Challenges in researching syntactic representations in the bilingual mind

Anna Skałba, MA

Faculty of English, Adam Mickiewicz University, Poznań

PhD Supervisors: prof. dr hab. Jacek Witkoś, dr Agnieszka Lijewska

In contrast to research aimed at on-line processing of individual words, there is a relative shortage of studies addressing the organisation of syntactic knowledge in the bilingual mind. This disparity results from a number of difficulties inherent to devising such experiments. Therefore, the presentation aims to outline challenges related to testing the predictions of separate-syntax (de Bot, 1992; Ullman, 2001) vs. shared-syntax (Hartsuiker et al., 2004) hypotheses for the bilingual mind.

The main on-line method used in bilingual research of syntax is cross-linguistic syntactic priming. However, its scope is limited because its current usage is restricted to constructions with an alternative structure expressing the same meaning. It may also be impossible to state with confidence whether the observed effects result from purely structural elements, or lexical repetition, thematic roles, animacy (McDonough & Trofimovich, 2009).

Another on-line method addressing these hypotheses is the Rapid Parallel Visual Presentation paradigm, which investigates sentence superiority effect in sequences of words from two different languages (Declerck et al., 2019). Nonetheless, this entails the selection of target sequences formally equivalent in the languages under investigation, whose length cannot exceed working memory capacity.

Finally, eye-tracking during reading is liable to provide highly informative data on the organisation of syntax in the bilingual mind. Yet, its application involves such challenges as controlling for a number of factors while preparing target stimuli and the selection of only the most appropriate measures in order to avoid inflating the risk of type I error (e.g., Godfroid, 2020).

All these factors contribute to a relative difficulty in investigating the representation of syntax in the bilingual mind. Hence, the presentation will not only review the so-far used methods to highlight their advantages and disadvantages, but it will also attempt to propose solutions to some of the discussed challenges.

References:

De Bot, K. (1992). A bilingual production model: Levelt's 'Speaking' model adapted. *Applied Linguistics, 13*, 1-24.

Declerck, M., Wen, Y., Snell, J., Meade G., & Grainger, J. (2019). Unified syntax in the bilingual mind. *Psychonomic Bulletin & Review, 27*(1), 149-154.

Godfroid, A. (2020). *Eye Tracking in Second Language Acquisition and Bilingualism. A Research Synthesis and Methodological Guide*. New York: Routledge.

Hartsuiker, R. J., Pickering, M. J., & Veltkamp, E. (2004). Is syntax separate or shared between languages? Cross-linguistic syntactic priming in Spanish-English bilinguals. *Psychological Science, 15*, 409-414.

McDonough, K., & Trofimovich, P. (2009). *Using priming methods in second language research*. New York: Routledge.

Ullman, M. T. (2001). The neural basis of lexicon and grammar in first and second language: The declarative/procedural model. *Bilingualism: Language and Cognition, 4*, 105-122.