

INVESTIGATING COMPLEXITY IN 'THE BILINGUAL EXPERIENCE' AND ITS ROLE IN ADAPTIVE CONTROL

Opangienla Kechu (Indian Institute of Technology Guwahati) & Bidisha Som (Indian Institute of Technology Guwahati)

Bilingualism is a dynamic and complex phenomenon (Bak, 2016) and it is affected by many factors including but not limited to cultural and linguistic environment. It has been found that external non-linguistic cues like culturally iconic images and faces (Woumans et al., 2015; Zhang et al., 2013; Jared et al., 2013; Roychoudhuri et al., 2016; Liu et al., 2021) and also the interactional context (Hartanto & Yang, 2016) of the bilinguals aid in language selection and processing. Both factors have been found to impact language control which in turn effect cognitive control. With this backdrop the main aim of this study was to examine the role of cultural and interactional context in bilingual language processing with a focus on less studied populations. Altogether eight experiments were conducted for the study, four on the role of cultural context and four on linguistic context. A total of 225 participants (54 Rongmei-Meitei bilinguals, 40 Ao-Sangtam bilinguals, 40 Sangtam-Ao bilinguals, 61 Ao-English bilinguals and 30 Nagamese-English bilinguals) took part in the study. The experiments consisted of 5 linguistic task (translation equivalent recognition task and lexical decision task) and 3 non-linguistic task (Simon task, Flanker task and Attention Network Task).

Experiments 1, 2, 3 and 4, investigated the role of culture on bilingual language processing by manipulating iconic culture cues as stimuli for the experiments. Our results did not indicate effect of interference of the culture cues in translation equivalent recognition task when the two languages were not culturally distant (Experiment 1 and 2). This finding is contradictory to other findings with reported effect of interference by the culture cues. Such an effect was observed only in experiment 3 and 4 where the participants were migrant population living in L2 dominant linguistic. The direction of the language turned out to be an important predictor in bilingual language processing as faster response time was observed in L2-L1 translation as opposed to L1-L2.

Experiments 5, 6, 7 and 8 investigated the role of bilingual interactional context on bilingual language processing in general and specifically executive control. As predicted by the Adaptive Control Hypothesis, it was expected that the intensity of demands in the DLC interactional context would modulate language control. But such an evidence was not observed in the linguistic task (experiment 5) as response latency was similar for both DLC and SLC participants. In response inhibition tasks (experiment 6 & 7) efficiency in conflict monitoring in the DLC participants was observed pointing towards the modulating effect of bilingual interactional context on language control processes which in turn could modulate cognitive control. Experiment 8 examined if the difference in the linguistic and social status of a language plays a role in bilingual language processing. The results point towards the role of social status of the language and dominance and thus indicating the importance of context.

Thus findings and observations of this study point towards the issue that distinct bilingual experiences might influence language processing differently. The findings from these experiments also lends partial support towards ACH and the importance of context in bilingual language processing.