

Gender agreement in Italian heritage speakers: effects of markedness and proficiency

Grammatical gender is acquired early in first language acquisition but it is notoriously difficult for second language (L2) learners (e.g., Blom, Polišenská, & Unsworth, 2008). Studies on Heritage Speakers (HSs) have shown controversial results with some reporting higher error rates for HSs compared to monolinguals (e.g., Polinsky, 2008), while others finding native-like acquisition (e.g., Kupisch, Akpınar, & Stöhr, 2013). This is not surprising given the large within-group variability in HSs and the variability along the lifespan of each individual that reflects different developmental paths due to their language history, proficiency, and language use (Benmamoun, Montrul, Polinsky, 2013). Yet, it is unclear which factors contribute most to the vulnerability of gender agreement in HSs.

Current morphological theory assumes that feature values, e.g., masculine and feminine or singular and plural, are asymmetrically represented, i.e. one member of the opposition (e.g. feminine for gender, plural for number) is assumed to be marked, and the other one, unmarked. Native speakers as well as L2 learners have been argued to use only the unmarked feature in agreeing elements during online processing of agreement (Wagers, et al., 2009; McCarthy, 2008), suggesting that grammatical representation happens earlier in unmarked forms (masculine and singular).

Studies with native speakers and L2 have shown effects of markedness on gender agreement in both groups. Grammatical violations realized on feminine (marked) adjectives showed larger P600 effects than on masculine (unmarked) adjectives, indicating that the parser can more easily detect agreement errors when the mismatching feature is marked rather than unmarked (Alemán Bañón, Miller, & Rothman, 2017). However, to date markedness in gender agreement has not been studied in HSs.

The present study fills this gap by investigating gender agreement in HSs of Italian growing up with German as the majority language. 54 adult HSs ($M\ age = 28.15$; $SD = 6.20$; $range = 18-41$) who acquired Italian from birth and German between 0–6 years and 40 native speakers of Italian ($M\ age = 25.65$; $SD = 3.99$; $range = 18-39$) living in Italy completed: 1) the DIALANG placement test (Alderson, 2005) measuring proficiency for Italian; 2) a language history questionnaire based on Lloyd-Smith, Einfeldt, & Kupisch (2019) measuring factors that have been shown to affect language development in HSs, as well as self-rated proficiency in Italian; 3) a Grammatical Judgement Task (GJT) for Italian with grammatical and ungrammatical noun-adjective gender agreement sequences addressing markedness and transfer effects; 4) a Gender Assignment (GA) task with the nouns used in the GJT measuring their knowledge of lexical gender in order to be able to exclude from the GJT nouns whose gender was known to individual HSs. Markedness was manipulated, such that half of the critical noun-adjective sequences were feminine (marked) and the other half masculine (unmarked). Transfer was manipulated, such that half of the nouns had the same gender in Italian and German and the other half different gender. All nouns ended in -e or in a consonant to avoid gender cues through the noun endings. Table 1 includes a list of the experimental conditions related to markedness.

Overall accuracy on the GA task was high (over 85% in all conditions) and there were no effects of markedness or transfer. Nouns whose lexical gender was not known to individual HSs were not included in the analyses of the GJT. Figure 1 shows the results of the GJT. An interaction between Gender*Number*Grammaticality ($F(1,00)=26.57, p<0.001, \eta^2=.338$) was caused by the ungrammatical feminine plural (feminine marked noun+masculine unmarked adjective) showing lower accuracy ($M=30.82\%; SD=31.19$) compared to the ungrammatical masculine plural condition (masculine unmarked noun+feminine marked adjective)

($M=64.07\%$; $SD=36.32$), demonstrating a markedness effect in the plural. There was no difference between gender agreement of nouns that have the same vs. different gender in Italian and German, indicating no transfer effect. There was a significant correlation between the results of the GJT and proficiency ($r(54)=.464, p<.001$), but no correlations with language exposure/use.

These findings reveal that markedness affects gender agreement only in the plural and stress the importance of proficiency in heritage language acquisition.

References

- Alderson, J. C. (2005). *Diagnosing foreign language proficiency: The interface between learning and assessment*. London: Continuum.
- Alemán Bañón, J., Miller, D., & Rothman, J. (2017). Morphological variability in second language learners: An examination of electrophysiological and production data. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 43, 1509-1536.
- Blom, E., Polišenská, D., & Unsworth, S. (2008). The acquisition of grammatical gender in Dutch. *Second Language Research*, 24(3), 423-430.
- Lloyd-Smith, A., Einfeldt, M., & Kupisch, T. (2019). Italian-German bilinguals: The effects of heritage language use on accent in early-acquired languages. *International Journal of Bilingualism* 24(2), 289-304.
- Kupisch, T., Akpınar, D., & Stöhr, A. (2013). Gender assignment and gender agreement in adult bilinguals and second language learners of French. *Linguistic Approaches to Bilingualism*, 3(2), 150-179.
- McCarthy, C. (2008). Morphological variability in the comprehension of agreement: An argument for representation over computation. *Second Language Research*, 24, 459-486.
- Polinsky, M. (2008). Gender under incomplete acquisition: Heritage speakers' knowledge of noun categorization.
- Wagers, M., Lau, E., Stroud, C., McElree, B., & Phillips, C. (2009). Encoding syntactic predictions: evidence from the dynamics of agreement. In *CUNY Sentence Processing Conference* (Vol.22).

Table 1. Markedness conditions for the GJT

FEMININE-SINGULAR

Grammatical/Ungrammatical

Daniele ha fotografato una torre antica/*antico ad Amsterdam.

...torre.FEM-SG-marked antica.FEM-SG-marked/*antico.MASC-SG-unmarked

Daniele photographed an old tower in Amsterdam.

FEMININE-PLURAL

Grammatical/Ungrammatical

Daniele ha fotografato delle torri antiche/*antichi ad Amsterdam.

...torri.FEM-PL-marked antiche.FEM-PL-marked/*antichi.MASC-PL-unmarked

...some old towers in Amsterdam.

MASCULINE-SINGULAR

Grammatical/Ungrammatical

Alessandro ha comprato un pesce rosso/*rossa alla fiera.

...pesce.MASC-SG-unmarked ROSSO.MASC-SG-unmarked/*ROSSA.FEM-SG-marked

Alessandro bought a red fish at the fair.

MASCULINE-PLURAL

Grammatical/Ungrammatical

Alessandro ha comprato dei pesci rossi/*rosse alla fiera.

...pesci.MASC-PL-unmarked ROSSI.MASC-PL-unmarked/*ROSSE.FEM-PL-marked

...some red fish at the fair.

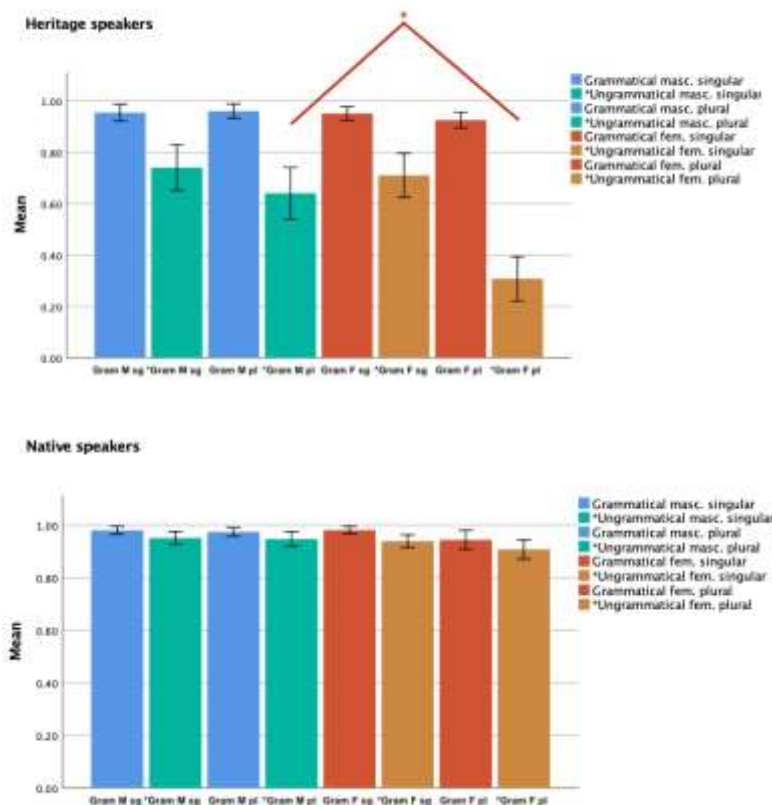


Figure 1. Mean accuracy for GJT