

Towards a uniform super-linguistic theory of projection

Background Formal semantics/pragmatics has recently seen an upsurge in studying *secondary modality content* like gestures and facial expressions accompanying speech (Ebert & Ebert 2014; Schlenker 2018a,b; Tieu et al. 2017, 2018, a.o.). Much of this work focuses on how such content projects, e.g., how the inferences arise in examples with *co-speech gestures* like in (1).¹

- (1) a. Lea might bring her dog_{LARGE}. b. Zoe might shoot at the target_{LONGBOW}.
 →Lea’s dog is large. →If Zoe shoots, she’ll shoot a longbow.

Most of this literature assumes projection of secondary modality content is governed by independent rules. This approach is most prominent in Schlenker’s (2018b) typology aiming to predict if/how a piece of secondary modality content projects, based on (i) whether it co-occurs with something in a more primary modality, and (ii) whether it’s “eliminable”; e.g., co-speech gestures co-occur with speech and are eliminable and, thus, trigger *cosuppositions* (assertion-dependent presuppositions).

Proposal I argue that a typology like Schlenker’s is both untenable and unnecessary, and projection behavior of compositionally integrated content is for the most part guided by the same linguistic principles in all modalities. Which projection mechanisms are available/enforced for a given piece of compositionally integrated content is uniformly determined by how it composes in the syntax/semantics, regardless of its modality. Whether a piece of content whose composition allows, but doesn’t enforce projection in fact projects is affected by various factors. Co-occurring with something in a more primary modality will sometimes result in a preference for a projecting interpretation, but other considerations, including lexical ones, can override this preference. I build towards a uniform, cross-modal theory of projection, focusing on two composition strategies (modifiers and supplements) associated with two distinct projection behavior patterns, and apply it to two novel case studies: conventional co-speech gestures and degree modifiers in various modalities.

Modifiers vs. supplements (Subjective) modifiers, e.g., spoken adjectives, combine with an expression β yielding α that entails β via generalized entailment. Modifier instances can but don’t have to be restricting; *non-restricting modifiers* (NRMs) are subjective modifiers intended by the speaker as truth-conditionally vacuous (Leffel 2014, adjusted). I argue that NRMs pragmatically trigger inferences that β entails α that project like presuppositions, i.e., relative to local contexts:

- (2) *Context: I believe that processed meat causes cancer.* I shouldn’t eat so many deadly sausages.
 →I shouldn’t eat so many sausages. (t-c vacuity)
 →Being a sausage entails being a deadly sausage (i.e., all sausages are deadly). (NRM inf.)
(3) Maybe processed meat causes cancer and I shouldn’t eat so many deadly sausages.
 →Maybe processed meat causes cancer and I shouldn’t eat so many sausages. (t-c vacuity)
 →If processed meat causes cancer, then all sausages are deadly. (NRM inf.)

Whether a modifier instance is non-restricting is ruled by pragmatic factors, but also by the modifier’s lexical properties. E.g., modifiers with a strong evaluative component are often non-restricting:

- (4) I don’t want any obnoxious philosophers at my talk!

Likely reading: \approx I don’t want any philosophers at my talk, and all philosophers are obnoxious.

Supplements, e.g., spoken appositives, combine with an expression yielding a proposition of a special kind about it (e.g., Potts 2005; Koev 2013). They don’t have the compositional potential to be restricting and typically must project (unlike NRMs, their projection is triggered conventionally):

- (5) #If Lea brings her dog, a **small** animal, that’s OK, but if she brings her dog, a **large** animal, we’ll need a van.

$\times \approx$ If L brings her \langle small, large \rangle dog... $\times \approx$ If (L brings her dog and it’s \langle small, large \rangle)...

Case studies Secondary modality content can in principle compose as modifiers or supplements, too, with similar consequences for projection. I explore two novel case studies in this respect.

¹ In word_{GESTURE} the gesture co-occurs with the word; **bold** indicates prosodic contrastive focus marking.

Conventional co-speech gestures Esipova (2019) argues gestures like in (1) can be construed as modifiers (cf. *large*) or supplements (cf. *a large object*). As modifiers, they can be restricting or non-restricting, but their restricting uses are marginal (see Esipova 2019 for experimental data): as they co-occur with speech (more primary modality), they prefer to be truth-conditionally vacuous:

- (6) If Lea brings her **dog**_{LARGE}, we'll need a van, but if she brings...
 a. her **cat**_{SMALL}, that's OK. NRM (\rightarrow Lea's only dog is large.)
 b. ?her **dog**_{SMALL}, that's OK. RM (\rightarrow Lea has two dogs.)

The gestures in (1) aren't conventional, though, and their potential compositional construals are constrained by their iconic content only. I observe that some conventional gestures can be modifiers, as well, and, thus, exhibit the corresponding projection behavior pattern, e.g.:

- (7) If Pam brings her **brother**_{CRAZY}, I'll fight with him, but if she brings...
 a. her **sister**, that's OK. NRM (\rightarrow Pam's only brother is crazy.)
 b. ?her **normal** brother, that's OK. RM (\rightarrow Pam has two brothers.)

But some conventional gestures can only be supplements (cf. sentence-level adverbs like *hopefully*):

- (8) If a friend of mine wins the race_{FINGERS-CROSSED}, I'll buy them a drink.
 ✓ \rightarrow I want a friend of mine to win. ✗ \approx If (a friend of mine wins and I wanted them to)...

Schlenker's (2018b) typology can't account for the different projection patterns in (7) vs. (8), but excluding all conventional gestures from consideration will miss the analogy between (6) and (7). My view, whereby composition determines projection across modalities (and various considerations—structural, iconic, or conventional—constrain composition), applies uniformly to all gestures.

Co-speech/gesture facial expressions I observe that mirative facial expressions (eyes wide open, *O_O*) and spoken adverbs can both compose as sentence-level supplements, as in (9), which must project, or as degree modifiers, as in (10), which don't project by default:

- (9) a. When, [surprisingly, [a friend of mine gets drunk]], I sometimes comment on that.
 b. When [[a friend of mine gets drunk]_{O_O}], I sometimes comment on that.
 \rightarrow When a friend of mine gets drunk, this fact is surprising.
- (10) a. When a friend of mine gets [surprisingly [drunk]], I sometimes comment on that.
 b. When a friend of mine gets [[drunk]_{O_O}], I sometimes comment on that.
 \nrightarrow When a friend of mine gets drunk, they get drunk to a surprising/large extent.

The same holds if we replace the word *drunk* with a conventional Russian gesture *DR*{*I,U*}*NK* (flicking a finger on the neck) to eliminate the effect of any voice modulations on *drunk* in (10b).

Schlenker (2018b) discusses degree modifier-like iconic vowel lengthening like in (11).

- (11) If the talk is loooong, I'll leave before the end. \nrightarrow If the talk is long, I'll leave before the end. He claims vowel lengthening is an "internal enrichment", i.e., "ineliminable", and these can be at-issue by default. This claim is dubious by itself, as the lengthening in (11) seems to be a supra-segmental realization of a compositionally integrated degree modifier, which is eliminable, like other intonational morphemes (e.g., focus marking pitch accents). Either way, the contrast between the two uses of *O_O* above, which can't be captured by Schlenker's typology (it predicts both to trigger cosuppositions), holds even in the absence of voice modulations, suggesting that the default at-issue status of (open-scale) degree modifiers is due to their lexical semantics and is not modality-specific. This holds even for degree modifier uses of expressives, which are never restricting otherwise:

- (12) a. If Lea brings a fucking dog, I'll leave. \rightarrow If Lea brings a dog, I'll leave.
 b. When a movie is fucking good, I stay till the end of the credits.
 \nrightarrow When a movie is good, I stay till the end of the credits.

The cross-modal parallels and contrasts above remain at best uncaptured by a typology like Schlenker's. A uniform, composition-driven view of projection proposed here can handle them, as it predicts supplements to project conventionally regardless of modality or alignment, but allows for various factors, including lexical, to determine whether a given modifier instance is (non-)restricting.

References

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