

Picture this: How linguists draw meanings

Joost Zwarts

(Utrecht University)

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The metalanguage of linguists is not entirely verbal or symbolic, but can also be visual and iconic and involve the use of *pictures for meanings*. This happens occasionally with classical authors (Saussure 1916, Ogden 1932, Whorf 1940, Hockett 1958) and very prominently in cognitive grammar (e.g., Langacker 1987) and some introductory textbooks (Valenzuela 2017). But how does this actually work? How can we *draw* meaning?

There is surprisingly little foundational and methodological reflection about pictures for meanings. General works on linguistic diagrams (Stewart 1976, Smessaert & Demey 2018, Petricca 2019, Bubenhofer 2020) do not mention pictures, Pflaeging (2014) only in the context of teaching linguistics, other works focus exclusively on Saussure (Kim 2008, Robert 2012, Christensen 2016, Joseph 2017, Willems 2018). But more general reflection is important, since pictures are so prominent in parts of modern linguistics and also might play a role in communicating semantics to students and the larger public. It is also important in connection to growing attention for multimodality (e.g., Bateman 2014), non-verbal linguistics (e.g., Patel-Grosz et al. 2023) and images in AI.

In order to answer the question how pictures are used in (mainly lexical) semantics we rely on a *corpus* of about 2000 graphics collected from semantic literature, about 250 of which are or contain pictures. The remaining graphics are non-pictorial (networks, plots, tables, set diagrams, ...).

We analyze the *variety* of these semantic pictures along different *parameters*, according to their ‘what’ (1)/(2), ‘how’ (3)/(4) and ‘why’ (5)/(6), partially following Smessaert & Demey (2018) for the linguistic and Richards & Engelhardt (2019) for the graphical side:

- (1) *extensional* (for a referent) or *intensional* (for a component)
- (2) *onomasiological* (for a lexical field) or *semasiological* (for a word)
- (3) *mimetic* (‘realistic’) or *schematic* (‘stylized’)
- (4) *pure* (only pictorial) or *mixed* (with diagrammatic elements)
- (5) *heuristic* (for discovering a theory) or *systematic* (for illustrating a theory)
- (6) *suggestive* (instead of text) or *supportive* (in addition to text)

This does not only map out (most of) the space of possibilities of semantic pictures, but it also helps us understand how it is possible in the first place that linguists draw meaning, while also making us aware of pictorial pitfalls and the need to ‘frame’ our semantic pictures well, theoretically and verbally.

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