Gestural Cosuppositions within the Transparency Theory*

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October 14, 2015

Abstract: It has been argued that the sentence *None of these 10 guys SLAP_punished his son* (where *SLAP* is a slapping gesture co-occurring with the verb) triggers a presupposition that *for each of these 10 guys, if he had punished his son, slapping would have been involved* (Schlenker 2015a,b). We argue that the conditional nature of this presupposition can be derived within an extension of the Transparency Theory (Schlenker 2008), one in which the target sentence competes with an 'articulated' competitor of the form: *None of these 10 guys punished his son like SLAP_this* (or some other post-verbal modifier).

Schlenker 2008 argues that the presupposition *d* of a (predicative or propositional) trigger <u>d</u>d' is just a normal entailment that 'wants' to be articulated as a separate conjunct, in accordance with (1). If possible, then, one should say *… it is raining and John knows it…* rather than *…John knows that it is raining…*. (Grice_1981 develops a related intuition).

(1) **Be Articulate**
 In any syntactic environment, express the meaning of an expression *… <u>d</u>d'…* as *…(d and <u>d</u>d')…* (unless independent pragmatic principles rule out the full conjunction).

Be Articulate is controlled by a Gricean principle of manner, *Be Brief*, which prohibits unnecessary prolixity, as in (2), *and takes precedence over Be Articulate* – ruling out, for instance, *If it is raining, it is raining and John knows it.*

(2) **Be Brief - Incremental Version**
 Given a context set C, a predicative or propositional occurrence of *d* is infelicitous in a sentence that begins with *a (d and* if for any expression *g* of the same type as *d* and for any sentence completion *b*', **C ⊨ a (d and g) b' ⇔ a d b'**.

In the end, <u>d</u>d' is acceptable in a sentence *a <u>d</u>d' b* just in case the attempt to be 'articulate' satisfies the boldfaced equivalence in (2), and thus violates *Be Brief*. Schlenker_2008 claims that *the theory of presupposition projection reduces to the interaction between these two principles*, and Schlenker_2007 proves that they derive the results of Heim 1983 for a fragment with generalized quantifiers, *modulo* some technical assumptions.

(1)-(2) are tailored to the case of 'articulated' competitors of the form *...(d and <u>d</u>d')....* We argue that (i) for gestural presuppositions (Schlenker_2015a,b), illustrated in (3)a, the 'articulated' competitor takes a different form, akin to *...(d d')...*, where *d'* is a post-verbal modifier; and that (ii) this explains why gestural presuppositions are conditional in nature. (*Notation:* the gesture co-occurs with the expression that immediately follows the picture).

(3) a. None of these 10 guys _punished his son.
 => none of these 10 guys punished his son; but for each of them, **if he had punished his son**, slapping would have been involved

 b. None of these 10 guys punished his son like _this / by slapping him.

(3)a triggers a universal inference that *for each of these 10 guys, **if he had punished his son**, slapping would have been involved.* Given standard results about presupposition projection under *none* (Chemla_2009), this is explained if x _punished x's son triggers a conditionalized presupposition (called a 'cosupposition' in

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Schlenker_2015b) that *if x punished x's son, slapping was involved.* But why this conditionalization? We suggest that the natural 'articulated' competitor comes with a post-verbal modifier, as in (3)b. Schematically, in 'standard' cases, …*dd'*… competes with *…(d and dd')…,* but here …*Gd*… (where *G* is a gesture co-occurring with the expression *d* – e.g. *_punished*...) competes with *...d g ...,* where g is a post-verbal modifier with the same content as *G* (e.g. *punished ... like* *_this*).

This difference in linear order[1] explains why the gestural presupposition is conditional in nature, *modulo* the extension of (1)-(2) sketched in (4)a-b. (4)b rules out the articulated competitor *...punished his son like* *_this…* just in case no matter which further modifier is added, no matter how the sentence ends, the *like*-phrase can be eliminated without affecting the truth conditions. This means that the post-verbal modifier must be trivial *after* the verbal meaning has been computed.

(4) Consider a sentence of the form *a G_d' b,* where *G* is a gesture co-occurring with a (modifier-compatible) expression *d'*.
   a. **Modified *Be Articulate*:** Say *a (d' g) b* rather than *a G_d' b,* unless this is in violation of (b).
   b. **Modified *Be Brief* – Incremental Version:** Given a context set C, do not say *a (d' g) b* if *g* is incrementally trivial, in the sense that for any modifier *g'*, for any sentence completion *b'*, C ⊨ a ((d' g) c') b' ⟺ a (d' c') b'.

Assuming that the modifiers are intersective, (4)b is equivalent to the acceptability conditions predicted by (1)-(2) for *a (d' and gd*) b,* where *d** is an arbitrary assertive component:

(5) Predictions of (1)-(2) for the acceptability of *a (d' and gd*) b*
   For any *g* of the same type as *d,* for any sentence completion *b'*, C ⊨ a (d' and (g and c')) b' ⟺ a (d' and c') b'.

Modulo the assumptions and equivalence results of Schlenker_2007, (5) (and thus (4)) makes the same predictions as Heim's dynamic semantics for a sentence *a (d' and gd*) b.* In particular, in Heim 1983, *(d' and gd*)* triggers the conditional presupposition $d' \Rightarrow g,$ which then gets dynamically projected. This derives the conditional nature of gestural presuppositions from the fact that the articulated competitor has a post-verbal modifier.[2]

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[1] We follow Schlenker_2007,2008 in framing the discussion in terms of linear order, but more structural notions could be used instead – as long as they are independently motivated. Languages in which the modifier can come pre-verbally (e.g. German) might well cause problems for a simple-minded analysis based on linear order alone.

[2] In the present note, we derive the conditional nature of the presupposition predicted by (4) by way of an equivalence with the presupposition predicted by *d' and gd*,* which in turn is known *in Heim's framework* to trigger a conditional presupposition $d' \Rightarrow g$ (which then gets dynamically projected). But we could try to derive a direct equivalence between (4) and the condition predicted by the Transparency Theory (and hence by (2)) for a trigger of the form $\underline{d' \Rightarrow g}\, d*$ (with the entire conditional $\underline{d' \Rightarrow g}$ as its presupposition, and an arbitrary assertive component *d**). The condition is written in (i):

(i)   *a (d'⟹g)d* b* is acceptable if for each *c'* of the same type as *g,* for each acceptable sentence completion *b'*,
         C ⊨ a ((d'⟹g) and c') b' ⟺ a c' b'

The acceptability condition in (i) entails that in (5): for every *c''*, take *c' = (d' and c'')* in (i), to get the condition in (ii):

(ii)   For each *c'* of the same type as *g,* for each acceptable sentence completion *b'*,
         C ⊨ a ((d'⟹g) and (d' and c'')) b' ⟺ a (d' and c'') b', hence
         C ⊨ a (d' and (g and c'')) b' ⟺ a (d' and c'') b'

But without further assumptions, (5) does not entail (i). Take the sentence *(Q (d' and (g and c')))*, where *Q* is a generalized quantifier meaning *zero or an odd number of objects*. Take *d'* to be a predicate that holds true of a single object O. (5) can be re-written as (iii), which is trivially true (both complex predicates hold true of zero or one object, thus making *Q* true). But if the domain contains at least two objects, (i), re-written as (iv), will fail to hold in case *c'* is a tautologous predicate and *g* is a contradictory predicate. Let n be the number of objects in the domain (≥ 1). The right-hand side is true iff n = 0 or n is odd. Since *g* is contradictory, *c'* is tautologous, and *d'* is only true of the object O, *(d'⟹g)* holds of n-1 objects (namely those make *d'* false), and so does *(d'⟹g) and c')*, hence the left-hand side is true iff n-1 = 0 or n-1 is odd. The equivalence *(n-1 = 0 or n-1 is odd)* ⟺ *(n = 0 or n is odd)* cannot be satisfied for n ≥ 2, as it then boils down to: *n-1 is odd* ⟺ *n is odd*. (It *is* satisfied if n = 1, since both sides are true in that case.)

(iii) C ⊨ (Q (d' and (g and c'))) ⟺ (Q (d' and (g and c')))

(Following questions raised by Kennedy and Szabolcsi, one could ask whether our analysis extends to verbs that encode manner modifications, as in (6)a, which might compete with (6)b.

(6) a. None$_F$ of these 10 guys drove / swam to the bridge.
b. None$_F$ of these 10 guys got to the bridge by driving / got to the bridge by swimming.

Extending *Be Articulate* to (6)a would predict an inference that *for each of these 10 guys, if he had gone to the bridge, he would have done so by driving / swimming*. It is unclear that this holds.)

(iv) C |= Q((d'⟹g) and c')) ⟺ Q(c')

References

Chemla, Emmanuel (2009). Presuppositions of quantified sentences: experimental data. *Natural Language Semantics* 17(4): 299-340

Heim, Irene: 1983, On the Projection Problem for Presuppositions. In D. Flickinger et al. (eds), *Proceedings of the Second West Coast Conference on Formal Linguistics*, 114-125.

Schlenker, Philippe: 2007, Anti-Dynamics (Presupposition Projection Without Dynamic Semantics). *Journal of Logic, Language and Information* 16, 3: 325-256

Schlenker, Philippe: 2008, *Be Articulate:* A Pragmatic Theory of Presupposition Projection. Target article in *Theoretical Linguistics*, 34, 3: 157-212

Schlenker, Philippe: 2015a, Gestural Presuppositions. *Snippets* (Issue 30) doi: 10.7358/snip-2015-030-schl

Schlenker, Philippe: 2015b, Gesture Projection and Cosuppositions. Manuscript, Institut Jean-Nicod and NYU.