

When the meaning of free morphemes diverges from the meaning of their bound counterparts: The case of *bio* and its relatives

Fabian Ehrmantraut¹

¹ Saarland University

fabian.ehrmantraut@uni-saarland.de

Bio, *super* and *mega* are just some examples for words that have undergone the morphologic development from a bound morpheme to a free lexeme in German (Scheller-Boltz 2008, Gehlen 2016). I will present corpus linguistic as well as experimental data that strongly suggests that the morphological change in question goes hand in hand with a semantic change, more concretely, semantic narrowing.

An exemplary corpus-based study (Deutsches Referenzkorpus, IDS Mannheim. Samples of the archive: *Der Spiegel*) for the element *bio* was conducted to determine the grammatical differences between bound and free occurrences. The study showed that the basic difference is of a semantic kind: whereas bound occurrences of *bio* are found in three different contexts – concerning either A: life in general (595 instances, e.g. *Biophysik*), B: living organisms (48 instances, e.g. *Biowaffe*), or C: ethical/environmental aspects (305 instances, e.g. *Biobanane*) – the use of the free morpheme is, with few exceptions (4 instances), restricted to contexts of type C (1) and not possible in contexts of type A (2) or B (3):

- (1) Die Banane ist bio. (2) *Die Physik ist bio. (3) *Die Waffe ist bio.

This observation suggests that the morphologic change of *bio* goes hand in hand with semantic narrowing. To confirm this hypothesis systematically, a rating study was carried out.

The study crossed the factors boundedness (bound vs. free) and context (A/B-contexts vs. C-contexts) in a 2x2 design. The data was analyzed by calculating a linear mixed effects model using *lme4* for R (Bates et al. 2015). Significant fixed effects of boundedness and context show that *bio* is overall more acceptable as a bound morpheme than as a free morpheme ($\chi^2(2) = 446,21$, $p < 0,0001$) and more acceptable in C-contexts than A/B-contexts ($\chi^2(2) = 181,69$, $p < 0,0001$). Furthermore, the interaction between both factors ($\chi^2(1) = 161,34$, $p < 0,0001$) shows that free lexemes are in comparison to the bound counterparts significantly less acceptable in A/B-contexts than in C-contexts. The results reflect the data of the previous corpus study and confirm the hypothesis that *bio* went through a process of semantic narrowing. Introspective data like (4) suggests that the observations made for *bio* can be generalized for other elements with similar developments. Corpus-based and experimental studies for these elements are currently in progress and will be ready to be presented in the talk.

- (4) Superstau / #Der Stau ist super. / Megakatastrophe / #Die Katastrophe ist mega.

References: Bates, Douglas et al. (2015). Fitting Linear Mixed Effects Models Using *lme4*. *Journal of Statistical Software* 61. Gehlen, Jakob (2016). *Vom Konfix zum Wort*. Graduate Thesis Ludwigs-Maximilian-Universität München. IDS Mannheim: *Das Deutsche Referenzkorpus DeReKo*. Scheller-Boltz, Dennis (2018). »Bio, Burger oder Genfood – Streit ums Essen« bio(-) jetzt als selbstständiges Wort? *Muttersprache* 118.

