

Processing of synonyms and homographs in bilingual and monolingual speakers

Clara D. Martin^{1,2}, Romain Pastureau^{1,3}, Emilia Kerr⁴, Angela de Bruin⁵

¹Basque center on Cognition, Brain and Language (BCBL); ²Ikerbasque, Basque Foundation for Science; ³University of the Basque Country (UPV/EHU); ⁴Aix-Marseille University (AMU); ⁵University of York (UoY)
c.martin@bcbl.eu; r.pastureau@bcbl.eu; emilia.KERR@univ-amu.fr; angela.debruin@york.ac.uk

Most languages in the world contain both single-mappings (1 word referring to 1 concept) and double-mapping words (hereafter within-language double-mappings), commonly called synonyms (2 words for 1 concept) and homographs (1 word for 2 concepts).

Early highly-proficient bilinguals have long-lasting experience with cross-language double-mappings: Most concepts are linked, in the bilingual brain, to a word in their first and another one in their second language (i.e., 2 words for 1 concept; translation equivalents). Furthermore, false friends are quite common, at least in some closely-related pairs of languages (i.e., 1 word for 2 concepts; interlingual homographs).

Considering the strong prevalence of cross-language double-mappings in early highly-proficient bilingual language use, the main question of the project was the following: Do bilinguals differ from monolinguals in how they process within-language double-mappings because of the prevalence of, and their experience with, cross-language double-mappings in their daily life?

Across two behavioral studies, we compared performances from Spanish monolinguals and Spanish-Basque bilinguals on a behavioral picture-word matching task. The words were all presented in Spanish, the native language of all participants. Participants responded to synonyms and homographs (both double-mappings) or single-mappings (controls).

The reaction times in both studies showed clear and significant costs in processing within-language double-mapping stimuli, as well as intrinsic differences in processing homographs versus synonyms. However, these effects did not differ between bilinguals and monolinguals.

The present findings thus suggest that the bilinguals' extensive experience with cross-linguistic double-mappings does not transfer onto within-language double-mapping processing.