A Problem for Local Maximize Presupposition!   Amir Anvari & Kyle Blumberg

The principle *Maximize Presupposition!* (MP) began life as an utterance-level principle of language use (Heim, 1991), stating that if two competing sentences are contextually equivalent, then the one that has a stronger presupposition must be used (unless this presupposition is not satisfied in the context).

> [John has two students.]

(1)   John invited {# all, both} of his students.

Very soon, however, evidence came to light strongly supporting a sub-clausal and incremental application of MP (Percus, 2006; Singh, 2011). In (2), for example, the two alternatives are semantically equivalent at root, yet there is a strong preference for the both-alternative much like (1).

(2)   a. If John has exactly two students then John will invite {# all, both} of his students.
      b. Every professor who has exactly two students will invite {# all, both} of his students.

The traditional treatment of examples like (2), following Singh, is to assume (i) that MP can apply to embedded constituents of relevant types (t and et, in particular) and (ii) the context relative to which MP is evaluated is computed incrementally by recapitulating the information encoded by the constituents that linearly precede the target constituent (its "local context"). Thus in (2a), the target constituent is the consequent of the conditional and the context relative to which MP is evaluated for this constituent is the set of all those possible worlds that verify the antecedent of the conditional (and are compatible with background assumptions of the conversation).

We discuss and elaborate on a data point discussed in (Anvari, 2018). In a nutshell, Anvari challenges the role of "linear precedence" in (ii) above. Consider (3).

> [There are two presidential candidates.]

(3)   I am critical of {# all, both} of the two mainstream presidential candidates.

As Anvari observes, the definite "the two mainstream candidates" in the partitive already triggers a presupposition that there are exactly two mainstream candidates. Thus, much like (2), the presuppositions carried by the two alternatives in (3) are identical at root. Unlike (2), there does not appear to be a way to solve the problem in (3) using linear precedence and the traditional notion of local context. The offending piece of information in the case of (3) is contributed by the definite "the two mainstream candidates" which (a) linearly proceeds "all"/"both" and (b) serves as an argument to them. (a) is problematic for an account of local contexts based on linear order and (b) for an account based on hierarchical order.

We sketch two possible responses to this puzzle. First we point out that a suitably flexible lexical entry for "all" and "both" in a dynamic semantic framework can indeed account for (3). The core idea is to update the context with the content of the restrictor of

"all"/"both" and then with the operators themselves. Second we point out that within a classical framework (3) can be accounted for on the assumptions that (i) at LF the definite in (3) moves out, (ii) local contexts are generated at the level of LFs not surface forms.

Unfortunately, the first approach is entirely stipulative and the second approach is *prima facie* implausible. The lesson we draw from this puzzling phenomenon is that, short of a significant modification of the *Maximize Presupposition!* theory, while there is certainly a sense in which the material embedded in the restrictor of "all"/"both" must be evaluated *prior* to the processing of these operators, neither linear precedence nor hierarchical order seem to be up for the job as the operators both linearly and hierarchically precede their restrictors.

Whatever the correct analysis of (3) turns out to be, we also suggest that this contrast can explain the contrast in (4), which has not been discussed before:

> [There are two presidential candidates.]

(4)   I am critical of {# all, each} of the two mainstream presidential candidates.

The idea is that the existence of the "both" alternative in the case where there are two individuals "indirectly" creates competition between the "each" and "all" alternatives. When the domain contains more than two individuals, both "all" and "each" are fine:

> [There are five presidential candidates.]

(5)   I am critical of {all, each} of the five mainstream presidential candidates.

But when you have just two candidates, "all" is out-competed by "both" (as (3) shows); whereas "each" is not, since "both" is not distributive while "each" is.

References

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