

## **Abstract**

The so-called "bilingual advantage" – the potential benefits for domain-general cognitive control as the result of bilingualism, has not been consistently replicated, and researchers have developed different theories to explain this variation in results. One explanation is that bilingualism should not be treated as a monolithic factor; instead, each bilingual's experiences and individual differences should be considered, as well as how language is used in different environments. Three broad language contexts have been suggested: regulatory, competitive, and cooperative. This dissertation explores whether these language environments differentially impact language use and cognitive control. Investigations 1 and 2 studied language availability and language control mechanisms in regulative and competitive language contexts. Investigation 3, on the other hand, attempted to simulate the competitive and cooperative contexts within a short-term experimental study and to observe the effects they may exert on specific domain-general cognitive mechanisms. By using a combination of behavioral and electrophysiological measures and restricting the scope to word production in Polish-English bilinguals, this dissertation attempts to give a broader understanding of the relationship between language environment and its consequences on the cognitive system. Additionally, the use of within-group and between-group comparisons in each study allowed for a more comprehensive exploration of changes in the cognitive system due to changes in the language environment.

Collectively, this dissertation aims to advance our understanding of the cognitive effects of bilingualism and to shed light on the flexibility of the language system. Investigations 1 and 2 found that the native language of long-term migrants is sensitive to changes in the environment. Even a short-term reimmersion in L1 results in a change in language control strategies. Investigation 3 found that the short-term language switching training, designed to simulate either competitive or cooperative language use, also results in a change of cognitive control processes of bilinguals, leading them to rely on more global monitoring in a competitive

language context. In summary, the dissertation paints a picture of a fast and adaptive language system that rapidly changes its cognitive strategies based on the environment's demands. The findings from the three presented investigations contribute to the existing body of knowledge in psychology, providing insights into the mechanisms underlying bilingualism-related cognitive benefits.