

Transparent Morphology Causes Phonological Opacity

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Application of phonological operations may obscure the underlying form and the morphological structure of words: if features freely spread, it may become hard to distinguish between morphemes, or to find the boundaries of morphological constituents. Apparently opaque phonological behaviour may therefore follow from the drive to mirror morphological structure faithfully in the phonology.

In this talk, we present a case study of this phenomenon, based on a set of data relating to nasal consonants in the Hellendoorn dialect of Dutch. If these consonants appear in a rhymal position, they undergo a variety of changes. However, if the nasal is a morpheme on its own, its behaviour differs from situations where it is just part of a more complex morpheme. We argue that this is the result of two constraints on the phonology-morphology interface:

REALIZE-MORPHEME, well-known in the literature, and of the requirement that phonological constituent structure should mirror morphological constituent structure (cf. ALIGNMENT).

One type of opacity can be found in the behaviour of the infinitival suffix *-n* with stems ending in a consonant. Here we find progressive place assimilation:

(1) loo[pm̩] “walk”, wär[kŋ] “work”, lao[tŋ] “let”

This assimilation seems to be subject to rule opacity. In the example in (2) the syllabic nasal is not homorganic with the immediately preceding consonant, while in the example in (3) it is.

(2) pa[kŋ] “took” (3) pa[kŋ] “take”

The difference between these two forms has something to do with the fact that the past tense suffix is /t/, and this /t/ is deleted in interconsonantal position. In a derivational analysis, this deletion would follow assimilation, and this would give a counterfeeding order. The constraint REALIZE-MORPHEME, requiring at least one element of the underlying form of a morpheme to surface, gives the right result in a representational analysis: if we would delete the /t/ completely, the plural would not surface at all. What we do instead, therefore, is retain the feature [coronal] and attach it to the nasal.

The suffix *-n* turns up as nasalization if the stem ends in an oral vowel (4a). Interestingly, however, if the stem already contains a nasalised vowel, the suffix shows up as a coronal syllabic *n* (4b). The vowel is denasalized in those environments (we now turn to nouns instead of verbs, but the suffix has the same phonological shape):

(4) a. spr[œ] ”starling” spr[œ̃] “starlings”
b. b[õ] “bill” b[oʔŋ] “bills”

This process is opaque in various ways. In the first place, a structure such as b[oʔŋ] can never occur as monomorphemic forms. But more importantly, it is not clear why addition of a [+nasal] suffix to an underlyingly nasalised vowel would lead to a structure such as this (instead of b[õ] with the nasalisation representing the plural suffix). Realizing, however, that in this way the stem-suffix boundary is better aligned, and we thus make the morphological structure more transparent in the phonology, can explain this apparent opacity. This is phonology mirroring morphology.

In the talk, we will show that Hellendoorn shows more facts pointing in the same direction. The upshot of this is that different phenomena get a uniform analysis. Whereas in non-morphologically based analyses there has to be a conspiracy of phenomena leading to the different types of behaviour of the Hellendoorn nasal, these are all captured in a uniform way.