

## **Shared syntax in the multilingual mind: Evidence from language comprehension by Polish-English-French speakers**

There exist two main hypotheses regarding the representation of syntax in the multilingual mind: the separate-syntax (de Bot, 1992; Ullman, 2001) and shared-syntax (Hartsuiker et al., 2004) accounts. The former postulates separate, language-specific representations, whereas the latter assumes that grammatical structures which overlap between two known languages have a single mental representation, thus reducing redundancy.

While the two hypotheses have been mainly tested from the perspective of language production with the use of the cross-linguistic syntactic priming paradigm (Loebell and Bock, 2003), there is still a shortage of empirical studies on language comprehension. Hence, Declerck et al. (2019) conducted a Rapid Parallel Visual Presentation (RPVP) experiment by presenting French-English proficient bilinguals with sequences of four words, two from each language. The recall of one of these words proved less demanding when the sequence formed a cross-linguistically grammatical phrase (e.g., *ses feet sont big* ‘his/her feet are big’), as opposed to randomly ordered words (e.g., *sont feet ses big* ‘are feet his/her big’). This bilingual sentence superiority effect has provided additional evidence that bilinguals can share syntactic representations (Hartsuiker et al., 2004).

However, it is still unclear whether trilingual speakers can access shared grammatical knowledge during language comprehension. This is worth investigating as connections between individual words and grammatical constructions in which they can be used are much more complex in the case of trilingual speakers. Therefore, the present proposal aims to fill this research gap by presenting a RPVP study with 40 Polish-English-French trilinguals, who performed the task in their L2 and L3. With a view to checking for sentence superiority effects between two foreign languages, the participants were presented with the same stimuli as in Declerck et al.’s (2019) experiment, with the caveat that presentation time was adopted to non-native speakers by increasing it from 200 ms to 400 ms. In order to assess the influence of word order on accuracy, a mixed model was fitted with the use of the R software (R Development Core Team, 2017).

The results confirm the posited hypothesis, as recall accuracy is significantly greater for cross-linguistically correct sequences than for randomly-ordered words ( $p < 0.001$ ). Given that Declerck et al.’s (2019) participants were all highly proficient bilinguals, the present study also aims to assess recall patterns as a function of proficiency in English and French, measured by the respective versions of the LexTALE test (Lemhöfer & Broersma, 2012; Brysbaert, 2013). Although the accuracy for cross-linguistically correct sequences tends to increase with greater French LexTALE scores, this variable fails to reach significance in the model. In turn, English LexTALE scores are rather homogeneous and, as such, do not influence the results.

The observation of the bilingual sentence superiority effect in the current data shows that multilingual speakers can also share syntactic representations of their two foreign languages. An insignificant effect of language proficiency might mean that the participants of the study have already achieved the level at which representations of syntactic structures become shared (Benolet et al., 2013).

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