

Priming datives by datives and locatives: No evidence for differential effects of animacy

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Structural priming refers to the tendency of speakers to reproduce previously used constructions. However, the locus of the effect is a matter of debate (cf. Pickering & Ferreira, 2008, for a recent overview). In their seminal paper, Bock and Loebell (1990) showed that the production of dative PO (vs. dative DO) sentences in English can be primed by locative constructions. Considering the difference in event structure they argued for a phrase structural interpretation of the effect and against an account in terms of thematic roles. This argumentation is questioned by contemporary semantic and syntactic analyses that treat recipients in dative sentences and goals in locatives alike (e.g., Pylkkänen, 2008). Despite these parallels, Potter and Lombardi (1998) found weaker priming of dative PO responses by locative as compared to dative sentences. As their dative and locative primes had not been matched for lexical content, they suggested that animacy might be a confound.

We conducted a sentence generation experiment in German in order to disentangle effects of phrase structure from those of animacy. To this end, we presented dative and locative primes in four conditions ((1) dative DO, (2) dative PO, (3) locative PO with animate goal, and (4) locative PO with inanimate goal) and paired them with dative alternation targets (5). All recipient referents in dative primes and targets were animate. Targets were presented vertically aligned on the screen for 1300 ms, participants were instructed to generate simple sentences using those words.

- (1) Der Mechaniker vermietet der Kundin den ramponierten Wagen.
- (2) Der Mechaniker vermietet den ramponierten Wagen an die Kundin.
'The mechanic rents the client the banged-up car / the banged-up car to the client.'
- (3) Der Mechaniker steuert den ramponierten Wagen zu der Kundin.
- (4) Der Mechaniker steuert den ramponierten Wagen in die Waschanlage.
'The mechanic steers the banged-up car to the client / into the car-wash.'
- (5) Inhaber Firmenleitung Prokurist übergeben
'owner management confidential clerk render'

Overall, participants produced 56% PO (vs. DO) responses. A Generalized Linear Mixed Model was computed with the dative DO prime condition as reference (42% PO). All other primes were found to increase the proportion of PO responses (dative PO: 67% PO, *coefficient* = 1.64, $p < .001$; animate goal: 56% PO, *coefficient* = 1.14, $p < .05$; inanimate goal: 60% PO, *coefficient* = 1.31, $p < .01$). Despite the relative decrease of coefficient size, Tukey's HSD test revealed no differences in priming between the dative PO and both locative conditions.

We conclude that syntactic and semantic parallels between dative PO and locative constructions (cf. Pylkkänen, 2008) are sufficient for structural priming to arise whereas an additional overlap in animacy features has only minor if any effects.

Differences in effect size between the locative conditions seem to run contrary to an effect of animacy. However, they are most probably due to differences in prepositional case assignment. Whereas *an* ('to') in datives and *in* ('into') in inanimate locatives assign accusative case, *zu* ('to') in animate locatives assigns dative case. It is a question of future research whether case in PPs modulates effects of structural priming.

References

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