

# Generic masculine bias in European Portuguese nouns: evidence from a sentence evaluation paradigm

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In Indo-European gender-marked languages, the grammatical gender of a [+human] noun may be used to refer to the extralinguistic gender of its referent. Thus, a grammatically feminine noun phrase like *as vizinhas* ('the neighbors'-Fem – (1)) refers unequivocally to a group of women. However, this assumption does not apply to grammatically masculine nouns, since the noun phrase *os vizinhos* ('the neighbors'-Masc – (2)) may refer to a group of men (specific interpretation) or a mixed-gender group (generic interpretation). Grammatically masculine nouns are therefore inherently ambiguous, as they may have two different interpretations: specific, when referring to a group exclusively composed of men, and generic, when referring to a mixed-gender group.

The ease of accessibility of the generic interpretation of these nouns has recently been the subject of debate: studies have demonstrated that, in a wide array of languages, the preferential interpretation of grammatically masculine nouns seems to be specific, not generic (Misersky *et al.*, 2019; Gygax *et al.*, 2012; Sato *et al.*, 2016; among others; for a review: Gygax *et al.*, 2021). These findings empirically support the phenomenon that Gygax & Gabriel (2008) defined as a “generic masculine bias”: even in contexts where the generic interpretation of masculine nouns could be available, their specific interpretation is consistently selected. This processing bias of the different interpretations of grammatically masculine nouns renders their male-dominated semantic representation. The present work intends to investigate whether this is also the case for European Portuguese nouns.

In this study, 50 native European Portuguese speakers were tested using a sentence evaluation paradigm proposed by Gygax *et al.* (2008). Participants were shown sequences of two sentences like those in (3), where they had to judge whether the second sentence (Sentence B) was a plausible continuation of the first (Sentence A). The subjects of sentences A were 24 grammatically masculine role nouns, 8 of which stereotypically masculine (e.g., *canalizadores*, 'plumbers'-Masc), 8 feminine (e.g., *costureiros*, 'dressmakers'-Masc) and 8 neutral (*vizinhos*, 'neighbors'-Masc). Every role noun and its corresponding gender stereotype were previously assessed by a norming study about gender stereotypes in European Portuguese nouns (Matos *et al.*, 2020). The subjects of sentences B explicitly referred to *mulheres* ('women'), or *homens* ('men'), as shown in (3.i) and (3.ii), respectively. Data analysis consisted of a generalized linear mixed model factoring the gender stereotype of the subject of sentences A (3 levels: masculine, feminine, and neutral) and the gender of the subject of sentences B (2 levels: men vs. women) as independent variables in a 3x2 within-subjects design. The proportion of positive vs. negative judgments and the reaction times of positive judgments were the two dependent variables, measuring the difficulty of mapping the subject of sentence B onto the subject of sentence A.

The analysis of the proportions of types of judgments showed a main effect of type of continuation (SE=0.221,  $z=-4.496$ ,  $p<0.001$ ), indicating that participants judged sentences B to be a plausible continuation for sentences A more often when the second sentences mentioned men (Fig. 1). The analysis of reaction times corroborated this finding, showing a main effect (SE=0.014,  $t=5.883$ ,  $p<0.001$ ) of the type of continuation in this condition (Fig. 2). No effects of stereotype were found in this study. Overall, our results are in line with the findings of other studies showing that, in Indo-European grammatical gender languages, the preferential interpretation of grammatically masculine nouns is their specific interpretation, thus rendering it more difficult (although not impossible, as evidenced by the very high acceptability rates of sentences B mentioning women) to include women in the semantic representations of these nouns.

# References, Examples & Figures

(1) *As vizinhas atravessaram a praça.*

**The-Fem neighbors-Fem** crossed the plaza.

(2) *Os vizinhos atravessaram a praça.*

**The-Masc neighbors-Masc** crossed the plaza.

(3) Sentence A:

*Os vizinhos estavam à porta do prédio.*

**The-Masc neighbors-Masc** were in front of the building.

Sentence B:

i. *Era evidente que duas das mulheres estavam bastante animadas.*

It was evident that **two-Fem of the-Fem women** were very happy-Fem.

ii. *Era evidente que dois dos homens estavam bastante animados.*

It was evident that **two-Masc of the-Masc men** were very happy-Masc.

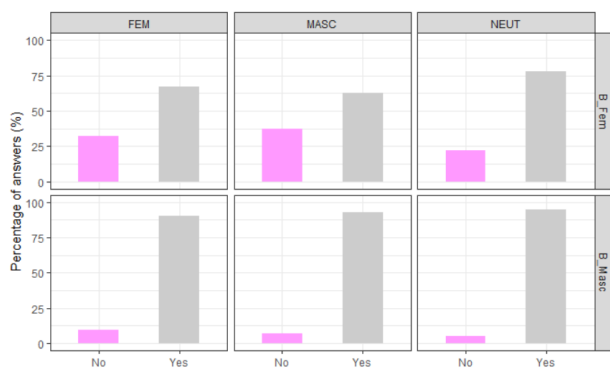


Figure 1 - Proportions of positive/negative judgments

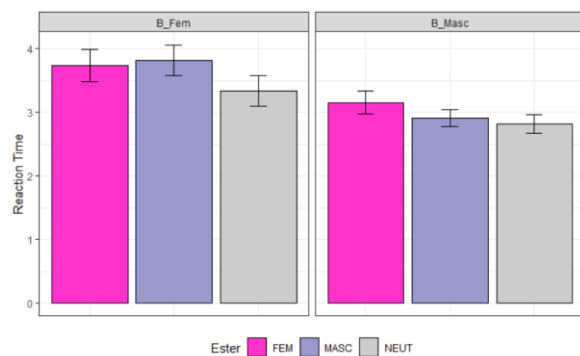


Figure 2 - Reaction times ("yes" answers)

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