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rnn word order - Dative Alternation (#11458)

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1) Have any data been collected for this study already?
It's complicated. We have already collected some data but explain in Question 8 why readers may consider this a valid pre-registration nevertheless.

2) What's the main question being asked or hypothesis being tested in this study?
RNN surprisal reflects humanlike preferences for the dative alternation: Animacy, definiteness, and NP shortness in the recipient push for the DO construction, and in the theme these same factors push for the PP construction.

3) Describe the key dependent variable(s) specifying how they will be measured.
Total sentence surprisal as calculated under two LSTMs: (1) the one from Gulordava et al. (2018), and (2) the one from Jozefowicz et al. (2016)

4) How many and which conditions will participants be assigned to?
Experiment: 2x2x2x2x2

* Construction form: double object or PP object
* Theme long/short
* Theme definite/indefinite
* Recipient long/short
* Recipient definite/indefinite

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Linear regression predicting total sentence surprisal. When one of the theme or recipient is long and the other is short, we expect the short one to come first. When they differ in definiteness, we expect the definite one to come first. We expect caused-motion verbs to favor PP object form. These are all manifested as interactions with construction form.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will remove all sentences that turn out to contain UNKs.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We have developed 16 items and we believe that will be enough.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Surprisal values have been calculated but not looked at nor analyzed.

We will also analyze verbs by semantic class (caused motion or not) and by their verb-by-verb constructional biases as reflected in corpora.

We may compare LSTM surprisals with surprisals from N-gram models.