From Non-verbal Behaviours to Cognition: Rethinking Adaptors in Bilingual Descriptive Performance

By investigating the relationship between non-verbal behaviours, cognitive load, and mental imagery, specifically within the ambit of descriptive tasks, this investigation focuses on the production of adaptors—nonverbal behaviours previously linked with internal states such as arousal or anxiety (Densing et al., 2018)—and their manifestation during the performance of descriptive tasks by 20 adult participants.

Participants, late bilinguals proficient in Polish and English, were divided into two groups based on the presence or absence of a tangible object during the discussion tasks. The study further randomized language dominance (L1 or L2) among participants to explore the potential effects of language proficiency on cognitive load and performance. Initial evaluations included assessments of language proficiency, temperament, and baseline heart rate measurements, followed by physiological sigh exercises to establish a consistent physiological baseline across participants. The core of the study involved a descriptive task where participants were asked to describe a non-present object in their dominant language, aimed at enabling a third party to identify the object based solely on the description. This task was designed to challenge participants' spatial working memory, imagery, and descriptive abilities under varying conditions of object presence and language dominance. The cognitive workload was assessed using the NASA-TLX tool, providing subjective measures of the participants' perceived effort and stress levels.

Grounded in a theoretical perspective that posits cognition as fundamentally intertwined with communication (Kita et al, 2017; Goldin‑Meadow & Beilock, 2010), adaptors are examined within the cognitive linguistics framework, highlighting their relationship with gesturing. This approach offers a perspective through which the function of adaptors as indicators of cognitive load can be understood, marking a significant departure from their traditionally overlooked status in the domain of nonverbal communication research. Adaptors, despite their prevalent occurrence, have remained largely underexplored in academic discourse, a gap in the literature previously highlighted by scholars such as Alan Cienki. Cienki (2023) has pointed out the ambiguity surrounding adaptors' structural characteristics and their marginalisation in studies focused on movement structures. This neglect extends to the broader spectrum of nonverbal communication research, where adaptors have been scantily recognized for their potential communicative and cognitive significance. A major objective of this research is to present the diverse adaptor types observed among participants, thereby challenging and refining previous classifications that have been criticised for being insufficiently comprehensive. These classifications tend to miss gesture classification's rich descriptive content, which fails to capture the nuanced and diverse nature of adaptors.

References:

Cienki, A. (2023). Self-adapters: Renewed interest in an often ignored category. I*n Book of Abstracts: 1st International Multimodal Communication Symposium, April 26-28, 2023* (pp. 12-14). Retrieved from https://mmsym.org/wp-content/uploads/2023/04/Book_of_abstracts_MMSYM.pdf

Densing, K., Konstantinidis, H., & Seiler, M. (2018). Effect of stress level on different forms of self-touch in pre- and post-adolescent girls. *Journal of Motor Behavior*, 50(5), 475–485.

Goldin‐Meadow, S., & Beilock, S. L. (2010). Action's influence on thought: the case of gesture. *Perspectives on Psychological Science*, *5*(6), 664–674. https://doi.org/10.1177/1745691610388764

Kita, S., Alibali, M. W., & Chu, M. (2017). How do gestures influence thinking and speaking? The gesture-for-conceptualization hypothesis. *Psychological Review*, *124*(3), 245–266. https://doi.org/10.1037/rev0000059