Keeping the English dative alternation in the family: a quantitative corpus-based study of spoken data

Gard B Jenset (independent researcher), Barbara McGillivray (Alan Turing Institute / University of Cambridge, UK) and Michael Rundell (Lexicography MasterClass / Macmillan Dictionary, UK)

Background and motivation

This talk presents a quantitative study on the English dative alternation construction based on the Early-Access Subset of the Spoken British National Corpus 2014. The features of the corpus data and metadata have allowed us to investigate the grammatical and sociolinguistic factors affecting the speakers' choice between the V-NP-NP construction (*Give me the money*) and the V-NP-PP(*to*) construction (*Give the money to me*).

Previous research on the dative alternation has focussed on introspection, written texts, or telephone conversations between strangers. This leaves open the question of the interplay between grammatical and sociolinguistic variables in spontaneous speech. Arnold et al. (2000) showed that the structural complexity of constituents and information status play a role in this alternation. Bresnan et al. (2007) found a greater range of possible variation using multivariate statistical techniques, and confirmed the role played by discourse factors. Jenset and Johansson (2013), using data from the web, demonstrated the effects of the semantics of the theme, but the data for this study were restricted to sentences with pronominal recipients. On the other hand, previous sociolinguistic studies on written data (Kendall, Bresnan, and Van Herk, 2011) and spoken data from telephone conversations between strangers (Bresnan and Hay, 2008; and Bresnan and Ford, 2010) found no significant role played by gender and age in the dative alternation. In this study we investigated whether in-person interactions between friends and relatives would lead to different results.

Data

We focussed on the relevant concordance lines of six high-frequency verbs (*give, lend, offer, sell, send,* and *show*), which correspond to 1,938 observations in the 2014 Spoken BNC data, containing transcripts of spontaneous conversations in informal settings recorded between 2012 and 2015. Since our attempts at automatically parsing the data yielded poor results due to the low performance of available syntactic parsers on spoken data, we manually annotated the type of dative pattern found in each, whenever relevant, and annotated the head of the noun phrases for recipients and themes.

Further, we automatically collected relevant corpus data and metadata, including speakers' information (gender, social status, age, etc.) and the semantic class of the heads of the recipient and theme.

Results

The table below displays the relative frequency of the two patterns for each of the six verbs analysed, showing that the V-NP-NP pattern is dominant for all the verbs except *sell*.

Verb	Datives	V-NP-NP	V-NP-PP
give	1000	882 (88%)	118 (12%)
lend	38	27 (71%)	11 (29%)
offer	72	62 (86%)	10 (14%)
sell	103	26 (25%)	77 (75%)
send	570	436 (76%)	134 (24%)
show	276	242 (88%)	34 (12%)

To assess the effects of linguistic and sociolinguistic features on the choice of one pattern over the other, we carried out a multivariate analysis. We fitted a binary logistic mixed-effects model with the response being realization of the recipient as either a PP (1/True) or NP (0/False), a random effect for verbs, and the following predictors: gender, pronominality of recipient, pronominality of theme, logarithm of recipient's length (in number of characters), logarithm of theme's length, animacy of recipient. By inspecting the predictor's coefficient, we found that all predictors were statistically significant. Specifically, in our data men were 14% more likely to use a V-NP-PP construction than women. Pronoun recipients were associated with a 50% lower probability of finding V-NP-PP constructions, while pronoun themes were associated with a 50% increase in the use of V-NP-PP constructions. A one-unit increase in recipient length (on a log scale) results in a 35% increase in the use of V-NP-PP, while a one-unit increase in theme length (on a log scale) results in a 50% decrease in use of V-NP-PP. Compared to inanimate recipients, animate ones have a 17% higher rate of use of V-NP-PP constructions. Moreover, considering verbs (the random effects), *show* and *give* prefer NP recipients, whereas *sell* prefers PP recipients.

In line with previous research (Bresnan and Hay 2008; Bresnan and Ford 2010; Kendall et al. 2011), our results show that sociolinguistic variables have a weaker effect on the dative alternation compared to the grammatical ones.

Compared to Bresnan et al. (2007), who focussed on American English, our model downplayed the effect of recipient's animacy, and had no place for the indefiniteness of theme (omitted for reasons of parsimony). Consistent with their results, we found strong effects for the length of theme and argument and the pronominality of recipient. Moreover, we found a strong effect for the theme's pronominality; this points to Behagel's Law and is in line with previous studies on the role played by discourse features on alternating constructions (Arnold et al. 2000; Bresnan et al. 2007; Bresnan and Hay 2008; Bresnan and Ford 2010; Jenset and Johansson 2013).

We found that even in spontaneous conversations between familiar speakers, the main results from previous research held up. However, we found a gender effect that runs parallel to the grammatical effects: while the V-NP-NP pattern is associated with

pronoun recipients and female speakers, the V-NP-PP pattern is associated with non-pronoun recipients and male speakers. This suggests that the gender effect may not be a direct result of specific preferences for one construction over another, but instead an emergent effect arising as an indirect consequence of other linguistic choices.

References

Arnold, J. E., Losongco, A., Wasow, T., & Ginstrom, R. (2000). Heaviness vs. Newness: The Effects of Structural Complexity and Discourse Status on Constituent Ordering. *Language 76*(1), 28-55.

Bresnan, J., Cueni, A., Nikitina, T., & Baayen, H. R. (2007). Predicting the Dative Alternation. In G. Bouma, I. Kraemer, & J. Zwarts (Eds.), *Cognitive Foundations of Interpretation* (pp. 69-94). Amsterdam: Royal Netherlands Academy of Arts and Sciences.

Bresnan, J., & Ford, M. (2010). Predicting Syntax: Processing Dative Constructions in American and Australian Varieties of English. *Language 86*(1), 168-213.

Bresnan, J., & Hay, J. (2008). Gradient Grammar: An Effect of Animacy on the Syntax of Give in New Zealand and American English. *Lingua 118*(2), 245-259.

Jenset, G. B., & Johansson, C. (2013). Lexical Fillers Influence the Dative Alternation: Estimating Constructional Saliency Using Web Document Frequencies. *Journal of Quantitative Linguistics 20*(1), 13-44. doi:10.1080/09296174.2012.754597.

Kendall, T., Bresnan, J., & Van Herk, G. (2011). The Dative Alternation in African American English: Researching Syntactic Variation and Change across Sociolinguistic Datasets. *Corpus Linguistics and Linguistic Theory 7*(2), 229-244.