you may withdraw from the research anytime and without any penalization. Should that be the case, the recording and information obtained from you will be discarded.

By signing this document you confirm that you have been informed about and understand the purpose and duration of the research, its parts, the handling of the data collected, and the possibility not to answer or withdraw completely without penalization.

Name of participant

date

signature

Name of researcher

Mgr. Magda Sučková

Department of English and American Studies, FF MU

Gorkého 7, Brno

Email: magda.suckova@seznam.cz

Phone: xxxxxxxxxxxxxxxxxxxx