Priming local accommodation of hard triggers in disjunction

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Two central questions in presupposition theory are: what are the presuppositions of complex sentences, and are there different types of presupposition triggers? We contribute to answering these questions by experimentally testing for readings of *again* in disjunction. Intuitively, the default for presuppositions triggered in one disjunct seems to be that they project globally (though theoretical proposals differ in how they derive this; Geurts 1999, Beaver 2001, Schlenker 2008). Our empirical aim is to probe for latent readings beyond the default. We are especially interested in assessing the availability of local readings, as local accommodation has played a central role in distinguishing different types of triggers (Abusch 2010). The presuppositions of 'soft' triggers (e.g. *stop*) seem to allow it quite easily, (1-a), while those of 'hard' triggers (e.g. *again*) are thought to either resist it or not permit it at all, (1-b).

(1)   a.   Jane didn't stop writing because she was never a writer in the first place.
        b.   ??Jane didn't go to New York again yesterday because she's never been to New York before.

Using a covered box picture matching task (Huang et al. 2013) with cumulative block priming, we provide evidence that: (i) non-global readings of *again* do exist (Exp. 1&2); (ii) non-global readings can be primed (Exp. 1&2); and (iii) at least some non-global readings are genuine cases of local accommodation (Exp. 2).
EXP. 1: We use sentences like (2) to test for non-global readings of *again* (for further readings, see below).

(2)   On Wednesday, John either went to the movies, or he went to the aquarium again.

        a.   *Global Ps (Glob-Ps):* aquarium<Wd & (movies-Wd $\vee$ aquarium-Wd)
   b.   *Local:* (movies-Wd) $\vee$ (aquarium<Wd & aquarium-Wd)

We use a picture selection task (36 items, 36 fillers). Participants were instructed to act as detectives relating reports on a suspect's activities to independent visual representations of what certain individuals did. They then decided which picture matched the description. Incomplete information was represented by '?' (providing a partial 'covered box'; Huang et al. 2013). 'X's marked days prior to the individual's arrival in town, and a context sentence referred to their arrival-day, protecting against accommodation to prior weeks.
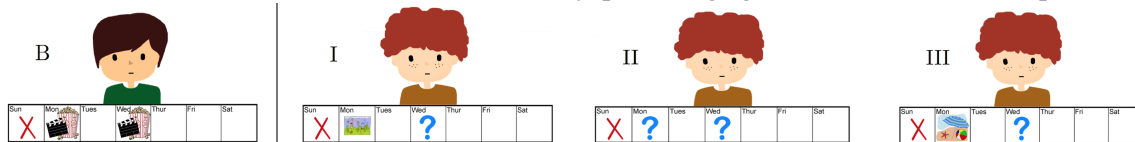
Participants were presented with a target picture and one of three competitors. The critical target, B, matches the assertion of (2) (movies-Wd), while the Glob-Ps is false. The competitors, I-III, leave open whether the assertion is true and vary whether the Glob-Ps is met (I), left open (II), or explicitly not met (III). ***Predictions for I-II:*** The Glob-Ps requires choosing competitors I and II over the target. If a non-global reading is accessed, the target should be preferred, assuming the uncertainty introduced by '?' biases against the competitor. ***Priming with III:*** Neither the target nor competitor III match the Glob-Ps. If a non-global reading is available, participants are thus under pressure to adopt it in competitor III trials. Being exposed to a block of competitor III trials before seeing other competitors may, then, prime participants to access a non-global reading, especially for competitor II, where the Glob-Ps is not explicitly supported. Competitor-block order was varied between subjects as I-II-III vs. III-II-I. ***Results:*** The rate of target choices by condition and block order for 125 MTurk participants is plotted above. Consistent with descriptions in the literature, results for blocks I and II when seen before III indicate a strong preference for a Glob-Ps, reflected in a low rate of target choices. However, when preceded by III, II displays a significant increase in target choices (based on logistic mixed effects models). The result for the III-II-I order shows that ***a non-global reading of 'again' can be accessed and primed***, and is thus consistent with the local reading in (2-b) being available. However, Exp. 1 leaves open
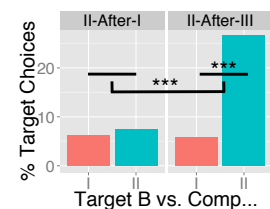
exactly *what* non-default reading is primed. Some theories assume presuppositions in disjunction to project semantically as conditional, with global non-conditional readings due to pragmatic strengthening. Rather than responding based on a local reading, participants could be accessing an underlying conditional reading, (3-a). Alternatively, participants could develop a (potentially task-specific) strategy to cancel or ignore the Glob-Ps, (3-b), and select the target picture based on its explicit match of the assertion.

(3) a. *Conditional Ps:* ($\neg$movies-Wd $\rightarrow$ $\underline{\text{aquarium<Wd}}$) & (movies-Wd $\vee$ aquarium-Wd)
    b. *Cancellation:* $\overline{\text{(movies-Wd} \vee \text{aquarium-Wd)}}$

EXP. 2: To differentiate a local reading from a Conditional Ps and from Cancellation, Exp. 2 adapted the test sentences from Exp. 1 using *neither/nor*, a context where the local reading dissociates from all others.

(4) On Wednesday, John neither went to the beach nor did he go to the movies again.

  a. *Global Ps (Glob-Ps):* $\underline{\text{movies<Wd}}$ & $\neg$(beach-Wd $\vee$ movies-Wd)
  b. *Local Accommodation:* (beach-Wd $\vee$ $\neg$ ($\underline{\text{movies<Wd}}$ & movies-Wd))
  c. *Conditional Ps (Cond-Ps):* ($\neg$beach-Wd $\rightarrow$ $\underline{\text{movies<Wd}}$) & $\neg$(beach-Wd $\vee$ movies-Wd)
  d. *Cancellation:* $\neg$(beach-Wd $\vee$ movies-Wd)

Only the local reading is true in the adjacent picture, as John did go to the movies on Wednesday but didn't go before. Local accommodation adds the presupposition as a conjunct in its clause (movies<Wd & movies-Wd), making the final disjunct false and the entire assertion true. The interpretations in (4-a,c,d) require the asserted content of the *again*-disjunct to be false. (Also note that because (4) entails $\neg$beach-Wd, the Cond-Ps patterns with the Global-Ps.) ***Design and predictions:*** If the priming effect in Exp. 1 came about through a local reading forced by competitor III, we expect priming with such trials to support unequivocal local readings in the *neither/nor* variant. To test this, Exp. 2 begins with a block that re-uses the *either* items from Exp. 1 with competitors II or III (varied between subjects). The II-prime group provides a baseline to assess the effect of III-priming. A second block asks participants to provide truth-value judgments for sentences like (4) relative to a picture (we switched to TVJ for *neither/nor* because a competitor with '?' for the assertion (Wed) proved excessively tempting as a seemingly better alternative over local targets in a pilot version). The 'local' picture creates the critical condition, relative to true/false controls where the presupposition is met globally. ***Results:*** The adjacent plot shows the rate of 'true' responses in the critical condition after both *either* blocks for 120 participants. The data provide conclusive evidence that ***genuine local readings with 'again' do exist***. Regardless of prime group, the local picture is accepted significantly more often than false controls. In addition, we again find a priming effect with more local responses after an initial competitor III block, reflected in a significant interaction.
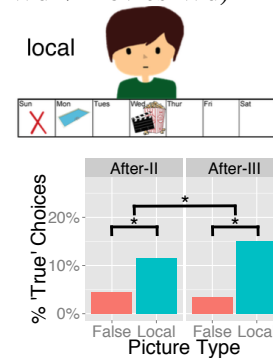
DISCUSSION. Our work makes various contributions: methodologically, it provides a tool to diagnose latent readings, in particular local ones. In cognitive terms, it shows that latent presupposition readings can be primed. Priming across (slightly) different constructions also provides initial evidence for the existence of a general process of local accommodation at a cognitive level. In theoretical terms, the conclusive confirmation of local accommodation with hard triggers constrains possible theories of presuppositions. This is relevant for ongoing theoretical debates, where alternative interpretations of previous data are sometimes ruled out based on the assumed unavailability of local accommodation (e.g, Chemla & Schlenker 2012). Furthermore, the results suggest that distinctions between triggers may not be categorical. This bears directly on the discussion about potential distinctions between triggers (e.g., hard vs. soft, Abusch 2010; entailing vs. non-entailing, Sudo 2012), and recent alternative proposals that the observed differences should be accounted for in terms of independent, orthogonal factors (Abrusan 2015). Finally, the priming methodology allows for a direct test of whether local accommodation with soft and hard triggers is due to related processes or not, which we are pursuing in ongoing work.