

The phonetics of newly derived words: Some case studies

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Neologisms and rare words have played a prominent role in research on morphological productivity (e.g. Baayen 1989, 1996; Plag 1999; Mühleisen 2010). Most of the attention concerning the properties of such lexical innovations has been devoted to their phonological, morphological, semantic and syntactic properties (see, for example, Bauer et al. 2013 for such analyses). Recently, the phonetic properties of complex words have come into focus (see, for example, Plag 2014), and it seems that, at least for some morphological categories, phonetic detail can tell us something about the morphological structure of a word. For example, several studies have shown that the phonetic realization of a particular segment varies according to the kind of morphological boundary it is adjacent to. A case in point is the velarization of English /l/, which is most dark before a word boundary and less dark before a word-internal morpheme boundary (e.g. Lee-Kim et al. 2013). Other studies have found that phonologically homophonous affixes are in fact phonetically distinct. Plag et al. (2015) and Zimmermann (2016) show that word-final S English differ in acoustic duration depending on their morphological status. Non-morphemic S is longest, suffix S is shorter, and cliticized S is shortest. Ben Hedia and Plag (2016) find that the duration of cross-boundary geminate nasals with the prefix *in-* depends on whether we deal with the more transparent negative prefix (e.g. *impossible*, *immemorial*), or the less transparent locative prefix (e.g. *import*, *immigrant*).

These findings raise the question of whether more recent lexical innovations of a given morphological category may generally differ phonetically from established older forms. One hypothesis (let's call it the 'segmentability hypothesis') that could be entertained is that newly derived words show less phonetic integration, hence less phonetic reduction, of the affix involved than established forms. This hypothesis is based on the idea that productivity correlates with morphological segmentability (e.g. Hay 2002; Plag and Baayen 2009), and that morphological segmentability in turn correlates with phonological integration. That the strength of the morphological boundary correlates with phonological integration is an assumption that is generally held, even by scholars of otherwise very different persuasions such as Lexical Phonology (e.g. Kiparsky 1982) and Natural Morphology (e.g. Dressler 1985).

To date there is only one study that clearly confirmed the segmentability hypothesis, Hay (2007), other studies have failed to replicate the effect (see Hanique and Ernestus 2012 for an overview). Hay found that the duration of the prefix *un-* in New Zealand English depends on the segmentability of the prefix, as measured by the relative frequency of base and derived word. The prefix is longer in words that are more easily segmentable. This means that new coinages may generally show phonetic properties that differentiate them from established forms.

The present study tries to replicate Hay's result with data from the Buckeye corpus (Pitt et al. 2007), using different measures of morphological segmentability. We will look at five affixes: *un-*, locative *in-*, negative *in-*, *dis-* and adverbial *-ly*. The results vary a bit across affixes but, in general, we find good support for the segmentability hypothesis. Affixes in lexical innovations have longer acoustic durations.

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