

## Prefix combinations in English

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In English, it is generally possible to attach affixes to already affixed words. However, affixes cannot be combined arbitrarily, but there seem to be certain restrictions at work that permit some (e.g. *atom-ic-ity*) and prohibit other combinations (e.g. *\*atom-less-ity*). Recent studies, such as Hay and Plag (2004) and Baayen and Plag (forthcoming), have provided evidence that suffix combinations in English are constrained by structural as well as by processing factors. Thus, two suffixes can only combine if their grammatical and semantic characteristics allow them to do so and if the resulting combination is well processable. Well processable are those combinations in which morphological complexity increases from the innermost to the outermost suffix. This idea was first put forward by Hay (2003), and is known as *Complexity Based Ordering*. In Hay's theory morphological complexity heavily relies on the parsability of affixes. According to Hay less parsable affixes cannot attach to more parsable affixes, because this would lead to difficulties in processing. A less easily decomposable inside a more decomposable suffix, on the other hand, is easy to process and therefore possible.

Studies testing this approach have, however, been exclusively focussed on suffixes, which gives rise to the questions whether prefix combinations are constrained by the same factors as suffix combinations and whether the idea of *Complexity Based Ordering* can be extended from suffixes to prefixes. These questions will be tackled in the present paper. I will present the results of an investigation of the combinatorial properties of 15 English prefixes and show what these results can tell us about the factors constraining prefix-prefix combinations in English. The methodology employed for this investigation is analogous to the procedure applied by Hay and Plag (2004) for their suffixes. First, the OED, BNC, and CELEX lexical database are checked for attestations of the 225 potential two-prefix-combinations. Second, it is tested which factors can be held responsible for the distribution of attested vs. unattested combinations. In order to investigate whether the combinability of prefixes is constrained by grammatical factors, it is worked out which combinations are structurally possible and which are impossible. This is done with the help of information on the structural characteristics of the 15 prefixes, which is available in the pertinent literature on word-formation (e.g. Marchand 1969, Adams 2001, Plag 2003). Next, it is tested whether *Complexity Based Ordering* can be extended from suffixes to prefixes by ordering the prefixes hierarchically, based on attested combinations. The hierarchical ranks are then correlated with different measures of parsability provided by Hay and Baayen (2002).

The structural analysis yields that the vast majority of the 225 potentially possible prefix combinations are structurally acceptable and that the number of structurally possible combinations exceeds the number of attested combinations by far. None of the attested prefix combinations is structurally unacceptable, but as only a relatively small proportion of structurally possible prefix combinations are actually attested, there must be further restrictions at work that prevent speakers from combining prefixes. It will be demonstrated that these further restrictions are processing constraints, as the hierarchical ranking established on the basis of attested combinations significantly correlates with productivity, which is a strong indicator of parsability according to Hay and Baayen (2002). The paper therefore provides strong empirical evidence that *Complexity Based Ordering* also holds for the combination of prefixes. Prefixes that are more easily parsable occur outside prefixes that are less easily parsable.

## References

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