Is Gender Inclusive Language inclusive? Evidence from Italian sentence processing.

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In richly inflected languages like Italian, nouns and other sentential elements may carry morphosyntactic information about the referent's gender through the final vowel (*il maestro* = male teacher; *la maestra* = female teacher; *il/la docente* = male/female teacher). To make language more inclusive and overcome the binary system, a recent proposal (Gheno, 2021) involves the adoption of the *schwa (ə)* as a gender-neutral morpheme (*lə maestrə, lə docente*). To date, no experimental study tested the efficacy of this inclusive/neutral form in reducing gender bias perception, i.e, the activation of gender stereotypes automatically integrated during processing (Ellemers, 2018). We aim to fill this gap by presenting 3 experimental studies with different groups of Italian participants: an Acceptability judgment task in which participants rated sentences' naturalness on a 7-point Likert scale (**Exp. 1**, N=44); a Forced-choice task (Staub, 2008) in which participants selected the most appropriate verb form to continue the sentence (**Exp. 2**, N=60); an Eye-tracking study in which eye-movements were monitored during reading (**Exp. 3**, N=48). **Materials** for Exp. 1 and 3 consisted of 108 sentences like (1) in which a role noun in the gender-neutral form was followed by a past participle in the feminine, masculine, or *schwa* (ə) form (in a Latin-square design); the same sentences were tested in Exp. 2, in which a selection had to be made at the verb between the schwa and the feminine or masculine form. Gender stereotypes associated with the 108 role nouns were measured in a previous norming study (N=117). **Results.** Ratings in **Exp. 1** (analyzed by means of *clmm* with sliding contrast coding) showed increased acceptability depending on the verb, ranging from the lowest (masculine, z=8.4, p<.001) to the highest (ə, z=13.1, p<.001), with the feminine form lying in-between (Fig. 1).The interaction between verb gender and stereotype showed an opposite trend between ə and masculine (z=2.6, p<.001) and a similar influence of stereotypes for ə and feminine (z=0.8, p=.42): the more a role noun is stereotypically feminine, the more the sentences with verbs ending with the feminine or ə morphemes were accepted. In **Exp. 2**, although participants selected ə most of the time, they were slower to select ə when the competitor was feminine rather than masculine (t= -2.4, p=.015), indicating greater interference of the feminine form in the lexical choice. To analyze reading times (**Exp. 3**), we adopted two contrast schemas (Table 1). Total reading times on the verb showed that feminine was significantly faster than ə (t=-2.05, p=.04) and slightly faster than masculine (t=1.7, p=.07). The interaction between stereotype and verb gender across reading measures showed opposite trends for verbs in the masculine and feminine forms in go past (t=2.07, p=.04), total RTs (t=2.4, p=.02) and regressions (t=1.9, p=.05) (Fig. 2). Also, a significant difference in total RTs emerged between ə and masculine (t=2.2, p=.03), while the difference between ə and feminine was only marginally significant (t=-1.9, p=.06), indicating a similar influence of the female stereotype. **Conclusion.** Although the ə symbol is well accepted in explicit tasks, its efficacy in neutralizing the gender bias associated to role nouns remains sub-optimal: despite the gender-neutral form of the noun, feminine forms are more accepted (Exp. 1) and interfere more in the selection (Exp. 2) compared to masculine verb forms. Also, the reading measures on the neutral verb (Exp. 3) show an influence of gender stereotypes, which in some cases does not differ

from the feminine verb form, suggesting a tendency towards a female bias when the gender inclusive form ə is adopted. We discuss these findings in the current debate about linguistic inclusivity.

(1)   Ieri *lə maestrə/ lə docente* è arrivato[+M]/arrivata[+F]/arrivatə tardi alla riunione.
         Yesterday, the teacher/the instructor arrived late to the meeting.

Table 1. The two contrast coding schemas on the verb condition included in all the analyses for Exp. 3.

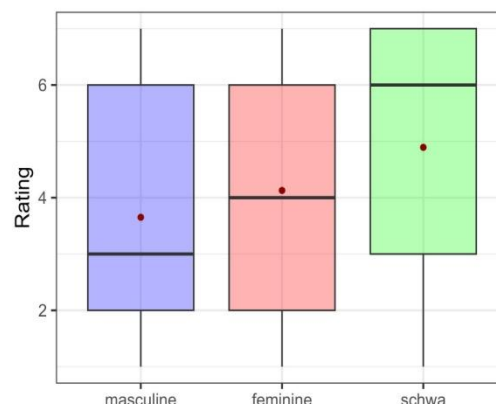|	1st matrix		2nd matrix	
Feminine	1/3	-1/2	1/2	0
Masculine	1/3	1/2	0	1/2
Neutral (ə)	-2/3	0	-1/2	-1/2

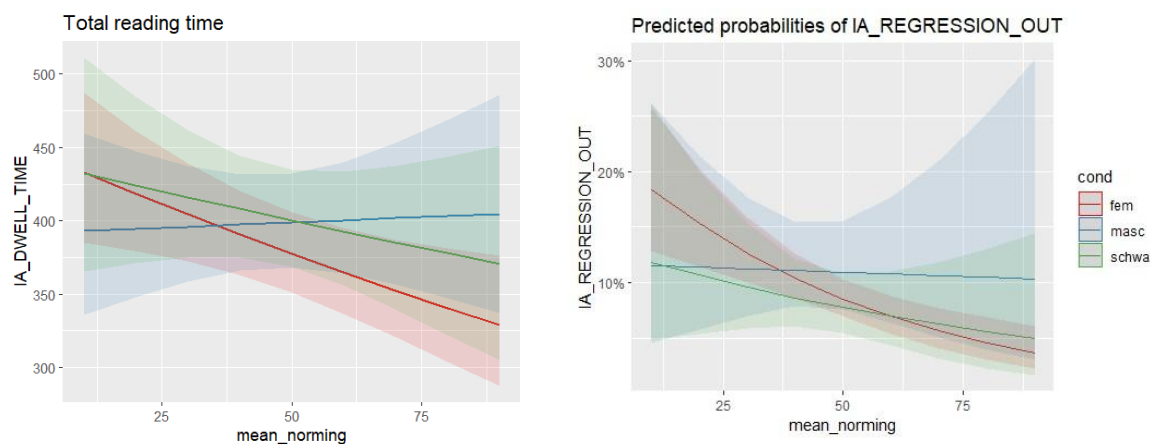**Figure 1.** Mean ratings depending on verb's gender (Exp. 1).

Figure 2. Exp 3: Interaction plot of verb.gender (feminine, masculine, schwa) and gender stereotype associated to the role nouns in the norming study (1=totally masculine to 100=totally feminine).

References

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