

A semantic account for iconic gestures

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Co-verbal iconic gestures carry information, that is, they have semantic significance (Turvey & Carello, 1985). But how do they accomplish that? Traditionally, with reference to the work of C.S. Peirce (1867), icons are said to be meaningful due to a resemblance of the sign – the performed gesture, in this case – with its referent. However, there are good reasons that resemblance is an all too vague and slippery notion to build a sign relation on it. In particular, 1) the sign relation and the resemblance relation have different properties; 2) resemblance is resemblance with respect to a *tertium comparationis*, which could be general to such an extent that resemblance becomes a vacuous term; 3) the interpretation of any iconic sign involves a good deal of conventional knowledge, that is used to establish the referential connection between the icon and its object in the first place. (Cf. Eco, 1967; Biermann, 1962). Reasons enough to watch for some alternative mechanism of “iconic meaningfulness”.

Trying to interpret iconic gestures in isolation, we are thrown back on guessing which predicates might apply to the perceived body movement. This interpretation endeavour advises that it is not the iconic gesture that denotes an object, but that in fact the gesture is the object that gets denoted. The denotation relation is just reversed. A reversed denotation relation is well-known in semiotics, it is Goodman's (1976) exemplification relation. Accordingly, I argue that the semantics of iconic gestures should be modelled in terms of exemplification.

Furthermore, the meaning of a co-verbal iconic gesture depends on its linguistic affiliate: One and the same body movement may get a quite different interpretation when interpreted, say, in the context of a noun (e.g., depicting shape) or a verb phrase (e.g., depicting a path). In order to model this kind of context sensitivity, the context-free interpretation of a gesture has to be ontologically neutral. Following semantic work on space-related prepositional phrases (Zwarts, 1997), I accomplish that by interpreting gestures in terms of vectors: The gesture annotation gets translated into a vector-based description. Exemplification, then, is modelled as a satisfaction relation between the gesture vector and the denotation of space-related predicates.

Additionally, iconic meaning may square to verbal meaning or fail to do so. Thus, there have to be some semantic well-formedness criteria obtaining for the integration of gestural and verbal information. Especially the latter fact urges to model the integration of speech and gesture within grammar theory, since it is not only a semiotic, but also a linguistic subject.

Putting the three lines of reasoning together, I present a semantic account for iconic gestures based on exemplification. Exemplification is implemented as a semantic mode within a unification-based grammar framework. A grammar interface is sketched that, among others, captures well-formedness conditions for the integration of speech and gesture. Some examples will illustrate how the account works.

References:

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