Abstract:

The study of L1 influences on L2 has a long tradition in bilingualism and second language acquisition research (cf. Odlin, 1989; Jarvis & Pavlenko, 2007). L2 influences on L1, on the other hand, have only started receiving deeper attention over the past years (cf. Cook, 2003; Pavlenko & Jarvis, 2002). However, much of the evidence for L2 influences on the L1 derives from bilingual subjects who are immersed in the L2 environment (cf. Hartsuiker, Pickering & Veltkamp, 2004). This state of things suggests that L2 influences on L1 occur primarily in situations where bilinguals are undergoing first language attrition, or when bilinguals’ L2 become their dominant language.

This poster reports a study that provided an opportunity for the exploration of evidence of knowledge of L2 activation by Brazilian Portuguese-English bilinguals who achieved high proficiency in their L2 (English), but who were immersed in the L1 dominant environment. The poster reports findings from a study focusing on an argument structure pattern – the induced action alternation. According to Levin (1993), the induced action alternation is a subset of the causative construction, and it applies to a set of verbs expressing manner of motion (verbs such as “run”, “walk”, “fly”, and “jump”), licensing sentences such as “The researchers ran the mice through the maze”. The study examined the extent to which bilingual subjects departed from constraints imposed by their L1 grammar as they processed sentences instantiating this alternation. For sentences such as this to be processed, the reader/listener must rely on a grammar that allows for late closure of the VP headed by “run”, with incorporation of the second NP as direct object of the head verb. As demonstrated by Souza (2011), this is not the case of the grammar of Brazilian Portuguese, in which verbs expressing manner of motion are mostly intransitive, therefore not licensing direct object.

The experiment reported in this poster involved a self-paced moving window reading task consisting of two sets of 32 sentences, one for English and the other for Brazilian Portuguese. 8 sentences in the English set were exemplars of the induced action alternation with verbs of manner of motion, and 8 sentences in the Brazilian Portuguese set mimicked this construction with corresponding verbs (e.g.: “The researchers ran the mice through the maze” / “Os pesquisadores correram cobaias em um labirinto”). All 32 sentences in both sets followed a Sub-V-Obj-PP pattern. The alternating verbs used in the study were “run”, “walk”, “race”, “swim”, “leap”, “jump”, “fly”, and “dance”. All such verbs, along with their Portuguese counterparts, are high frequency lexemes, belonging to the 5,000 more frequent types of the two languages, and their participation in the induced action alternation in English was testified in the Corpus of Contemporary American English (COCA). 44 subjects divided in five groups participated in the study. The subjects were speakers of Brazilian Portuguese with virtually no knowledge on English (n=9), native speakers of English and English dominant bilinguals living in the USA (n=8), low proficiency Brazilian Portuguese L1 users of English L2 living in Brazil (n=9), and high proficiency Brazilian Portuguese L1 users of English L2 living in Brazil (n=18). The speakers of Brazilian Portuguese with little or no knowledge of English, and half of the high proficiency Brazilian Portuguese L1 users of English L2 read the sentences in Portuguese. All other subjects read sentences in English. All sentences were fragmented as NP1/V/NP2/PP. Therefore, participants visualized sequences of frames such as “1:The researchers/2-ran/3-the mice/4-through the maze. Reaction times to the third frame, i.e. NP2, were calculated, and inter-group comparisons were made.

The results obtained are as follows:
The results support Souza’s (2011) findings concerning the gradual development of representation of the induced motion by Brazilian Portuguese users of L2 English. It also demonstrates that lower proficiency bilinguals experience high processing costs when integrating a potential object NP into VPs headed by verbs of manner of motion. Therefore, they parallel monolinguals processing of similar constructions. This result supports the hypothesis that L1-to-L2 influences lead to underrepresentation of the induced action alternation with verbs of manner of motion, in convergence with findings from offline studies with speakers of Spanish and English reports in Montrul (2001). A noteworthy finding, however, is that the reaction time patterns of the high proficiency L2 users not only departed from their L1 when they read in English – indicating a diminished effect of the L1-based constraint – but they also showed behavior that corresponds to native English speaking monolinguals and English dominant bilinguals reading in English. Such behavior of high proficiency Brazilian-English bilinguals was found both when they were reading sentences in their L2 and when they were reading sentences in their L1. These results can be interpreted as activation of L2 knowledge of the induced action construction with verbs of manner of motion during sentence processing irrespective of the language of the stimuli, or even as loosening of the L1 constraint experienced by monolinguals of Brazilian Portuguese and less proficient bilinguals. Although further investigation is needed for a more thorough explanation to be proposed, the present study can be viewed as providing evidence that a high level of L2 proficiency rather than immersion in the L2 environment is the key variable in activation of knowledge of an L2 during L1 processing.

References:


