Richard Atkinson
University of Birmingham

Phonological Processing of Dual Language Input: the relationship between phonological systems for speech-sign bilinguals (English)

Hearing speech-sign bilinguals know languages in distinct sensory-motoric modalities. This allows simultaneous perception and production, entailing potential benefits for multimodal integration. Existing evidence shows dual-input processing benefits for semantically-based decisions. The present study investigates whether this holds for the non-overlapping phonological systems in these bilinguals. 13 fluent English-BSL bilinguals, 13 intermediate signers and 13 monolingual English controls made phonological decisions to audio/video stimuli. In Experiment 1, participants made BSL handshape decisions (sign-only vs. sign-with-speech). Intermediate and fluent signers were significantly more accurate with dual-input, but reaction times did not differ. In Experiment 2, participants monitored English phonemes (speech-only vs. speech-with-sign). Here both signing groups responded faster with dual-input, but only fluent signers performed significantly more accurately. Results suggest intermediate signers performed a speed-accuracy trade-off in both tasks. Overall, sign experience seemingly leads to phonological systems becoming linked, such that signers even profit from their weaker L2 when making English decisions.