Conceptual and morphophonological influences on agreement
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The production of subject-verb number agreement has received a great deal of attention in the last 15 years, since Bock and Miller's (1991) seminal paper. They showed that nouns (attractors) included in a modifier to the subject head (the real agreement source) could interfere with the agreement process resulting in a verb number error, usually called attraction error. Ever since, researchers have tried to identify the factors that affect the agreement process and their implications for current theories of language production (e.g., Hartsuiker, Schriefers, Bock & Kikstra, 2003; Vigliocco, Butterworth, & Garrett, 1996). The more constraint-based models hypothesize that both conceptual and morphophonological factors can play a role at any point during agreement computation (Vigliocco & Franck, 1999). The more serial models predict that different factors would have an effect at different points during the implementation of agreement. Bock, Eberhard, Cutting, Meyer, & Schriefers' (2001) Marking and Morphing model belongs in this latter category. It posits two stages—Marking, where number features of the message are mapped onto the lexical-grammatical representations; and Morphing, where the morphological specification of number is instantiated and number features are transferred to the agreement target, the verb. Another serial model is Franck, Vigliocco, Antón-Méndez, Collina, & Frauenfelder's (submitted) Feature selection and Feature copying. It differs from Marking and Morphing “in the way it’s cutting the pie”. For Franck et al, both notional and morphological factors play a role during the Feature selection stage of agreement implementation, while only syntactic factors determine Feature copying.

We tested the predictions of the three frameworks with respect to the combined effects of conceptual and morphological manipulations on subject-verb agreement in Dutch. We compared agreement errors for syntactically singular sentence preambles which referred conceptually either to a single token (ST) or to multiple tokens (MT). The preambles' head noun was preceded by a determiner which was either morphologically unambiguous (unamb) or morphologically ambiguous (amb) with respect to number.

MTamb De asbak op de tafels (The-ambiguous ashtray on the tables)
MTunamb Het menu op de tafels (The-unambiguous menu on the tables)
STamb De rivier bij de villas (The-ambiguous river by the villas)
STunamb Het meer bij de villas (The-unambiguous lake by the villas)

Bock et al's model predicts no interaction between the two factors given that each one would affect a different level of processing. The interactive framework adopted by Vigliocco et al, by its very nature, predicts an interaction between the two factors. In the model proposed by Franck et al, although serial, the two factors are also expected to interact since they both play a role during the same phase of agreement implementation.

The results show significant main effects of conceptual number and morphophonological ambiguity, thus replicating previous results. The interaction between the two factors is also significant due to the amount of errors for multiple token sentence preambles containing an ambiguous determiner being overadditive. The implications for the different models of agreement implementation are discussed.

References: