

When person meets number: An ERP study on feature processing

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Introduction

Verb agreement has received significant attention both in linguistics [1] [2] and in psycholinguistics [3]: **(1)** Results show that agreement violations usually elicit a late parietal positivity (P600), sometimes preceded by negative components (LAN or N400). **(2)** But linguistic analysis claims that verb agreement is composed of distinct phi-features, such as person and number; **(3)** there is scarce experimental evidence that phi-features like person and number are processed distinctly [4] [5]. The aim of this study is to explore agreement feature-processing in detail; in order to do that we investigated processing of agreement features in Basque, both in subject and in object agreement configurations.

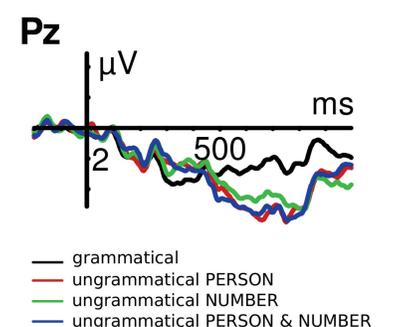
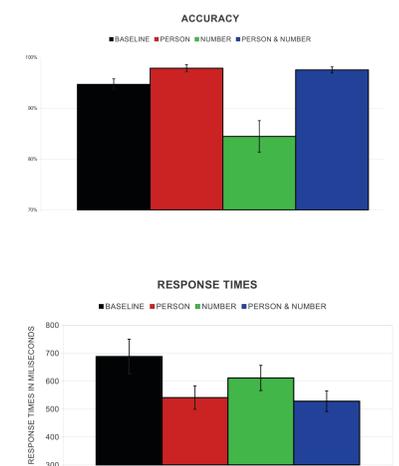
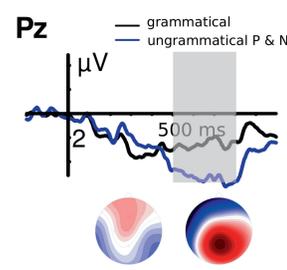
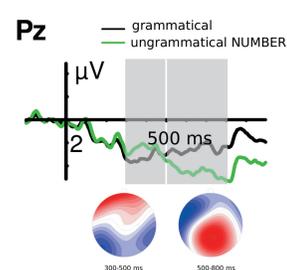
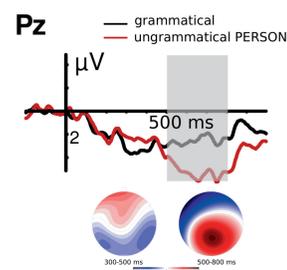
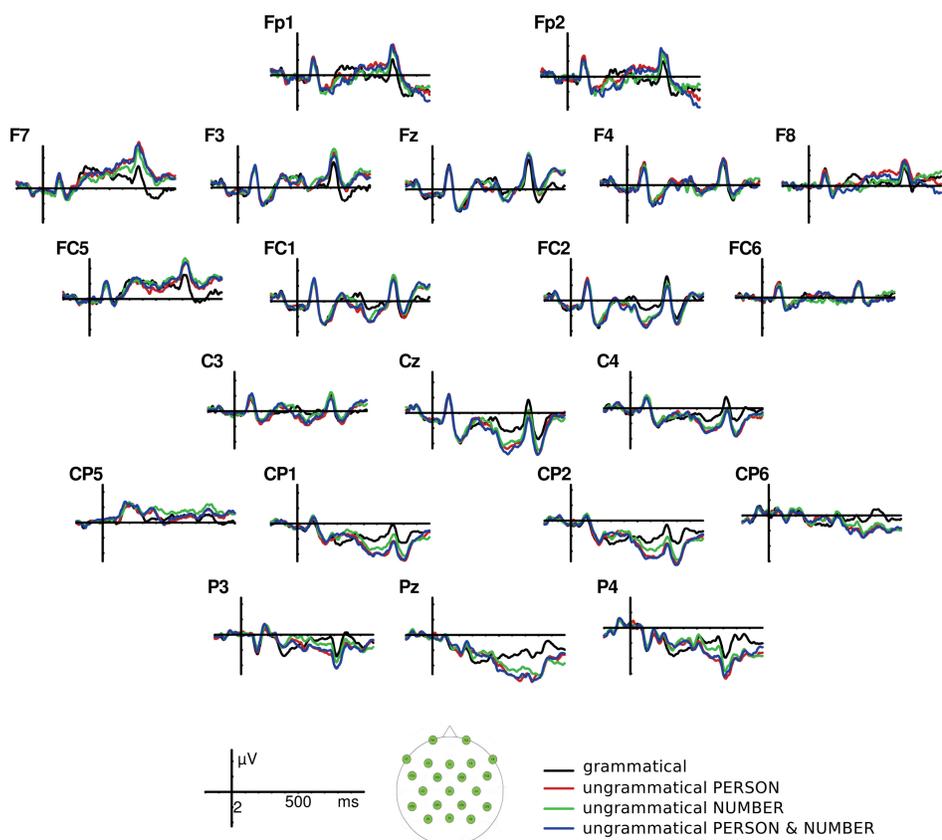
Materials and procedure

SUBJECT-VERB AGREEMENT

BASELINE	1. Zuk mutila bakarrik utzi duzu kalean. you-S boy-O alone left have-2SG in-the-street <i>'You left the boy alone in the street'</i>
PERSON	2. Zuk mutila bakarrik utzi dut kalean. you-S boy-O alone left have-1SG in-the-street
NUMBER	3. Zuk mutila bakarrik utzi duzue kalean. you-S boy-O alone left have-2PL in-the-street
PERSON & NUMBER	4. Zuk mutila bakarrik utzi dugu kalean. you-S boy-O alone left have-1PL in-the-street

- 22 native speakers of Basque
- word-by-word display for 350 ms (ISI = 250 ms).
- grammaticality judgment task
- 400 sentences randomly distributed over 4 blocks

Results



Discussion & Conclusions

- Participants faster when detecting the ungrammaticality of violations involving person than the control sentences
- More errors judging the ungrammaticality of number violations than violations involving person
- Violations involving the person feature (with or without number) elicited larger P600 than violations that did not (number violations).

In sum:

- **Phi-features** such as person and number are processed **distinctly** during morphological computation. Person is more salient than number (as [4])
- Different repair processes occur on the encounter of different feature violations

References

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