

Gestural Predicates: Assertions and Presuppositions

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Abstract. We argue that some gestures can *replace* predicates in spoken language, and that unlike standard co-speech gestures, they make an assertive contribution. But some of them *also* trigger presuppositions, which in simple cases are analogous to those of words with a comparable bivalent content. This suggests that presupposition generation is not a lexical process but may be the result of 'triggering algorithm', or alternatively that the mechanism that interprets dynamic iconic representations may derive presuppositions from them.

Co-speech gestures are claimed to have a supplemental (Ebert_and_Ebert_2014) or presuppositional semantics (Schlenker_2015a,b). But in some cases (Slama-Cazacu_1976,Clark_1996), a gesture can *replace* rather than enrich a word. Unlike co-speech gestures, gestural predicates make an assertive contribution. Thus (1)a contrasts with (1)b, which triggers a universal conditional presupposition ('if punished, then hanged'). (Acceptability seems increased when an onomatopoeia is produced concurrently with the gestural predicate to justify the absence of a spoken word.)



- (1) a. None of these ten traitors was
=>none was hanged



- b. None of these ten traitors was _punished.
=>none was punished, and for each, punishment would have meant hanging

Are gestural predicates just co-speech gestures modifying covert words? The latter would have to be as specific as the gesture. (i)First, unless the covert word in (1)b is *hanged* rather than *punished*, we won't explain why the gestural contribution is assertive in (1)b but presuppositional in (1)a. (ii)Second, co-speech gestures can be disregarded in ellipsis resolution (Schlenker_2015a), hence the inference obtained in (2)b. By contrast, in (2)a the elided VP is obligatorily understood as *hanged*, hence the need for a specific covert word: *hanged* but not *punished*.



- (2) a. This politician was . That one will never be.
=>the second politician won't be hanged



- b. This politician was _punished. That one will never be.
=>the second politician won't be punished

However positing such specific covert words lacks plausibility in the general case. In (3), the gesture makes clear that the first two pies should be cut in a specific way (probably in 9 parts); a very convoluted expression would be needed to approximate this content.

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- (3) The first pie should be , the second one should be as well, but the third one shouldn't be.
Thus gestural predicates make, on their own, an assertive contribution.

Interestingly, some *also* trigger presuppositions, which in simple cases seem similar to those of words with a comparable bivalent content², as in (4)-(6) (gestures are capitalized, with illustrations on their first occurrence).



- (4) a. In two minutes, our Chair might DOZE-OFF .
=>our Chair is currently awake
b. Within a few minutes, the helicopter we took yesterday might TAKE-OFF



=>the helicopter we took yesterday is currently on the ground

- (5) a. If in two minutes our Chair were to DOZE-OFF, everybody would notice.
=>our Chair is currently awake
b. If in a few minutes the helicopter we took yesterday were to TAKE-OFF, I'd be surprised.
=>the helicopter we took yesterday is currently on the ground
- (6) a. None of our ten subjects will DOZE-OFF.
=>each of our ten subjects is awake
b. None of your five helicopters will TAKE-OFF
=>each of your five helicopters is on the ground

As with presuppositions, the relevant inferences fail to project if they are locally justified:

- (7) If our Chair is awake, I am sure he'll soon DOZE-OFF.
=>our Chair is currently awake

Why do our gestural predicates generate presuppositions, and why are these similar to those of English verbs with comparable bivalent contents?

1. It is unlikely that TAKE-OFF is just a gestural code for English 'take off'. First, the gestural predicate in (4)b has an iconic ('rotating') contribution that 'take off' lacks. Second, positing a covert 'take off' to trigger the presupposition would predict that the verb could be preserved in ellipsis *without* the co-speech gesture, which seems dubious, as seen in (8)b.



- (8) a. This helicopter will soon take off , and this plane will too.



b. #This helicopter will soon TAKE-OFF , and this plane will too.

2. Alternatively, the presupposition might be triggered by the iconic semantics of the gesture – possibly because its starting point corresponds to a presupposed state.³ But in (9), there is no discernible inference corresponding to the initial state of the SMOKE-WEED gesture. Thus this theory would require a distinction among different kinds of gestural boundaries, possibly along the lines of Wilbur 2003,2008, Strickland_et_al._2015.

² The bivalent content is obtained by lumping together presupposition failure and falsity. For instance, the bivalent content of *John stopped smoking* is equivalent to: *John used to smoke and doesn't now smoke*.

³ In fact, TAKE-OFF in (4)b triggers another shape-related presupposition, namely that the subject denotes a helicopter: if *helicopters* is replaced with *aircraft* in (6)b, we get an inference that each of the aircraft is a helicopter.



(9) None of the ten guys will ever SMOKE-WEED_

3. A third possibility is that some presuppositions are not triggered lexically, but are produced by a general 'triggering algorithm' that takes as input the bivalent content of atomic elements, be they words or gestures (Stalnaker_1974,Simons_2003,Abusch_2009,Schlenker_2010, Abrusan_2011). It would then be unsurprising that two atomic expressions with the same bivalent content give rise to the same presuppositions.

References

- Abusch, Dorit: 2009, Presupposition Triggering from Alternatives. *Journal of Semantics*, Advanced access, doi:10.1093/jos/ffp009
- Abrusan, Marta: 2011, Predicting the Presuppositions of Soft Triggers. *Linguistics and Philosophy* 34(6), 491-535, 2011, doi: 10.1007/s10988-012-9108-y
- Chemla, Emmanuel: 2009, Presuppositions of quantified sentences: experimental data. *Natural Language Semantics*,17(4):299-340.
- Clark, Herbert H.: 1996, *Using language*. Cambridge: Cambridge University Press.
- Ebert, Cornelia and Ebert, Christian: 2014, Gestures, Demonstratives, and the Attributive/Referential Distinction. Handout of a talk given at Semantics and Philosophy in Europe (SPE 7), Berlin, June 28,
- Greenberg, Gabriel: 2013. Beyond Resemblance. *Philosophical Review* 122:2, 2013
- Schlenker, Philippe: 2015a, Gestural Presuppositions (squib). *Snippets* (Issue 30) doi: 10.7358/snip-2015-030-schl
- Schlenker, Philippe: 2015b, Gesture Projection and Cosuppositions. Manuscript, Institut Jean-Nicod and New York University.
- Schlenker, Philippe: 2010, Local Contexts and Local Meanings. *Philosophical Studies* 151, 1, 115-142 (special issue on Stalnaker's "Assertion")
- Simons, Mandy: 2003, Presupposition and Accommodation: Understanding the Stalnakerian Picture. *Philosophical Studies* 112: 251–278, 2003. DOI 10.1023/A:1023004203043
- Slama-Cazacu, T.: 1976, Nonverbal components in message sequence: "Mixed syntax." In W. C. McCormack & S. A. Wurm (Eds.), *Language and Man: Anthropological Issues* (pp. 217–227). The Hague: Mouton.
- Stalnaker, Robert: 1974, Pragmatic Presuppositions. In Munitz, M. and Unger, P. (eds.) *Semantics and Philosophy*. New York: New York University Press.
- Strickland, Brent; Geraci, Carlo; Chemla, Emmanuel; Schlenker, Philippe; Kelepir, Meltem; Pfau, Roland: 2015, Event representations constrain the structure of language: Sign language as a window into universally accessible linguistic biases. *PNAS* www.pnas.org/cgi/doi/10.1073/pnas.1423080112
- Wilbur, Ronnie B. : 2003. Representations of telicity in ASL. *Chicago Linguistic Society* 39 : 354-368.
- Wilbur, Ronnie B.: 2008. Complex Predicates Involving Events, Time and Aspect: Is This Why Sign Languages Look So Similar?. In: Quer, J. (ed.) *Signs of the Time*, pp. 217–250. Signum, Hamburg.