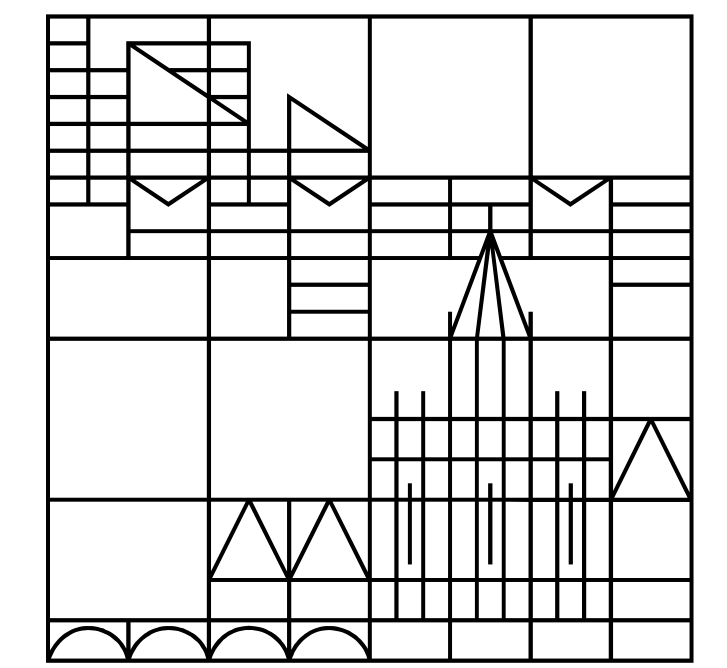


Processing of gender agreement in Italian heritage speakers

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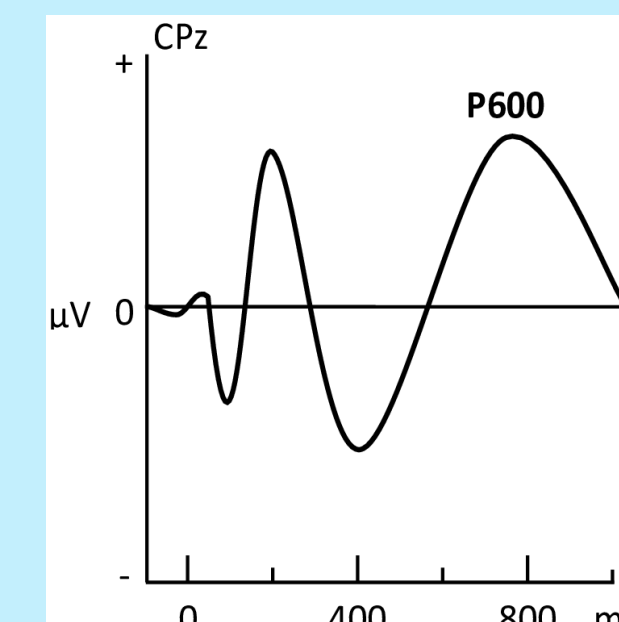
I. BACKGROUND

- L1 acquisition research shows that inflectional morphology is acquired around age 3-4 in monolingual children (e.g., Italian, German, English).
- L2 acquisition research suggests knowledge of gender agreement is a difficult structure to master for adult L2 learners (Montrul, 2004).
- Regarding heritage speakers (HSs) findings are mixed. Some studies reported differences between HSs and native speakers, claiming signs of attrition or incomplete acquisition in the HSs output (e.g., Polinsky, 2008). Others found no difference between the two groups who showed native-like acquisition of agreement (i.e., Kupisch, Akpınar, & Stöhr, 2013).
- Together, these findings suggest that inflectional morphology is affected by variability in HSs.

Our study will be the first to investigate gender agreement in HSs using both offline behavioural and online EEG methods.

II. RESEARCH QUESTIONS

- Do Italian HSs differ from monolingual controls in their behavioral and ERP responses to gender agreement violations?



Amplitude and/or distributional differences:
(1) negativity
(2) frontal positivity
(3) P600

- Do differences between the groups relate to a specific task modality? (i.e., comprehension vs. production).
- Are differences in gender processing modulated by extra-linguistic factors? (e.g., amount/quality of exposure to L1 relative to L2, formal vs. non-formal education, age of onset, transfer from 2L1 German).

III. METHODOLOGY

EXPERIMENTS:

- # 1: Italian HSs living in Germany
- # 2: monolingual Italians

MANIPULATIONS:

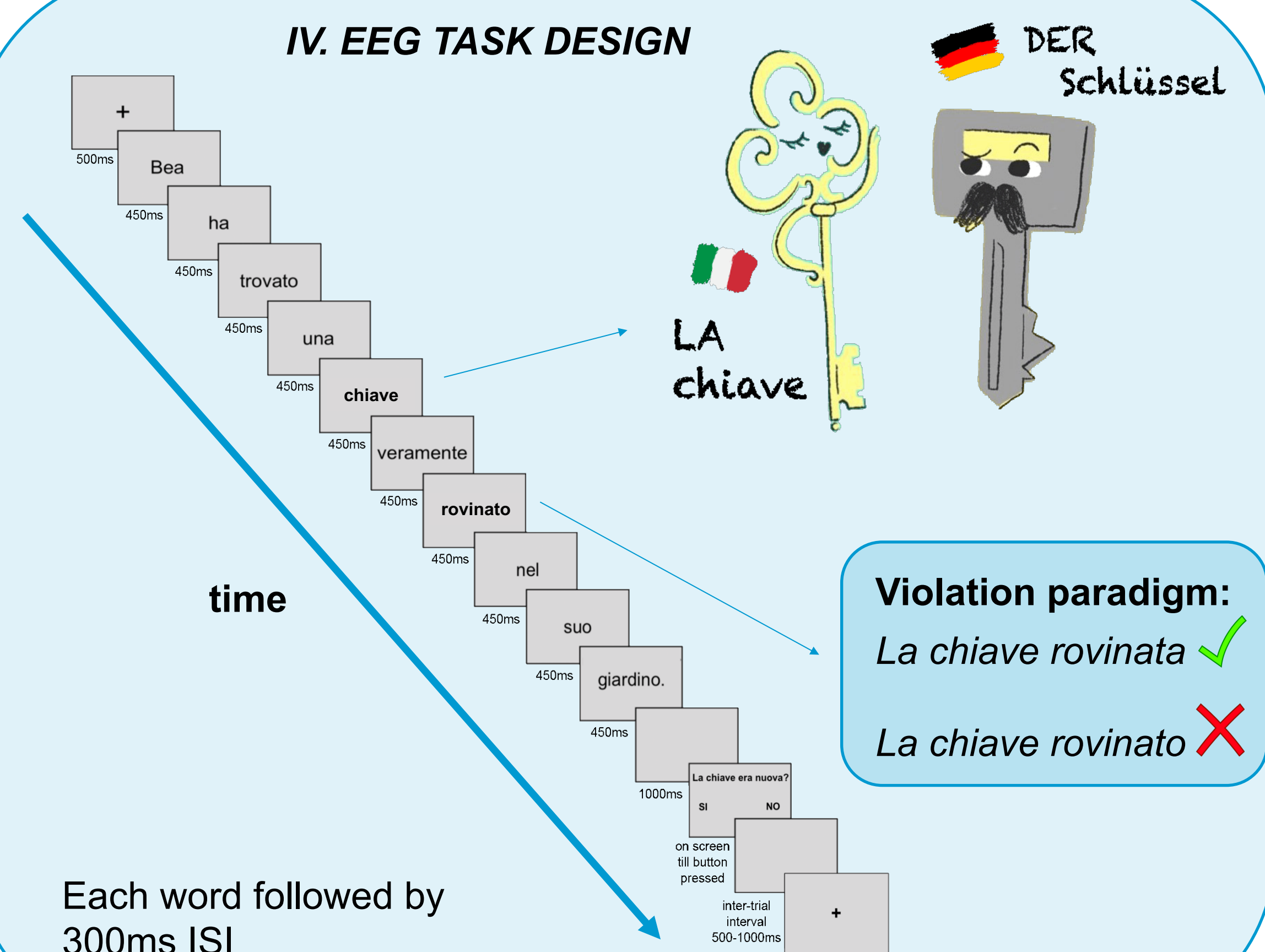
- Grammatical gender
- Gender congruency IT vs. DE
- Effect of markedness

STIMULI:

- 8 experimental conditions
- 10 items x condition (80 sentences) x 2
- 80 grammatical fillers with 1st vs. 3rd person violation
- All critical nouns with endings in vowel -e

	Test	Description
Session #1	Language Proficiency test DIALANG	to attest general language abilities in Italian and German.
	Language and social background questionnaire (interview)	to address individual differences and extra-linguistic factors.
	EEG (64 channels) Comprehension task	sentence reading task presented word-by-word with comprehension questions.
Separated by minimum 3 days and maximum of 2 weeks		
	EEG (64 channels) Comprehension task	sentence reading task presented word-by-word with comprehension questions.
Session #2	Working Memory task	N-Back task: sequential letter memory task.
	Gender Assignment task	to measure participants' knowledge of lexical gender. List of critical nouns and assignment of <i>il</i> [the_MASC] vs. <i>la</i> [the_FEM].
	Gender Agreement Production task	to measure the participants' ability to accord noun and adjective.
	Grammaticality Judgment task	to assess accuracy in the detection of the ungrammaticalities.

IV. EEG TASK DESIGN



Each word followed by 300ms ISI

V. EXPECTATIONS

- Previous offline behavioural findings are controversial, some found longer reaction times for HSs compared to monolinguals. Other studies reported instead native-like behaviour. So our results could go both ways.
- EEG studies on bilinguals showed that high level of proficiency and exposure to a language result in native-like ERP signatures. If this is the case for our participants, then we expect a robust P600 in both groups (Alemán Bañón, Miller, & Rothman, 2017; Caffarra, Siyanova-Chanturia, Pesciarelli, Vespignani, & Cacciari, 2015).
- Regarding the effect of task modality, we know that HSs usually learn their L1 at home while they are often schooled in the majority language (Rothman, 2009). This means that HSs often lack metalinguistic skills, which could be reflected in better performance in the comprehension tasks rather than in the production ones.
- From the questionnaire, we expect to identify and quantify those extra-linguistic factors that are most predictive of divergence in HS population.

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