On-line sensitivity to case marking among heritage Spanish bilinguals in the U.S.
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The present study examined the on-line processing of differential object marking the variable overt marking of select direct objects with the particle *a* primarily on the basis of the semantic features of animacy and definiteness among heritage speakers of Spanish in the United States. Previous research has found that such heritage bilinguals omit the particle *a* with animate direct objects during speech production at rates of around 20 to 50 %, depending on proficiency level, which contrasts with data from monolingual speakers, who produce unmarked direct objects at rates of around 2 % (Montrul, 2004; Montrul & Bowles, 2009; Montrul & Sánchez-Walker, 2013). Acceptability judgment data has also revealed significant differences between heritage bilinguals and monolinguals when it comes to the marking of animate objects with *a* (Montrul & Bowles, 2009). Exposure to input and the relative non-saliency of the *a* form have been proposed as factors that may contribute to its variable use among heritage bilinguals (Montrul & Sánchez-Walker, 2013), but no prior study has examined on-line sensitivity to the case marker during bilingual sentence processing in real time. In order to fill this gap in existing research, the present study sought to determine to what extent the variability seen in oral production and acceptability judgment data is also apparent during real time sentence comprehension and also to explore potential underlying factors via correlation analysis.

The participants for this study were 76 Spanish-English bilinguals residing in the U.S., all of whom had acquired Spanish since birth and English at an age ranging from 0 to 16. The primary experimental measure was a noncumulative, linear self-paced reading task. As illustrated in the examples on the following page, half of the stimuli contained direct objects that were animate and thus required marking with *a*, as in (1), while the other half contained direct objects that were inanimate and thus required no marking, as in (2); each of these stimulus types appeared in grammatical and ungrammatical conditions. Secondary measures included an off-line acceptability judgment, an abbreviated test of general proficiency in Spanish, and a bilingual language background questionnaire. Reading time data showed on-line sensitivity to the particle *a* only with the inanimate object stimuli, with no evidence of an on-line preference with animate direct objects at the group level. These results suggest that the results from prior studies indicating variable use of the *a* marker with animate direct objects in oral production tasks, as well as the tendency to accept unmarked direct objects when judging sentences, are paralleled by a similar trend in on-line processing behavior. In addition, correlational analysis reveal that on-line sensitivity to the case marker with animate direct objects varies according to some predictable factors such as age of onset of bilingualism and language proficiency, but that most of the variability remains unaccounted for in the analysis and thus probably represents a complex interaction of factors.

(1)   *Animate Object Stimulus (Grammatical, Ungrammatical)*
        a. Los estudiantes escuchan al maestro con seriedad.
        b. *Los estudiantes escuchan el maestro con seriedad.
(2)   *Inanimate Object Stimulus (Grammatical, Ungrammatical)*
        a. Los abuelos escuchan el noticiero por la tarde.
        b. *Los abuelos escuchan al noticiero por la tarde.

References
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