

## **Monolingual and bilingual processing at the syntax-discourse interface: Evidence from the English dative alternation**

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In English, dative sentences where an agent causes the physical or metaphorical transfer of a theme to a recipient are expressed using different structural options, as in (1-3). A speaker's choice of structure is governed by a set of interacting, probabilistic constraints, one of which is the accessibility/givenness of the post-verbal arguments (Arnold et al 2000; Thompson 1990). Self-paced reading and judgment tasks have shown that DO and HNPS sentences but not PO sentences are more difficult to process when the referent of the first post-verbal argument is new/less accessible (Clifton & Frazier, 2004; Brown, Savova & Gibson, 2012). Similar studies of L2 English have shown variation based on English proficiency and task: In a forced preference task, Park (2011, 2014) found that advanced L2 English/L1 Korean speakers were sensitive to information order, but preferred PO more often than L1 speakers. Marefat (2004) found that acceptability ratings of intermediate and advanced L2 English/L1 Farsi speakers matched those of L1 speakers, while ratings of low proficiency speakers were always higher for PO. These authors point to L1 transfer due to lack of a DO equivalent in Korean/Farsi, but DO is also less frequent in the input, and speakers from other L1 backgrounds were not tested. Previous L2 studies also did not include HNPS structure or reading time measures and did not consider speakers' exposure to and use of English. The current study fills these gaps by examining the relative influence of sentence type, information order, L1 background, English proficiency, English exposure, and English use on the processing of English dative sentences.

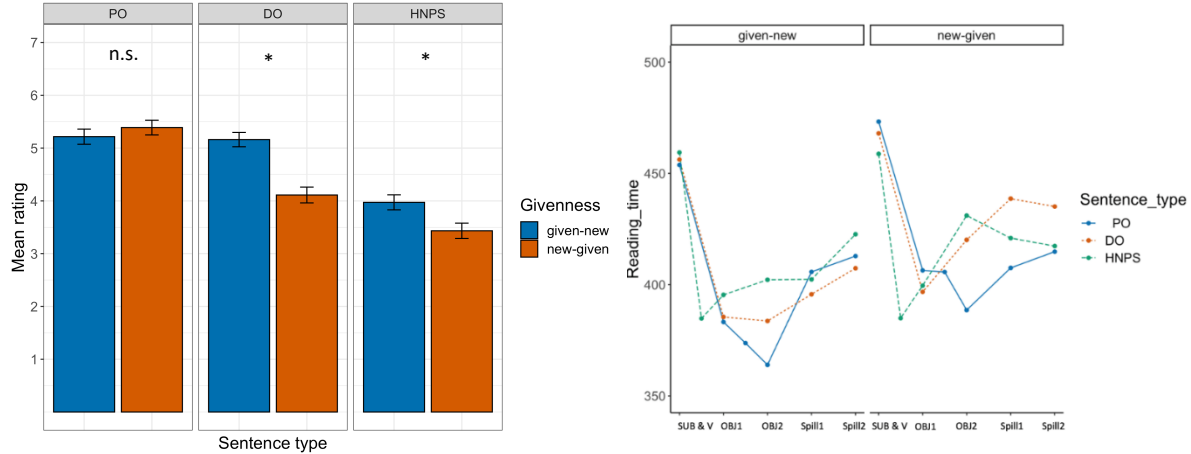
**Hypotheses:** (H1) for monolingual English speakers, DO and HNPS sentences will be significantly less acceptable/dispreferred/harder to process in the new-given order compared to the given-new order, while PO sentences will not differ (Brown et al., 2012; Clifton & Frazier, 2004). (H2) for bilingual L2 English speakers, sensitivity to information order will be more target-like as English proficiency, exposure, and use increase (Park 2011, 2014). (H3) Spanish but not German lacks a close DO equivalent. DO will be less acceptable/preferred less often by Spanish-English speakers than German-English speakers (Park 2011, 2014).

**Experiment:** 60 monolingual English speakers living in the United States, 60 bilingual English/German speakers living in Germany, and 60 bilingual English/Spanish speakers living in Mexico were recruited online via Prolific. Participants completed three experimental tasks (self-paced reading, scalar acceptability rating, forced preference, counterbalanced between participants), a language background questionnaire, and the LexTALE lexical decision task as a measure of proficiency (Lemhöfer & Broersma, 2012) in a single session of about one hour. Stimuli for the experimental tasks were adapted (with permission) from Brown et al. (2012). Each item contained a context sentence followed by a dative test sentence (PO, DO, or HNPS) with full NP post-verbal arguments in given-new or new-given order. Givenness was marked by a definite article and prior mention of the referent in the context sentence. Preliminary analyses given here are based on linear (self-paced reading), ordinal logistic (acceptability) and binomial logistic (forced preference) mixed-effects models for each participant group.

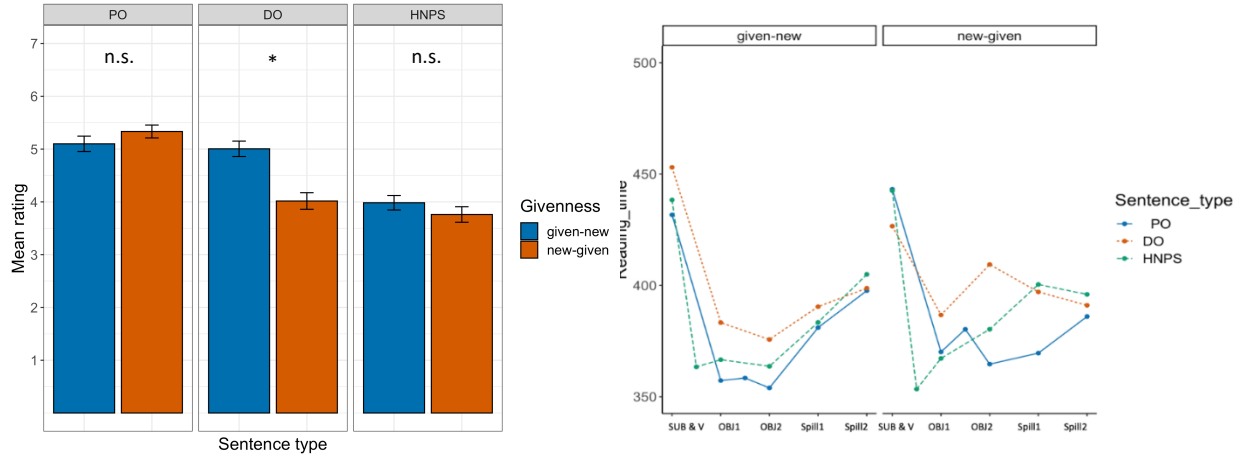
**Results and discussion:** For monolingual speakers, acceptability and forced preference results were as predicted in H1 (Figure 1; forced-preference omitted). In the self-paced reading task, RTs at the critical region (OBJ2) were slower for all three sentence types in the new-given condition (Figure 2). This was expected for DO and HNPS, but not for PO. Both bilingual groups were sensitive to information order in DO sentences in a similar manner to the monolingual group but showed some minor differences with respect to HNPS: German-English speakers showed no differences due to information order (Figures 3 & 4); Spanish-English speakers showed the expected dispreference for new-given order, but unlike the other groups rated HNPS sentences as no less acceptable than DO sentences (Figure 5). Statistical analyses to assess H2 and H3 are ongoing and will be reported in the presentation.

- (1) The student sent the botanist a photograph. (double object; DO)
- (2) The student sent a photograph to the botanist. (prepositional object; PO)
- (3) The student sent to the botanist a photograph. (heavy NP shift; HNPS)

Figures 1 & 2: Monolingual English speakers' acceptability rating and self-paced reading results



Figures 3 & 4: German-English bilingual L2 speakers' acceptability rating and self-paced reading results



Figures 5 & 6: Spanish-English bilingual L2 speakers' acceptability rating and self-paced reading results

