Anti-Transfer in L3A of Portuguese

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A growing body of research in third language acquisition has demonstrated the possibility of backward cross-linguistic transfer, specifically L3→L2 transfer (Hui, 2010; Cheung, Matthews & Tsang, 2011; Tsang, 2014). Among these studies, Matthews et al. (2014) suggest that L3→L2 transfer could actually counterbalance previous transfer from L1 to L2, which they referred to as "anti-transfer effect". In their study, L3 German learners (L1-Chinese and L2-English), compared to L2 English learners (L1-Chinese), used significantly fewer uninflected verb forms to describe past events in their L2 English, a type of error attributed to negative transfer from their L1 Chinese which lacks tense markers. In light of this "anti-transfer effect", this project sets out to investigate the influence of L3 on previous L1→L2 transfer in the domain of English third person singular agreement by looking at L3 learners of Portuguese (L1-Chinese and L2-English) at two Universities in Macau: The University of Macau and Macau University of Science and Technology. Adopting longitudinal and cross-sectional methods, it is hypothesized that after one year of Portuguese learning, learners' use of uninflected verb for third person singular in English will be reduced and this effect will increase in proportion to learners' L3 proficiency. In a pilot study comparing a L3 group with 2 years of Portuguese learning experience and a L2 group with no learning experience in Portuguese (both groups showed comparable English proficiency level after an English placement test), it is found that numerically, the L3 group showed an advantage of the use in English third person singular over the L2 group, in both the writing task and the grammaticality judgment task. The result from the pilot suggests L3 influence in accordance with our hypothesis. A DST approach (Jessner, 2008) will be discussed, focusing on the role of metalinguistic awareness in the development of multilingualism.

Age of acquisition of the second language modulates structural and functional dynamics of bilingual reading

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Neuroimaging evidence has suggested the involvement of left-lateralized perisylvian regions in reading processes (Turkeltaub et al., 2002). In contrast, research on bilingualism has showed contradictory evidence in regard to the differential involvement of language-related brain regions and networks for reading in the native (L1) and second language (L2) (Hernandez et al., 2015). This highlights the relevance of investigating in a systematic manner the main factors modulating the differential involvement of reading regions and networks in bilinguals, while controlling other potential sources of variance. The age-of-acquisition(AoA) of the L2 and language proficiency have been pointed out as critical variables that can determine potential differences in brain function and structure among bilingual readers (Klein et al., 2014). Here, we sought to investigate the effects of the L2 AoA on the function and structure of language-related regions associated with L1 and L2 reading, while controlling language proficiency and exposition to L1 and L2. To this end, we followed a multimodal neuroimaging approach examining fMRI, cortical thickness and tractography measures in a sample of early and late bilinguals. Thirty-six bilinguals with Spanish as their L1, who learned Basque as their L2 before age 3 (early bilinguals) or after age 6 (late bilinguals), participated. All participants were high-proficient in both languages. In the scanner, they performed two separate tasks during which they were asked to press a button when they saw a colored letter within a given string (perceptual-task) or when they saw an animal word (semantic-task). Whole-brain fMRI analysis reveals no differences between groups. Region-of-interest analysis revealed a similar recruitment of