

Gender trouble? grammatical gender similarity and intervention effects in L1 and L2 processing of European Portuguese relative clauses

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The advantage of subject relative clauses (SRC) over object relative clauses (ORC) in L1 and L2 processing is well researched [1]. Featural Relativized Minimality [2] attributes the ORC difficulty to intervention when the extracted object and the intervener share crucial morphosyntactic features, e.g. [+N], while cue-based accounts [3] attribute it to similarity-based interference of structural or semantic features. Work on child comprehension [4] suggests that gender mismatch does not facilitate relative clauses (RC) crosslinguistically. In European Portuguese (EP), [+N] intervention effects shape A'-dependency processing [5,6], whereas the role of grammatical gender, morphosyntactically encoded in nominals but not involved in movement, remains underexplored. In L2 processing, differences from L1 have been attributed to reduced structural sensitivity [7], cognitive resource limitations [8], or greater susceptibility to interference [9]. This study investigates whether gender similarity modulates EP RC processing, comparing native speakers with L1-Italian (gender-marking, postnominal RCs) and L1-Mandarin (no gender, prenominal RCs) learners.

A non-cumulative self-paced reading task followed by picture selection crossed extraction type (SRC/ORC) with gender similarity (match/mismatch), balanced for masculine and feminine configurations. 34 learners per L2 group and 37 L1-EP speakers participated. Accuracy, response times, and reading times (critical and spillover regions) of correct trials were analysed with mixed-effects models and pairwise comparisons.

Accuracy showed a main effect of extraction ($p = .022$). Planned contrasts showed an SRC advantage for native ($p = .016$) and L1-Italian speakers ($p = .005$), not for the Mandarin group ($p = .312$). Gender and extraction $\times$ gender were non-significant in accuracy and response times. Reading times showed an SRC advantage across groups ($p < .001$), significant in the critical region for EP and Italian participants (both $ps < .01$) but not in the spillover. Per-segment contrasts revealed that gender-matched ORCs were read more slowly than mismatched items at Segment 6 for natives only ($p = .026$), with no gender effect in SRCs or in learners at any segment.

Results confirm a SRC advantage in native and Italian learners. Gender overlap in ORCs produces a localized online cost for natives only [3], suggesting that grammatical gender is a weaker intervener than [+N] [2]. Italian learners showed online structural sensitivity but no gender effects, counter to [9], suggesting that L1 feature inventories (Italian) does not automatically cause interference in an L2. The absence of SRC advantage in the Mandarin

group, unexplained by proficiency or working memory, likely reflects transfer of L1 parsing preferences. These asymmetries are not straightforwardly explicable by [7], [8], or [9]. Future work with L1s with prenominal RCs and clear SRC advantage could disentangle transfer from reduced structural sensitivity.

References

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Example – experimental items

a. SRC match

Na | imagem correta, | o cavalo | que | está a ferir | o coelho | tem | os olhos | muito grandes.
in.the limage correct | the horse | that | is PREP hurt | the rabbit | has | the eyes | very big

b. SRC mismatch

Na | imagem correta, | a mula | que | está a ferir | o coelho | tem | os olhos | muito grandes.
in.the limage correct | the mule | that | is PREP hurt | the rabbit | has | the eyes | very big

c. ORC match

Na | imagem correta, | o cavalo | que | o coelho | está a ferir | tem | os olhos | muito grandes.
in.the limage correct | the horse | that | the rabbit | is PREP hurt | has | the eyes | very big

d. ORC mismatch

Na | imagem correta, | a mula | que | o coelho | está a ferir | tem | os olhos | muito grandes.
in.the limage correct | the mule | that | the rabbit | is PREP hurt | has | the eyes | very big

Figures

Figure 1: mean accuracy by condition

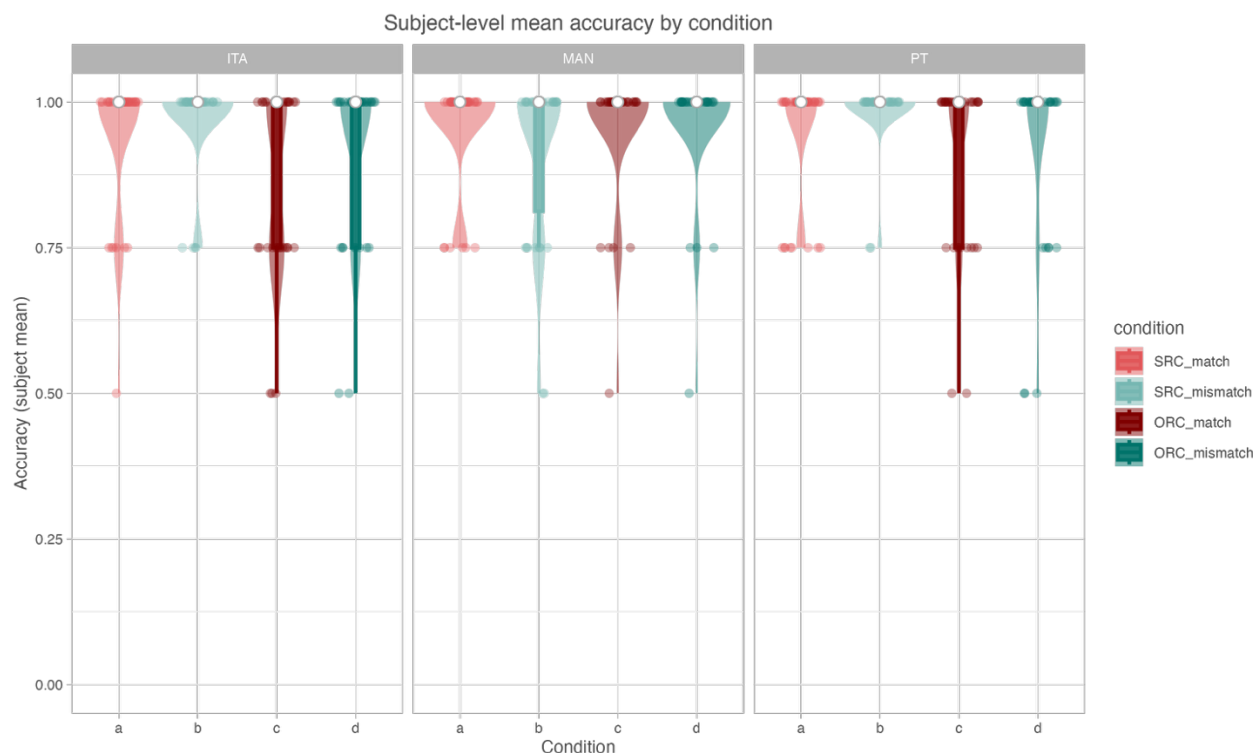


Figure 2: mean reading times per segment

