Semantic Theories

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Semantics is the study and representation of the meaning of every kind of constituent and expression (from morph to discourse) in human languages, and also of the meaning relationships among them.

It is suggested in Plato's *Cratylus* (c.388BCE) and Isidore of Seville's *Etymologiae* (600–625CE) that meanings are 'natural', i.e. the form of a listeme (what needs to be listed in a dictionary) derives directly from its meaning. There is evidence of Plato's scepticism and scholars like Parmenides of Elea (c.515–450BCE) and Democritus (c.460–365BCE) concurred with Aristotle (384–322 BCE) that every sentence has meaning, not as an instrument of nature, but by convention (*On Interpretation* 16ª30; 17ª1) – i.e. the form-meaning correlation is arbitrary and the typical listeme is a symbol.

In *De signis* (Bacon 1978, c.1267) Roger Bacon postulates that nouns signify the concept of an entity; this allows for non-existents to be spoken of. Bacon also identifies fragments of semantic networks: God implies creation; essential parts (*nose/face*) and relative terms (*parent/child*) imply each other; any word invokes its proper grammatical category; contraries are implied such that privations and non-existents imply corresponding existents, and universals imply the particulars on which they are based.

The modern use of the term *semantics* defined as 'la science des significations' stems from Michel Bréal 1883. Words are signs of thoughts, and meanings change in line with speakers' needs to communicate. 'Words are not exact models of ideas; they are merely signs for ideas, at whose significance we arrive as well as we can', wrote Whitney 1867: 20. Whitney also said that old words are used in new contexts leading to meaning-change. It is the 'customary office of a word to cover, not a point, but a territory, and a territory that is irregular, heterogeneous, and variable' (Whitney 1875: 110). This opens the way for prototype and stereotype semantics – developed to rectify problems with 'checklist' theories such as componential analysis.

Lounsbury 1956, Goodenough 1956, and Lehrer 1974 cast the sense of a listeme in terms of one or more 'semantic components'. Senses are decontextualized meanings such as are found in a dictionary; senses describe the salient properties of a typical denotatum. The denotation of a language expression α is what α is normally used to refer to in some possible (not necessarily real) world. The reference of a language expression is what the speaker is using the language expression to talk about. Thus, the sense of *I crashed my car yesterday* is "the speaker did something which caused severe damage to his or her automobile the day before the utterance was made". 'I' denotes the speaker; 'my car' denotes some kind of automobile driven by the speaker, etc. If, on Sunday 3 May 2020, Max says *I crashed my car yesterday* and his car is a BMW, then Max is referring to himself, his BMW, and the event of his crashing the BMW on Saturday 2 May 2020. Meaning relationships, for instance between *father, uncle,* and *aunt*, have in common that all three denote FIRST_ASCENDING_GENERATION; *father* and *uncle* additionally have in common that both are MALE, whereas *aunt* is FEMALE; *aunt* and *uncle* are both COLLATERAL relations, whereas *father* is LINEAL. The semantic field of kinship is well-defined in terms of such components, but an exhaustive componential analysis of the entire vocabulary of a language is unachievable because it proves impossible to define the boundaries – and hence all the components – of every field.

Semantic primes are, with their interpretations, the primitive symbols that constitute the vocabulary of a semantic metalanguage. Semantic components are composed from semantic primes, but what are these primes and how many are there? The number of semantic primes in Natural Semantic Metalanguage (NSM) grew from 14 in Wierzbicka 1972 to 65 in Goddard 2011. Proponents of NSM believe that semantic primes and their elementary syntax exist as a minimal subset of ordinary natural language. It is claimed that 'any simple proposition' expressed in NSM using one natural language will be expressible in NSM using any other language (Goddard 1994). There is an English NSM, French NSM, Mandarin NSM, etc. But primes are often not isomorphic across languages like the figures *1, 2, 3* are; they show partial overlap rather than complete identity: English SOME = French IL Y A … QUI; English THERE IS = French IL Y A.

Componential semantics and NSM presuppose a checklist of properties to be satisfied for the correct use of the decomposed expression (Fillmore 1975: 123). For example, the default denotatum of *bird* is bipedal, has feathers, and is capable of flight. But there are several species of flightless birds; a downy chick and a plucked chicken are featherless, but nonetheless birds; and a one-legged owl or a mutant three-legged hen are also birds. Such analytical difficulties are avoided in prototype and stereotype semantics. The prototype

hypothesis is that some denotata are better exemplars of the meaning of a listeme than others, therefore members of the category denoted by the listeme are graded with respect to one another. For example, a bird that flies, such as a pigeon, is a better exemplar of the category Birds than a penguin, which doesn't. Establishing the prototype depends upon the experiences and beliefs of the population investigated. Consequently, the claimed prototypicality ranking is valid for the community surveyed, but not for all speakers of the language, or even for the same subjects on a different occasion.

George Lakoff 1987 noted that the prototypical *mother* (the woman who produces the ovum, conceives, gestates, gives birth, then nurtures the child) links to the *biological mother, donor mother,* etc. Some extended meanings are figurative (e.g. *mother superior*), and a very important development in late twentieth century studies of meaning was the general acceptance, following Lakoff and Johnson 1980, that metaphor and metonymy are all pervasive in language and not clearly demarcated from 'literal' meaning (Coulson 2001; Kövecses 2002).

Hilary Putnam 1975 proposed a stereotype semantics such that the meaning of a language expression α (typically a listeme) is a minimum set of stereotypical facts constituting a mental image, mental construct, or Gestalt with the attributes of the typical denotatum, including pragmatic connotations (Allan 2007). The latter is especially obvious with tabooed terms and their orthophemistic counterparts, contrast *shit* and *faeces*: the denotation is identical, but the connotations arising from encyclopaedic knowledge about the denotation and from experiences, beliefs, and prejudices about the context in which the listeme is typically used are different. The stereotype properly includes the prototype: the stereotypical *vehicle* includes the prototypical *car* and/or *bus* together with the peripheral *horse-drawn wagon*.

There are also frame semantics (Fillmore 1982); constructional semantics (Goldberg 2006); conceptual semantics (Jackendoff 1990; 2007); Discourse Representation Theory (Kamp 1981; Kamp and Reyle 1993). But most important is truth conditional semantics. To claim that *bull* means "adult, male, bovine" (Lyons 1968) is false when we appeal to the only language-independent device available: truth conditions. There is no anomaly in *bull calf* nor *bull elephant*. The world of the English speaker is such that *bull* is much more likely to denote a bovine than any other species of animal, so: For any entity x that is properly called a *bull*, it is the case that x is male and probably bovine. Semantics is necessarily dependent on

truth conditions and the probability conditions that are nonmonotonic inferences are sometimes equated with implicature (Allan 2001; 2011).

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