

Streszczenie w języku angielskim

The thesis falls into the area of neurolinguistics and its main objective was to extend the existing knowledge concerning the neurocognition of foreign-accented speech processing. To achieve this aim, a series of ERP (event-related brain potentials) experiments were conducted. The first experiment served as a baseline enabling further comparisons, and the subsequent three experiments specifically focused on three crucial factors potentially influencing the processing of foreign-accented speech, i.e., (i) accent familiarity, (ii) the language status as L1 or L2, and (iii) the listener's status as a monolingual or bilingual person.

The work consists of an introduction, six chapters, a conclusion, references, and an appendix. The introduction presents a general theoretical and empirical background on the basis of which the ERP experiments were designed. The first two chapters of the thesis are purely theoretical in nature. Chapter 1 explains basic terms related to topic of this thesis, such as *accent* and *bilingualism* and reviews crucial findings of behavioural studies related to foreign accent perception and comprehension. Chapter 2 provides basic information concerning the ERP technique. Moreover, the chapter defines relevant ERP components in the light of the current ERP studies investigating the neurocognition of foreign-accented speech processing (e.g., Hanulíková et al., 2012; Romero-Rivas et al., 2015; Grey & van Hell, 2017; Grey et al., 2018; Holt et al., 2018; Schiller et al., 2020). Most importantly, the discrepancies observed between different groups of subjects are reviewed and discussed.

Chapters 3–6 constitute the empirical part of the dissertation. Each of them reports the results of one ERP experiment, referred to as Experiments A–D. In Experiment A, described in Chapter 3, monolingual subjects (native Polish speakers) were presented with the recordings provided by a native Polish speaker and a non-native Polish speaker with a common and easily recognizable foreign accent, i.e., Ukrainian. The types of errors processed included *templatic* and *classic* semantic anomalies, out of which the first ones involve incorrectly used templates, i.e., fixed phrases (e.g., **dolewać oliwy do ciasta* ‘*to add fuel to the dough’) and the latter ones are caused by semantic features mismatch (e.g., **upiec uśmiech* ‘*to bake a smile’). The obtained results suggest that the ERP component typically elicited as a response to classic semantic anomalies (known as the N400 component) was similar in magnitude, but more globally distributed in the case of the non-native accent. The response elicited in reaction to unexpected template endings (the so-called Nref effect) was comparable between accents.

In Experiment B, described in Chapter 4, another sample of monolingual native speakers of Polish was presented with an uncommon and less recognizable foreign accent, i.e., Korean. As a reaction to classic semantic anomalies, a (delayed) N400 effect was elicited in both accent conditions. Hence, juxtaposing the results of Experiment A and Experiment B seems to confirm that the processing of semantic anomalies is not significantly affected by accent familiarity. Apart from that, the obtained ERP results indicate that the mechanisms associated with anticipatory processing are hampered in the case of less familiar foreign accents, such as the Korean accent in Polish. Although template violations elicited neural reactions both in the case of native and foreign-accented speech, the amplitude of the observed effect (i.e., Nref) was statistically higher in the case of native speech.

Later, in Chapter 5 the results obtained in Experiment C are reported. The subjects recruited to take part in this study were native speakers of Ukrainian, for whom Polish was a second language. As a reaction to classic semantic

anomalies, a (delayed) N400 effect was elicited only in native-accented (i.e., Polish-accented) speech. As a reaction to templatic anomalies, the N400 was elicited only in foreign-accented speech (i.e., the Ukrainian-accented speech). Such results are different from those obtained earlier in Experiment A, which generally suggests that language status (i.e., the difference between L1 and L2) is a factor influencing the processing of non-native speech.

Finally, Chapter 6 discusses the results of Experiment D, whose aim was also to investigate the processing of foreign-accented speech by bilingual subjects, and more specifically, sequential bilinguals with L1 Polish and L2 English. In this group of participants, the ERP results obtained for templatic and semantic violations did not differ across accent conditions. In other words, I observed similar brain responses (i.e., the N400 followed by late positivity) regardless of the speakers' accent. This finding indicates that bilinguals' experience in non-native speech comprehension and their own status as foreign-accented speakers may lead to the development of native-like mechanisms in foreign-accented speech processing.

The conclusion contains final remarks concerning the study outcomes, discusses its limitations, and indicates directions for further research. The most relevant findings concern the listener-oriented factors influencing foreign-accented speech processing. The results of the investigation suggest the relevance of listener's status as mono or bilingual person for meaning re-analysis, and the relevance of accent familiarity and language status for all examined cognitive processes, i.e., lexical retrieval, template activation, and revision.

10 XI 2021 r.
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