The typology of associative relations in (complex) word-formation

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In this talk we propose an integrated model of associative relations in word-formation, metonymy and lexical semantics, the PHAB model. We start by considering the unstated (or underspecified) relation ℜ that pertains between the major constituents of noun-noun compounds and other binominal lexemes (1).

(1)  a. PRODUCTION  b. COMPOSITION  c. USE  d. RESEMBLANCE
Seychelles Creole  Hebrew  Slovak  German
mous dimyel  mesil-at barzel  veter-ny mlyn  schlüssel-bein
fly honey  track-STC iron  wind-ADJZ mill  key-bone
‘bee’  ‘railway’  ‘windmill’  ‘collarbone’

The nature of ℜ has been the subject of considerable research, often with each new researcher reinventing the classificatory wheel (see Hacken 2016 for a recent summary). We focus on two classification schemes of the “reductionist” type (Søgaard 2005) which operate at different levels of granularity: Hatcher’s (1960) system of four logical relations and Bourque’s (2014) 25-way empirically-derived classification. Following Arnaud (2016), we show how these two systems can be mapped together into a two-tiered system (the “Hatcher-Bourque classification”). We argue that this resolves the dispute regarding the number of relations involved. That number depends on the requirements of the analysis, and the degree of granularity can range from one (as suggested by Bauer 1979) to unlimited (as opined by Jespersen 1942). Our resulting two-tiered system has been tested against a database of over 3,700 noun-noun compounds and their functional equivalents from 106 languages.

We then turn to metonymic relations, taking our cue from Janda (2011) and Peirson & Geeraerts (2006). We show how most, if not all, such relations match the semantic relations found in binominals. For example, the PRODUCER FOR PRODUCT metonymy in I’m reading Shakespeare (Kővécsei 2002) corresponds (at some level of abstraction) to the PRODUCTION relation between honey and fly in (1a). All but one of the 23 metonymic patterns catalogued by Peirsman and Geeraerts can be accommodated by the Hatcher-Bourque classification, with only very minor tweaks (and the exception is exceptional in other ways, as we will show). Furthermore, even if the total number of relations should out to be unbounded, the vast majority, as Tratz & Hovy (2010) point out, fit within a relatively small set of categories.

Finally, we consider the seven-way system of “conceptual relations” developed by Andreas Blank and Peter Koch in various papers (e.g. Koch 2001; Blank 2003) and used to investigate polysemy, semantic shifts and other aspects of lexical semantics. According to Koch and Blank, all such relations ultimately go back to Aristotle’s three associative relations of ‘similarity’, ‘contiguity’ and ‘contrast’. We show how they, too, can be accommodated within a slightly extended version of the Hatcher-Bourque classification. The result is a single, integrated, multilevel system of associative relations that can be applied across subfields of linguistics as diverse as word-formation, metonymy and lexical semantics, the PHAB model. This model provides a common framework that can be tested and further elaborated by other researchers, who are thereby relieved of having to continually reinvent the wheel.
The PHAB model of associative relations

References


