Overcoming L2 Inflectional Variability in the Verbal Domain: Moving-Window Paradigm Evidence

Whether adult second language (L2) learners can achieve a native-like representation and computation in the target language has been an extremely debated topic in the field of second language acquisition (e.g., Clahsen and Falser, 2006; Hopp, 2007). In the case of inflectional morphology, some models (e.g., McCarthy, 2008, 2012) predict that variability in L2 systems results from an underlying impoverished morphological representation. By contrast, others models predict that L2 systems are fundamentally identical to native systems, L2 variability being modulated by factors such as L1-L2 overlap, individual cognitive differences (e.g., working memory), task demands, and proficiency level (e.g., Dekydtspotter and Renaud, 2014).

This paper contributes to this debate by examining how L1 English advanced speakers of L2 Spanish parse grammatical gender and number in verb-object agreement relations, a domain that has been shown to cause protracted difficulties even at highly advanced levels of proficiency (e.g., McCarthy, 2007, 2008; Rossi et al., 2014; Tremblay, 2005). Specifically, it examines (a) the L2 online sensitivity to grammatical gender and number agreement between left-dislocated DPs and clitics in sentences with clitic-doubled left dislocations (CLLDs) like (1); and (b) the extent to which the existence of a grammatical feature (number) in the L1 of the acquirers affects this sensitivity (*contra* grammatical gender, which does not exist in English). CLLDs involve the displacement of a DP like *las máquinas* in (1) to the left periphery of the clause, and the clitic is the grammatical spell-out of an *Agree* relation involving gender, number, and Case features between the displaced DP and the verb (Lopez, 2009).

Twenty-eight English adult advanced learners of L2 Spanish, and 54 Spanish natives completed a proficiency test, a language background questionnaire, a working memory test (a letter-number sequencing test adapted from Wechsler (1997)), a clitic-cluster test (Slabakova et al., 2012), and a non-cumulative segment-by-segment self-paced reading task with a yes-no comprehension question after each of the 100 sentences. As illustrated in (2), all the sentences were displayed in a segment-by-segment fashion as in Hopp (2007, 2009) to preserve the prosodic unit that the clitic and the verb constitute. The 24 experimental sentences had 3 conditions: gender and number agreement, gender mismatch, and number mismatch between the left-dislocated DP and the clitic in the embedded clause like in (1). Stimuli were controlled for length, and appeared once in the entire experiment, which followed a Latin square design. All the displaced DPs were formed by transparent feminine plural nouns that are countable in both languages.

Four Generalized Linear Mixed Models (GLMM) were run on the residual Reading Times (RTs) converted to *T* scores of the 4 regions (one GLMM for each region: N-1, N, N+1, N+2). Results (see Figure 1 and Figure 2) revealed no statistically significant differences between conditions in the RTs of the N-1 region. In contrast, there were statistically significant differences between conditions in the N and N+1 regions, which consisted in slowdown effects associated with the mismatch conditions when compared to the agreement condition. Moreover, no differences were found between the mismatch conditions in the N and N+1 regions. However, in the N+2 region statistically significant differences were found only between the gender mismatch condition and the agreement condition, and between the mismatch conditions (gender vs. number), but not between the number mismatch condition and the agreement condition. Importantly, the same parsing pattern was found in natives and L2 speakers. Further statistical analyses on accuracy on the comprehension questions revealed no significant differences between groups, $F(1, 2622) = 0.002$, $p = .966$ (natives: $M = 86.17$ (SD: 34.53); L2 learners: $M = 87.61$ (SD: 32.96)). Taken together, these findings suggest that late L2 learners can overcome inflectional variability involving verb-object agreement relations and employ grammatical information in a native-like fashion in real-time, regardless of whether or not a grammatical feature exists in their L1. The asymmetry in the processing of gender and number mismatches in both natives and L2 speakers in the wrap-up region is discussed in terms of processing difficulties posed by grammatical gender (e.g., Domínguez et al., 1999; Hernández et al., 2007).

(1) El supervisor dice que las máquinas las/*los/*la repararon ayer por la tarde.

The supervisor says that the machines$_{FEM.PL.ACC}$ CL$_{FEM.PL.ACC}$/CL$_{MASC.PL.ACC}$/CL$_{FEM.SG.ACC}$ repaired yesterday by the afternoon.

'The supervisor says that the machines they repaired yesterday in the afternoon.'

(2) El supervisor | dice | que | las máquinas | las repararon | ayer | por la tarde.
N-1 N N+1 N+2

Figure 1

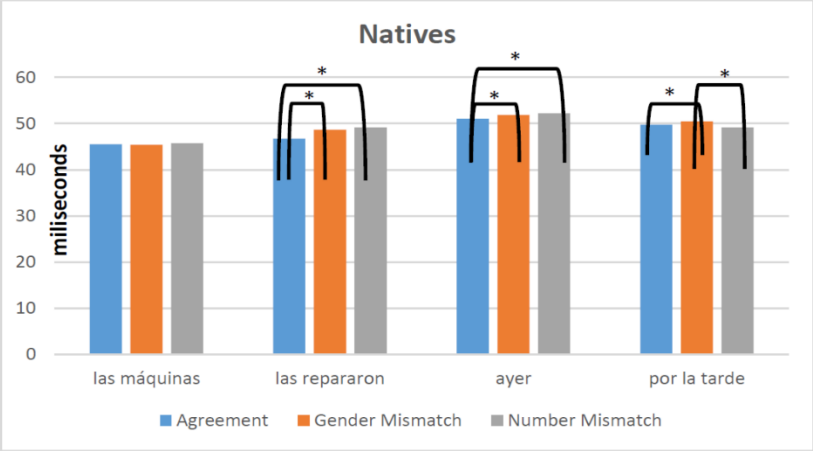
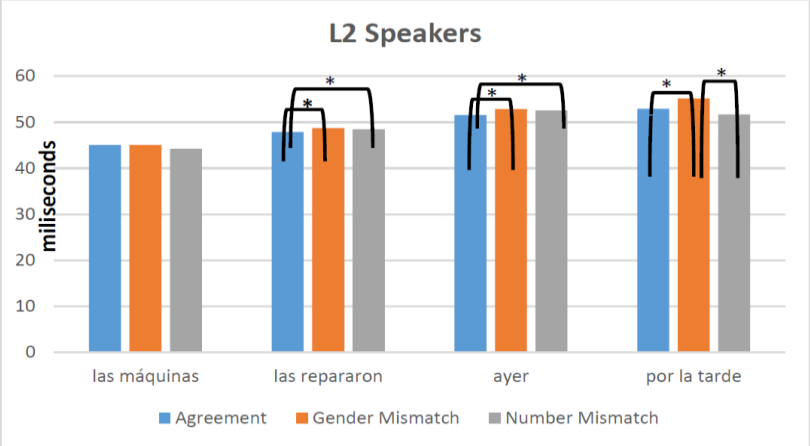


Figure 2



Selected References

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