Presupposition projection from disjunction is symmetric

Alexandros Kalomoiros & Florian Schwarz (*University of Pennsylvania*)

We investigate 'Bathroom sentences' (Partee), where the second disjunct can support a presupposition in the first, if its negation entails it, as in: 'Either *the bathroom* is in a weird place or this house has no bathroom'. Recent accounts take projection to be fundamentally asymmetric, and account for the above by positing something extra: Schlenker (2009) posits symmetric filtering that is available at a processing cost for overriding the asymmetric default. Hirsch & Hackl (2014) propose that the presupposition is locally accommodated due to pragmatic constraints on disjunctions. Our adaptation of Mandelkern et al. (2019)'s paradigm for conjunction, which shows that asymmetry in conjunction cannot be overridden, yields support for genuinely symmetric projection for disjunction (without cost), indicating lexical encoding of projection properties.

Design: We created 6 Items for different triggers (*continue*, *again*, *aware*, *find out*, *happy*, *stop*) in 6 conditions. Conditionals with the trigger in the antecedent in Support (S) and Explicit Ignorance (EI) contexts established a baseline for the acceptability of local accommodation (as in Mandelkern et al.). Presuppositional disjunctions (Ps) in either Order (First vs. Second) were presented in EI context to assess order effects on filtering, with non-presuppositional control variants (No-Ps) (1-4).

Predictions: Accounts positing any kind of asymmetry predict PsFirst to be less acceptable than PsSecond (in EI contexts), beyond any potential independent order effects for No-Ps, i.e., an interaction between Ps/No-Ps and Order. The local accommodation-based asymmetry view also predicts that the difference between PsFirst (Local Acc) and PsSecond (Support from 1st Disj) should parallel that between EI-Cond-Ps (Local Acc) and S-Cond-Ps (Support from Context), given that it posits a parallel contrast between local accommodation and presuppositional support; i.e., there should be NO interaction between embedding (Disj vs. Cond) and presupposition status in context.

Participants & Procedure: 255 participants from Prolific were shown 6 items, one per trigger and condition, in a latin square design. The Cond-Ps controls were shown first to establish baselines (in random order), followed by the disjunction conditions (in random order). Participants indicated on a 7-point scale how natural the sentence sounds in the given context.

Results: The overall pattern is simple (Fig. 1), and confirmed by mixed effect model analyses: S-Ps-Cond was rated higher than all other conditions, and there are no contrasts in the disjunction conditions. Contrary to asymmetric predictions, there is no interaction between Ps/No-Ps and Order here, either. And contrary to local accommodation-based asymmetry accounts, there is a significant interaction between the conditional and disjunction conditions and the contextual status of the presupposition, rather than parallel context effects as posited by such accounts.

Discussion: Our findings contrast starkly with those for conjunction in Mandelkern et al (2019), where asymmetry is reflected in a Ps/No-Ps vs. order interaction. Given the parallel paradigm, this makes a strong case that the effect of linear order on projection differs across connectives. This is incompatible with a domain-general processing account of projection asymmetries grounded in linear order alone (Schlenker 2009). Rather, it favors lexical encoding of linear order projection properties for individual connectives. Two theoretical options remain for disjunction: **(i)** there is no filtering mechanism at play in disjunction at all, i.e., presuppositions generally project from both disjunctions (cf. Geurts 1999). Cases of non-projection then would have to be explained in another way, e.g., by local accommodation. But note that there is no penalty for local accommodation for the Ps-conditions relative to the No-Ps disjunction conditions in our data, as one might expect on such a view. **(ii)** The lexical entry for disjunction allows for symmetric filtering in disjunction, in a way that does not incur any processing cost a la Schlenker (2009). While our results do not conclusively settle the choice between these options, the empirical picture clearly speaks against asymmetric treatments and in favour of connective-specific, lexical encoding of linear order

projection properties, thus constraining the space of possible theories of presupposition projection.

Example Stimuli: (font highlights for presentational purposes here only)

(1) **Contexts:** My friend John researches 20th century literature. One day, I stopped by his house and I saw a copy of Tolkien's "The Fellowship of the Ring" lying around.
  a. I *know that John has been researching Tolkien* recently, … (**S**)
  b. I *don't know if John has ever had research interests in Tolkien's work*,… (**EI**)
   …so I thought:

(2) If John continues having research interests in Tolkien, then that's why he is reading 'The Fellowship'. (**Ps-Cond**)

(3) Either John {has / continues having} research interests in Tolkien, or he has never had an interest in Tolkien and the book is unrelated to his research. (**(No-)Ps-First**)

(4) Either John has never had an interest in Tolkien and the the book is unrelated to his research, or he {has / continues having} research interests in Tolkien. (**(No-)Ps-Second**)
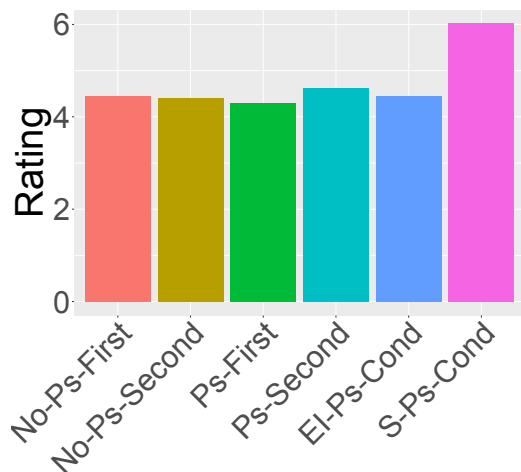

Fig. 1. Mean acceptability by condition

Table 1: Mixed-effects models summary

S-Ps-Cond vs.	Coeff.	SE	*p*
EI-Ps-Cond	-.89	0.18	$<.001$
No-Ps-First	-0.78	0.18	$<.001$
No-Ps-Second	-.54	0.18	$<.01$
Ps-First	-0.73	0.18	$<.001$
Ps-Second	-0.61	0.18	$<.001$
Interaction:	Coeff.	SE	*p*
Embed * Ps-Status	-.81	0.25	$<.01$

References: Mandelkern, M., Zehr, J., Romoli, J. et al. 2020. We've discovered that projection across conjunction is asymmetric (and it is!). Linguistics and Philosophy 43, 473–514. Schlenker, P. 2009. Local Contexts. Semantics and Pragamtics 2, 1-78. Hirsch, A. & Martin Hackl. Incremental presupposition evaluation in disjunction. Proceedings of NELS 44. Geurts, B. 1999: Presuppositions and Pronouns. Elsevier, Oxford.