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Hemispheric Asymmetry for Language Processing and Lateral Preference in Simultaneous Interpreters

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ABSTRACT

Neuroimaging studies showed that linguistic functions are less lateralized in polyglots than in monolinguals. However, there is not much agreement about the role of the two hemispheres in semantic and syntactic processing in bilinguals. In this study, 35 right-handed Italian speakers were shown 520 words and pseudo-words. The task consisted in detecting a given target letter by pressing a button with either the left or right hand. 19 simultaneous interpreters and 16 monolingual University students participated in the study. Interpreters performed the task in their native (L1) and second language (L2 = English); monolingual students only in L1. Response times to targets were recorded as a function of the hand used. RTs were faster to words than pseudo-words (word superiority effect). Results showed a significant right hand/LH advantage for the student group, and a complete lack of asymmetry for the interpreters both in L1 and L2. These data indicate a left-lateralization of linguistic functions in monolinguals and reduced lateralization in polyglots. The lack of lateralization in interpreters can be attributed either to their polyglottism, or to their prolonged practice of simultaneous interpreting strategies (e.g., dealing with two input channels; right ear/LH for listening to themselves interpret and left ear/RH for listening to the source language).

KEYWORDS

Laterality, Hemispheric Asymmetry, Interpreters, Bilingualism, Brain

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