

## Number agreement in heritage Chinese in Europe

**Background** Previous studies show that agreement is among the most vulnerable domains in heritage grammar. Heritage speakers (HS) diverge from the baseline in both production and comprehension and they appear to be losing sensitivity to specific agreement features (Benmamoun et al., 2013; Scontras et al., 2018; Polinsky & Scontras, 2019). This study sets out to explore contact-induced change on plural agreement in heritage Chinese in the Netherlands, France and Italy. Contrary to expectation, our research finds that heritage Chinese speakers may increase their sensitivity to agreement and its production instead, as a result of transfer from the dominant language.

**Plural agreement in Chinese** Despite being a low morphology language in general, Mandarin Chinese does exhibit plural agreement, morphologically expressed by *men*, in left-dislocation structures with resumptive pronouns (RPs), as exemplified in (1). In particular, plural agreement between the resumptive pronoun and the antecedent is obligatory when the antecedent is animate, as in (1a) while it is optional when the antecedent is inanimate, as in (1b).

- (1) a. [Zhe-xie xuesheng]<sub>j</sub>, \*ta<sub>j</sub>/**ta-men**<sub>j</sub> gang fangxue.  
these-PL student 3SG/3SG-PL just finish.school  
'As for these students, they just finished school.'
- b. [Zhe-xie xiaoxi]<sub>j</sub>, wo juede **ta**<sub>j</sub>/**ta-men**<sub>j</sub> bu shi hen kekao.  
this-CL.PL news, 1SG think it/it-PL NEG be very reliable  
'These pieces of news, I think it/they is/are not very reliable.'

Notice that singular may function as a default or unspecified feature. Witness the fact that agreement mismatches may occur when the antecedent is plural or uncountable, in which case the RP can be either plural or singular, as illustrated in (2).

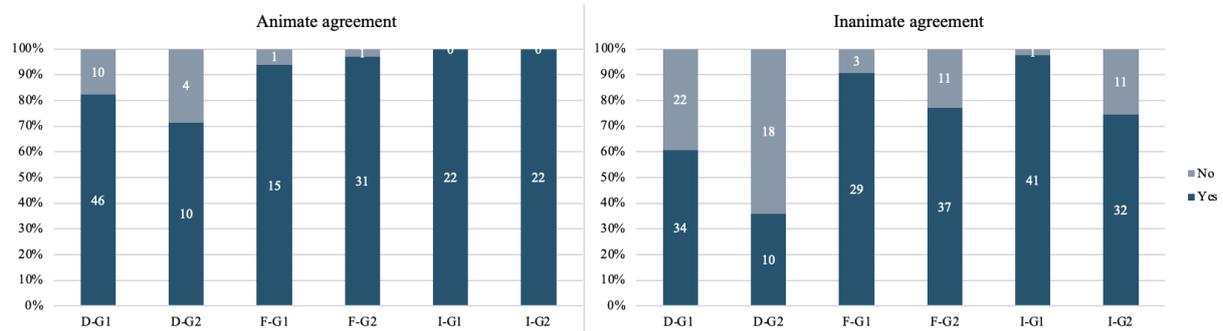
- (2) [Zhe-ge xiaoxi]<sub>j</sub>, wo juede **ta**<sub>j</sub>/**ta-men**<sub>j</sub> bu shi hen kekao.  
this-CL.SG news, 1SG think it/it-PL NEG be very reliable  
'This piece of news, I think it is not very reliable.'

**Plural agreement in IT, FR, NL** Plural agreement is pervasive in French and Italian, regardless of animacy. Dutch expresses plural agreement morphologically to a lower extent, mostly lacking dedicated inflectional morphology on the verb and using the same form as the infinitive. For instance, plural resumption makes use of an unmarked *die*, as shown in (3a), adapted from (Broekhuis & Corver, 2019). As illustrated in (3b), *die* can also resume singular antecedent.

- (3) a. Els als Marie, die hebben gedanst.  
Els and Marie they have danced  
'Both Els and Marie have danced.' (modified from Broekhuis and Corver, 2019, p. 33)
- b. Deze jongen, die studeert erg hard.  
this boy, that study very hard  
'(As for) this boy, he studies very hard.'

**Data and results** Following the idea in (D'Alessandro et al., 2025), A pairwise comparison between three language dyads: Mandarin-Dutch (MD), Mandarin-French (MF) and Mandarin-Italian (MI) was carried out targeting feature-level (micro)contact-induced change in number agreement on RPs. n=15 first-generation (G1, age: 34-64) and n=20 second-generation (G2, age: 15-20) MD speakers; n=8 G1 (age: 29-61) and n=26 G2 (age: 14-25) MF heritage speakers; and n=11 G1 (age:23-59) and n=15 G2 (age: 18-33) MI speakers were recruited. Data were collected through an on-site interview in two parts. After a language background survey, the participants completed a two-alternative forced-choice task on agreement. The results are shown below for animate and inanimate agreement respectively, with numbers representing collected items for each group, G1 being the baseline and G2 the HL.

**Finding I: Agreement can be stable in heritage grammar** The data indicates that plural agreement remains stable among heritage Chinese speakers, as no generational differences were observed across all three heritage groups when compared to their respective baselines regarding the animate condition (Fisher’s Exact Test: D-G1 (82.14%) and D-G2 (71.43%),  $p > .05$ ; F-G1 (93.75%) and F-G2 (96.88%),  $p > .05$ ; I-G1 (100%) and I-G2 (100%). This finding aligns with the general descriptive pattern observed in homeland speakers, where plural agreement is obligatory when the antecedent is animate. Sagarra and Herschensohn (2011) found that intermediate Anglophone learners of L2 Spanish were sensitive to noun animacy and the processing of animate nouns is cognitively more demanding than that of inanimate nouns. Likewise, one plausible explanation is that animacy driven agreement might be more stable in heritage grammar. Since animate nouns often carry natural gender and more semantic features, their agreement mechanisms might be less prone to erosion in contact scenarios compared to inanimate noun agreement, which is less semantically loaded and cognitively demanding.



**Finding II: Transfer in agreement** Assuming that transfer is purely grammar-based (though potentially influenced by extra-linguistic factors), if significant differences emerge between the language dyads and the development of the number system is not uniform, this would indicate that no fundamental cognitive factor (3rd Factor) is at play. If such a factor were involved, the change would be expected to proceed uniformly across all three dyads. The data on inanimate agreement reveal that heritage Dutch speakers exhibit a significantly lower preference for agreement (35.7%) compared to heritage French (77.1%,  $p < .001$ ) and Italian speakers (74.4%,  $p < .001$ ), **indicating that 3Fs are unlikely to be at work**. Importantly, this reduced preference for plural agreement among heritage Dutch speakers is already evident in the baseline group: D-G1 speakers show a lower agreement rate (60.7%) relative to F-G1 (90.6%,  $p < .001$ ) and I-G1 (97.6%,  $p < .001$ ). The data illustrates that transfer is at work rather than a general cognitive bias related to number marking. Additionally, lower-animacy entities in Chinese are less likely to be referred to with pronouns (cf. Liu, 2023). In contrast, number agreement in French and Italian is obligatory regardless of animacy. This difference suggests that contact between Mandarin and French or Italian may reinforce heritage speakers’ preference for agreement in the first generation and the singular is no longer an unspecified feature. Conversely, Dutch exhibits less morphological marking for plural agreement, often lacking specific inflectional forms, as previously mentioned. Consequently, the MD group exhibits reduced plural agreement marking. The distinct behaviors observed among the three baseline groups indicate that transfer effects may already be present, with agreement resolution arising early on in HL development. For G2 heritage speakers, cross-linguistic transfer might also play a role, or they may simply follow the patterns established in their baseline varieties. The current findings align with previous research identifying agreement as a vulnerable domain in HLLs when optionality is involved but challenge the claim that heritage speakers fail on agreement resolution (Polinsky, 2018).