

Deixis, reference, and space in multimodal interaction: How to describe complex sign processes with Peircean triangles

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Semiotics in the line of Charles Sanders Peirce (1839–1914) can only be fully understood in the light of his contribution to modern logic by introducing the concept of polyadic relations. His concept of sign as a triadic (or three-place) relation is a special case. It is conceived of as a relation between the *representamen* or sign vehicle (R), its *object* (O), and its *interpretant* (I) (cf. Peirce 1931–58, 2000). Pre-theoretically, the latter can be understood as the sign’s “meaning” in a broad sense.

In honour of the one hundredth anniversary of his death, the present talk has the following three main goals: 1. to give an introduction to the Peircean concept of sign and semiosis beyond the well-known and often referred to distinction between iconic, indexical, and symbolic signs; 2. to further elaborate Peirce’s original concept of semiosis (semiosis type $I_1 = R_2$) by adding other possible formal types (e.g., $O_1 = R_2$, $I_1 = O_2$); 3. to apply these types to examples of “gesture-speech ensembles” (Kendon 2004) in multimodal interaction. The concluding discussion considers the extent to which the elaboration of semiosis might provide a dimension of analysis for multimodal language-image ensembles present in ancient systems of writing, such as hieroglyphs.

The introduction to analysing the use of deixis and space in multimodal interaction takes the Peircean concept of sign as its starting point and addresses the dynamic aspect of space by integrating different dimensions (Fricke 2007, 2012, submitted). Building upon the three relata – *representamen*, *object*, and *interpretant* – we can distinguish between: 1. communication by spatial means (space used as a *representamen* or sign carrier, e.g., gestures), 2. communication about space (space used as an object of the triadic sign, e.g., the Potsdamer Platz used as an *object* of verbal and gestural route descriptions), 3. space as a concept (space used as an *interpretant*, e.g., a map-like vs. a sphere-like concept of space). If space is not used to instantiate one of the three relata of the Peircean concept of sign, then concrete space is treated as a non-sign, i.e., it is not interpreted as standing for something else.

When referring to space via pointing gestures and verbal deictics the processes of semiosis can be simple (deixis at non-signs) or complex (deixis at signs, semiosis type $O_1 = R_2$) (Fricke 2007, 2014b). Based on the Peircean concept of sign, the term “deixis at non-signs” refers to the default case in which both communication partners have perceptual access to the *demonstratum*, the reference object intended by the speaker. In this case, the demonstratum of the pointing gesture or the verbal deictic is *not interpreted as a sign*. The term “deixis at signs” is used when the deictic object (*demonstratum*) is an entity that is interpreted as standing for something else, namely the reference object intended by the speaker. It is proposed that in this case the relata can concatenate by serving more than one semiotic function. In our empirical example, the *demonstratum* of the pointing gesture R_1 is the flat hand of the addressee, which is the object O_1 of the first sign relation. But, at the same time, the flat hand functions in a second sign relation as the sign vehicle, or *representamen* R_2 , that stands for the intended reference object, a particular building at Potsdamer Platz (O_2), which is not present in the actual utterance situation. It will be demonstrated how this kind of concatenation of Peircean triangles on the representamen-object axis can also be adopted for the analysis of metonymic and metaphoric use of space (Fricke 2007).

The distinction that Fricke (2012, 2014a) makes between “object-related” and “interpretant-related” gestures (semiosis type $I_1 = O_2$) is based on the distinction made between reference and meaning in linguistics. Object-related gestures are primarily related to the reference object intended by the speaker, whereas interpretant-related gestures are primarily related to the meaning or concept attached to a spoken

word form. Why is it necessary to make this distinction? Fricke (2012, 2014a) presents examples of co-speech gestures that accompany noun phrases and whose form characteristics are obviously incongruent with those of the reference object intended by the speaker, although the speaker knows exactly what the respective reference object looks like. For example, various speakers refer to a rectangular entrance using arced and circular gestures. Fricke's explanation for this is that speakers are able to switch between gestures that depict the intended reference object and gestures that depict mental images associated with the word form of the nuclear noun, e.g., mental images that serve as representations of prototypes or stereotypes.

Phylogenetically, iconic and deictic gestures may have constituted the first human signs and preceded language (Tomasello 2008). Analysing the gestural depiction of linguistic prototypes from a Peircean semiotic perspective – elaborated as introduced above – might provide a promising tool for analysing analogous types of semiotic processes in modern and ancient language-image relations to be found in written texts (Fricke 2013).

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