The impact of gender agreement on gender inferences: evidence from French epicene nouns

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A growing body of research suggests that grammatical gender is not semantically inert, but contributes gender inferences (e.g., Gygax et al., 2008). For instance, Storme & Delaloye Saillen (2024) showed that masculine epicene nouns in French (e.g. *un individu* 'an individual') are more likely to be interpreted as referring to a man than feminine epicene nouns (e.g. *une personne* 'a person'). This study investigates whether this effect is accentuated by gender agreement. For instance, is the difference between gender inferences triggered by *un individu* and *une personne* increased in the presence of additional gender agreement markers in the sentence (on adjectives or verbs)?

To test this, we constructed 18 sextuplets of sentences referring to a person. In each sextuplet, half contained a masculine epicene noun, the other half a semantically similar feminine one (e.g., *personne/individu*). The sentences further differed in whether they only included a gender marker on the determiner preceding the epicene noun (**baseline**), an additional marker that is purely orthographic (**ortho**; e.g., *souvenue/souvenu* 'remembered'), or an additional marker that is also pronounced (**ortho-phono**; e.g., *remise* [miz] / *remis* [mi] 'recovered'). See Table 1 for a sample set.

In a preregistered on-line experiment, 108 French native speakers were asked to read sentences and guess the gender of the referent (male, female), using a 7-point Likert scale (1=male, 7=female, 4=uncertainty). Each subject saw one noun for each sextuplet and an equal number of sentences in each of the six conditions. We expected an effect of gender agreement on gender inferences, and possibly a greater effect for gender markers available in both modalities (ortho-phono), given that the written form can activate the phonological form, for instance if the participant produces inner speech.

Figure 1 shows the gender inferences as a function of the grammatical gender of the noun and the type of gender agreement. We fit a Bayesian hierarchical ordinal regression to the Likert-scale data, using the brms package in R (Bürkner, 2017), with grammatical gender, gender agreement and their interaction as fixed effects and by-subject and by-item random intercepts. The results support the hypothesis that gender agreement affects gender inferences, as the difference between feminine and masculine nouns was found to be increased in the presence of additional gender agreement markers in the sentence (baseline vs ortho, ortho-phono). However we did not find a robust difference between the agreement markers available in one vs two modalities (ortho vs ortho-phono).

These results have implications for gender-fair language as they suggest that gender inferences are not only sensitive to grammatical gender (e.g., masculine vs feminine epicene nouns) but also more broadly to patterns of gender agreement in the sentence. Concretely, using gender-fair language should be even more efficient at reducing the male bias of masculine forms in the presence of agreement targets in the sentence.

In order to further examine the effect of agreement present in the phonology, we are currently preparing an experiment in which the sentences are presented auditorily. The results will be available at the time of the conference.

	Grammatical gender	
Gender agreement	masculine	feminine
baseline	Cet **individu** ne se souvient plus de son nom.	Cette **personne** ne se souvient plus de son nom.
ortho	Cet **individu** ne s'est pas souvenu de son nom.	Cette **personne** ne s'est pas souvenue de son nom.
ortho-phono	Cet **individu** ne s'est pas remis [ʁəmi] de son amnésie.	Cette **personne** ne s'est pas remise [ʁəmiz] de son amnésie.

Table 1: An example of sextuplet. Epicene nouns are bolded, agreement markers are underlined.

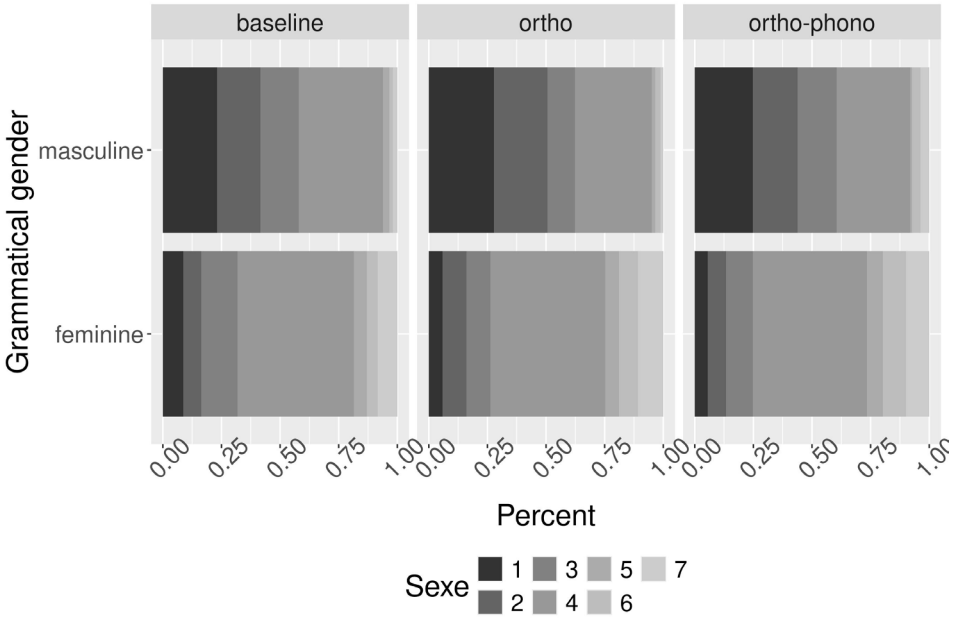

Figure 1:
Gender inferences (1=male, 7=female, 4=uncertainty) as a function of grammatical gender and type of gender agreement

References

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