Focus on what's not at issue:
gestures, presuppositions, supplements under Contrastive Focus

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Introduction The semantic status of gestural modifiers is an open question. Ebert (2017) claims that co-speech gestures (which co-occur with the verbal expressions they modify), as in (1), are Pottsian (2005) supplements (akin to non-restrictive relative clauses, NRCs), and post-speech gestures (which follow the verbal expressions they modify), as in (2), are parentheticals. Schlenker (to appear) argues co-speech gestures trigger presuppositions of the form $P \Rightarrow G$ (where P is the verbal expression the gesture modifies, G is the gesture's content, and $\Rightarrow$ is generalized entailment), and post-speech gestures are supplements.

(1) *Context: We are in a bar making bets on what our colleagues are going to order.*

If John orders a beer[LARGE] _, I'll win.[1,2]
Ebert: $\approx$ If John orders a beer, which (by the way) will be large, I'll win.   ✓
Schlenker: In the local context of *beer*[LARGE], *beer $\Rightarrow$ large*.[3]   ✓

(2) If John orders a beer — LARGE, I'll win.
Ebert: $\approx$ If John orders a beer (and, btw, that beer will be large), I'll win.   ✓
Schlenker: $\approx$ If John orders a beer, which (by the way) will be large, I'll win.   ✓

While Ebert and Schlenker claim both co- and post-speech gestures are by default non-at-issue (NAI), co-speech gestures are sometimes forced to have at-issue (AI) readings under Contrastive Focus (CF) (observation originally due to Rob Pasternak (p.c.), but for different examples), while post-speech gestures in similar configurations can remain NAI:

(3) If *John* orders a **beer**[SMALL] and *Bill* orders a **beer**[LARGE] , I'll win.
$\approx$ If *John* orders a **small** beer and *Bill* orders a **large** beer, I'll win.
$\nrightarrow$ If John orders a beer, it will be small; if Bill orders a beer, it will be large.
Ebert: $\approx$ If John orders a beer, which (btw) will be small, and Bill orders a beer, which (btw) will be large, I'll win.   ✗
Schlenker: $\rightarrow$ If John/Bill orders a beer, it will be small/large.   ✗

(4) If **John** orders a beer — **SMALL** and **Bill** orders a beer — **LARGE**, I'll win.
$\rightarrow$ If John/Bill orders a beer, it will be small/large.

Ebert could modify her analysis saying co-speech gestures are ambiguous between non-restrictive (NAI) and restrictive (AI) interpretations, with the former being the default. Schlenker attributes AI uses of co-speech gestures to local accommodation, allowed for as a last resort in some presupposition theories (e.g., Heim 1983; Schlenker 2009). However, one still has to explain what forces AI interpretations of gestures in (3), but not in (4).

Generalization: temporal alignment matters (and not just for gestures) I explore

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[1] In 'word[GESTURE]' the gesture co-occurs with the word, in 'word — GESTURE' it follows the word; illustrations come after _; **bold** is for prosodic CF ((L+)H*), *italic* is for prosodic Contrastive Topic ((L+)H*L-H%).

[2] The judgements come from at least 5 native English speakers for each example; variation is reported.

[3] A lot hinges on what the local context is, but for local accommodation to work one needs narrow inferences.

how different types of NAI content interact with CF, and show that NAI content that shares a time slot with some AI content (co-speech gestures, presuppositions) can't be focused independently, without focusing the co-occurring AI content. Thus, when the AI content of such "two-dimensional" contrasted elements is not contrastive, the co-occurring NAI content has to be treated as AI to make CF felicitous. NAI expressions with their own time slots (post-speech gestures, NRCs) can always be contrasted independently, without becoming AI.

More data The generalization above has already been illustrated for co- vs. post speech gestures. Similarly, two contrasted NRCs can remain NAI even if the nouns they modify aren't contrastive (in fact, (4) and (5) have very similar readings):

(5) If **John** orders a beer, which (btw) will be **small**, and **Bill** orders a beer, which (btw) will be **large**, I'll win.
→ If John/Bill orders a beer, it will be small/large.

Co-speech gestures under CF are only NAI if the verbal expressions they modify contrast, too. Thus, in (6) the size of the drinks isn't part of the bet, but in (3) it is. (7) has no CF on the word-gesture clusters in the first place, so the gestures can remain NAI.

(6) If *John* orders a **beer**$^{\text{LARGE}}$ and *Bill* orders a **cocktail**$^{\text{SMALL}}$, I'll win.
→ If John orders a beer, it will be large; if Bill orders a cocktail, it will be small.

(7) If **John** orders a beer$^{\text{SMALL}}$ and **Bill** orders a beer$^{\text{LARGE}}$, I'll win.
→ If John/Bill orders a beer, it will be small/large.

The data for (standard) presuppositions are more complicated, as the AI vs. NAI split in this case is sublexical and thus less clear, and it's hard to find items whose AI content isn't contrastive while their presuppositional content is. These two examples approximate that:

(8) a. %If *John* **doesn't** smoke and *Bill* **stopped** smoking, I'll win.
$\nrightarrow$ Bill used to smoke.
b. If *John* **stopped** smoking and *Bill* never **used** to smoke, I'll win.
$\xrightarrow{?\%}$ John used to smoke.

Two out of the five speakers I consulted with don't accept (8a), but those who do (i) don't get projection of the presupposition of *stopped*, (ii) get the strengthened reading of the first conjunct: *doesn't and didn't use to*. If *stop* has *doesn't* as its AI content and *used to* as its presuppositional content, the AI content of the two CF-ed elements in (8a) is identical and thus non-contrastive. Accommodating the presupposition of *stopped* isn't enough: *used to and doesn't* vs. *doesn't* still aren't contrastive, as one entails the other. So, one needs to further exhaustify *doesn't* with respect to *stopped*, getting *doesn't and not (doesn't and used to)*, i.e., *doesn't and didn't use to*. This extra step likely makes (8a) unacceptable for some.

All the speakers accept (8b), but vary on whether they get projection of the presupposition of *stopped* (of the five speakers above two get projection, three don't) and are overall less sure about their inferential judgements. The AI content of the two contrasted elements is *doesn't* vs. *never used to*. Neither of the two entails the other (unless one interprets *never used to* as including the present, in which case it entails *doesn't*, and then the reasoning is as above), yet, it's unlikely the two would be addressing the same question under discussion, especially in the presence of a more salient contrast (*used to* vs. *never used to*), which might be why some people don't get projection in (8b).

Crucially, there is a contrast with (9) (a counterpart of (6)), where speakers typically get projection of both presuppositions (local accommodation might still be possible, since *start* and *stop* are usually considered weak triggers, but arguably it's not enforced by CF):

(9) If *John* **stopped** smoking and *Bill* **started** smoking, I'll win.
     → John used to smoke; Bill used to not smoke.

Thus, regarding interaction with CF, co-speech gestures pattern with presuppositions, and post-speech gestures pattern with supplements, which is in line with Schlenker's story, but is this contrast actually due to different semantics (presuppositional vs. supplemental)?

Proposal I propose that AI content co-occurring with prosodic Focus markers has to be semantically focused, even if it shares a time slot with some NAI content. Consequently, when two word-gesture clusters are contrasted with one another, the verbal expressions must be semantically focused. If they aren't contrastive, as in (3), the gestures must be treated as AI to make CF licit. If the verbal expressions are contrastive, as in (6), the gestures can remain NAI. The reasoning is the same for presuppositions. NAI content that has its own time slot (NRCs and post-speech gestures) can be focused independently, without simultaneously focusing some AI content.

This story relies solely on temporal alignment and is thus compatible with treating co-speech gestures as triggering presuppositions that can be locally accommodated (Schlenker's story), or as modifiers that are non-restrictive by default but can be interpreted restrictively under pressure (modified Ebert's story). It also doesn't require positing different semantics for co- vs. post-speech gestures to explain their divergent behavior under CF. While there might be other reasons to consider assuming different syntactic structure and semantic status for the two (e.g., certain anaphoric constraints on post-speech gestures discussed in Schlenker to appear), this is the first step towards a more uniform analysis of gestures.

Selected references

Ebert, Cornelia. 2017. Co-speech vs. post-speech gestures. *Language and cognition workshop in memory of Peter Bosch*, Cognitive Science Department, University of Osnabrück, February 2017.

Heim, Irene. 1983. On the projection problem for presuppositions. In Michael Barlow, Daniel Flickinger & Michael Wescoat (eds.), *Second West Coast Conference on Formal Linguistics (WCFFL)*, 114–125.

Potts, Christopher. 2005. *The logic of conventional implicatures.* Oxford University Press.

Schlenker, Philippe. 2009. Local contexts. *Semantics and Pragmatics* 2(3). 1–78. doi:10.3765/sp.2.3.

Schlenker, Philippe. to appear. Gesture projection and cosuppositions. *Linguistics and Philosophy* `http://ling.auf.net/lingbuzz/002645`.