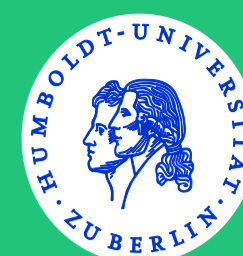


# Planned ERP-study: Gender interference effects of German (L1) in English (L2) sentence processing

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**Introduction:** A long-standing question in bilingualism research is to what extent the L1 remains active during L2 processing (MacWhinney, 2005). The present experiment will investigate the following question: Can gender information specific to German interfere with pronoun resolution in English sentences? Event-related potentials (ERPs) can reveal interference effects even if behavioral performance in grammatical judgment is unimpaired (Tokowicz & MacWhinney, 2005).

## Method:

**Subjects:** L1 German, L2 English (low & high-proficient)

**Task:** Reading simple sentences followed by an easy Grammatical Judgment Task (GJT)

**Dependent measures:** Online: ERP components (N400, P600) on pronouns reflecting semantic and syntactic violations, Behavioral: error rates in GJT

**Stimuli:** A short introductory sentence followed by a sentence with a correct or incorrect pronoun. Pronouns refer to inanimate nouns, e.g. „bus“. Contrary to English, the German translation of „bus“ has masculine grammatical gender. Pronouns are either

- correct in English but not German („bus“ and “it”),
- correct in German but not in English („bus“ and “he”/“him”) or
- incorrect in both languages („bus“ and “she”/“her”):

### Research questions:

- Can L2 pronoun resolution be influenced by L1 gender information, even if behavioral performance is (almost) unimpaired? (ERP components & error rates)
- Is the influence of L1 grammatical gender attenuated in the course of L2 learning? (High vs. low proficient speakers)
- Is the processing of pronouns in the object position any more difficult than in the subject position? (Pronouns in object position)

„This is a **bus**.“

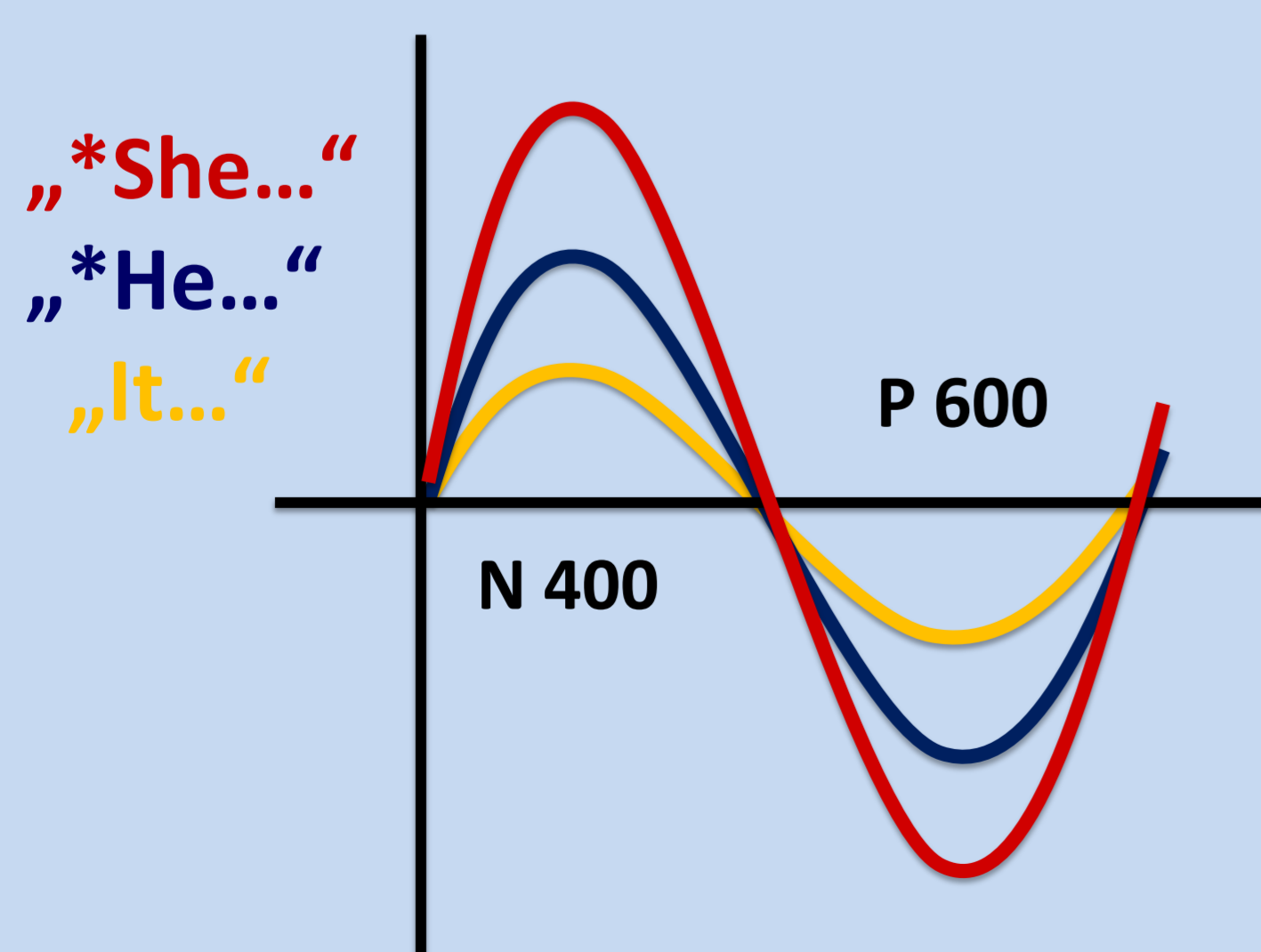
a) „**\*He**/**\*she**/**it** is big and crowded.“

b) „I can see **\*him**/**\*her**/**it**.“

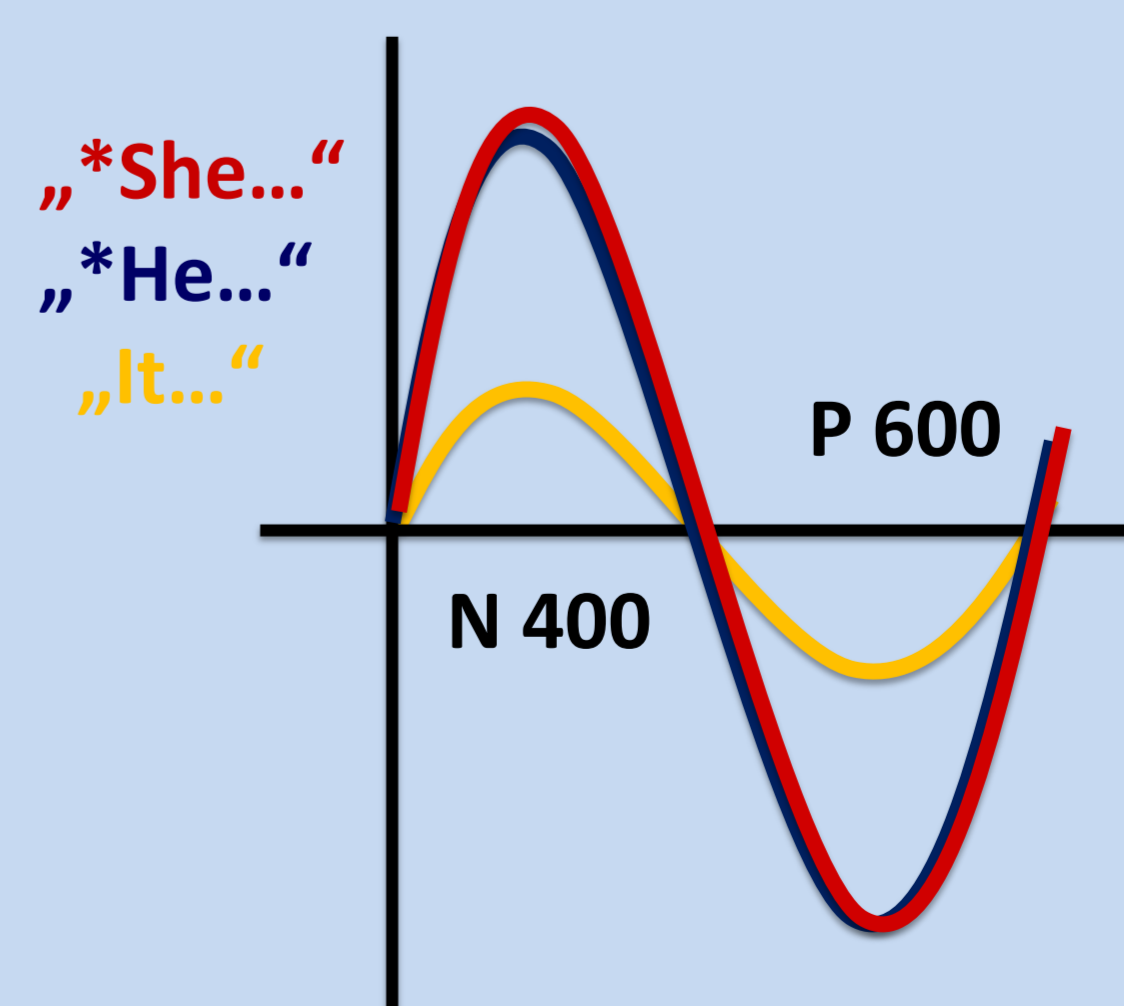
Pronouns occur in a) subject and b) object position.

## Expected Results:

- **Behavioral results:** Very few errors.
- **ERP components:** Subjects should be influenced by German gender information (compare eye-tracking evidence from Dutch-English: Conklin, Dijkstra & vanHeuven, 2008). Hence they should perceive the pronoun “she” referring to “bus” as a greater syntactic violation than the pronoun “he” :



„This is a **bus**.“



If subjects perceive „she“ referring to „bus“ as more incorrect than „he“, this should be reflected in higher N400 and P600 amplitudes.

If subjects perceive „he“ referring to „bus“ as equally incorrect as „she“, there should be no difference in the N400 and P600 amplitudes