Previous findings using discrete response measures, such as production or speeded acceptability judgments, suggest that Spanish speakers are more sensitive to agreement violations than English speakers [1,2,3]. Here we show, using a speeded acceptability judgment task (SAJT) and a self-paced reading study (SPR), that there is a contrast between immediate (i.e. verb reading times) and delayed measures (e.g., SAJT, spillover RTs) of sensitivity in Spanish speakers. Spanish speakers are indeed more sensitive to agreement errors and less prone to attraction, but early measures suggest that they are initially susceptible to the same attraction mistakes as English speakers, and in cases of extreme feature overlap between pairs of pre-verbal NPs, Spanish speakers may be even less sensitive than their English counterparts.

The present studies tested the non-local agreement attraction effect previously found in English [4,6,7,8], where a plural relative clause (RC) head interferes with the detection of a subject-verb agreement anomaly inside the RC. In a SAJT (n=32 monolingual Argentinians) we found that the presence of a plural attractor as the head of the RC reliably increased the proportion of ungrammatical sentences judged as grammatical, with no attraction effect in grammatical sentences (mixed effects logistic regression, ungrammaticality×number, z=2.61, p<0.01). Since the attraction effect was smaller in magnitude than in related English studies [5], we also assessed this effect using a self-paced reading task (n=48, Latin Square; 2x2x2 manipulation of grammaticality, attractor number, and animacy; grammatical gender (mis-)match between nouns was counterbalanced across items).

The online SPR results yielded a pattern configurationally similar to English: when the RC head attractor matched the RC verb’s number there was significant reduction in the reading time disruption otherwise elicited by subject-verb number mismatch, but only in the ungrammatical conditions (grammaticality×number, F=6.22, p<0.05). However, in contrast to the English findings, this attraction effect appeared immediately at the verb region and disappeared at the following region, where equivalent slow downs were found in all ungrammatical conditions, irrespective of attractor number (main effect of grammaticality; F=136.31, p<0.001). Also, in contrast to previous English findings, there was an effect of the animacy of the attractor (F=19.64, p<0.001), such that only conditions with inanimate attractors were identical to the English attraction pattern. Post-hoc analyses of the animate attractor cases suggest that in sentences where the attractor and the true subject NP are maximally similar (both animate and with the same grammatical gender), detection of agreement violations is delayed, even in the absence of an attractor with interfering plural number.

These results suggest that although Spanish speakers display greater sensitivity to agreement than their English-speaking counterparts in delayed measures, similar mechanisms of feature matching operate in the two languages. However, differences in the availability and weight of the cues that the parser encodes and uses may allow a rapid recovery from agreement attraction effects in Spanish. Additionally, animate nouns with identical gender cues may also slow the parser, interacting with number agreement phenomena.

Materials

(1)
La nota [que la chica escribió…]
*La nota [que la chica escribieron…]  

The note that the girl wrote_{sg}  
The note that the girl wrote_{pl}  

Singular attr/Grammatical  
Singular attr/Ungrammatical
*Las notas [que la chica escribieron…]
*The notes that the girl wrote*

Plural attr/Ungrammatical

(2) El auto/hombre [que el detective siguió…]
*The car/man that the detective followed*

Singular {animate/inanimate} attr /Grammatical

Los autos/hombres [que el detective siguió…]
*The cars/men that the detective followed*

Plural {animate/inanimate} attr /Grammatical

* El auto/hombre [que el detective siguieron…]
*The car/man that the detective followed*

Singular {animate/inanimate} attr /Ungrammatical

* Los autos/hombres [que el detective siguieron…]
*The cars/men that the detective followed*

Plural {animate/inanimate} attr /Ungrammatical

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![Fig.1. Comparison between Spanish and previous English SAJT results [5].](image-url)
Fig. 2. Spanish self-paced reading results

References


