Myopic effects in the Irish initial consonant mutation system

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Irish initial consonant mutation (ICM) is the systematic alternation of word-initial consonants in a range of morphosyntactically defined environments. For example, word-initial */b/* in ***b****róg* 'shoe' mutates to */v/* following the definite article (*an* ***bh****róg* 'the **L**.shoe'; "lenition"); and becomes */m/* when the definite complement of a preposition (*ar an* ***mb****róg* 'on the **E**.shoe'; "eclipsis"). I argue that the Irish mutation-triggering environments fall into two distinct classes, depending on whether or not the mutation-inducing element is spelt out alongside a "trigger word". Myopic effects at the morphosyntax-phonology interface lead to subtle differences between these two classes, and can thus serve as a diagnostic for the source of mutation in a given context.

Following Breit (2019), I propose that ICM is caused by floating phonological material that latches onto the initial consonant of a word to produce a mutated consonant. Breit assumes that this material is introduced into the derivation as part of the phonological representation of a so-called "trigger word". The trigger word contains floating features ({**L**}/{**E**}) at its right edge; these features dock onto the initial consonant of the following word to effect the mutation (Figure 1). I also consider a second possibility: that the mutation-inducing material is inserted separately from the trigger, possibly as a prefix exponing morphosyntactic features on the target word (Figure 2).

Figure 1: Mutation features tied to trigger

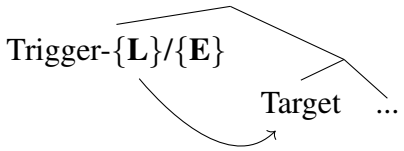
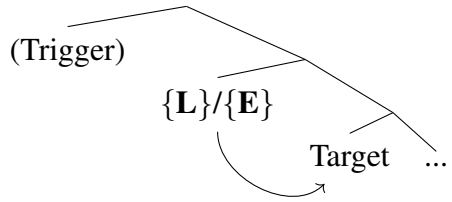


Figure 2: Mutation features inserted separately



I argue that both sources of mutation-inducing material are necessary to account for the full range of Irish ICM data. For example, the former case ("Type 1") accounts for instances where a single trigger word is associated with mutation on any following consonant, regardless of the target word's morphosyntactic properties. The latter case ("Type 2") can explain instances of trigger-target non-adjacency, as well as mutation in the absence of an overt trigger word.

I assume that spell-out occurs cyclically in chunks, and that within each chunk, it is implemented from the inside out, starting with the most embedded node (cf. Embick 2010). In such a grammatical system, where the phonological form is built up incrementally, the fundamental difference between the two proposed mutation types lies in whether the mutation-inducing material is spelt out alongside (Type 1) or before (Type 2) the immediately preceding word/morpheme. This means that myopic effects may be used to distinguish between the two sources of mutation in some instances. I consider two examples of this here.

1. No look-ahead: particles selected based on post-mutation identity of the target segment

Irish verbs are almost always mutated in certain tenses, and the pre-verbal tense particle *d'* is associated with precisely the contexts where tense mutation is observed on the verb. It therefore seems reasonable to assume that it carries the mutation-inducing features as part of its phonological representation (Type 1). However, in most modern dialects of Irish, this particle only surfaces in the context of an empty consonantal slot (assumed to be present in all Irish vowel-initial words). Crucially, whether *d'* is inserted depends on the post-mutation identity of the initial consonant. Thus, it appears not only before vowel-initial verbs (1-a), but also before verbs that are underlyingly *f*-initial (since */f/* deletes under lenition, leaving an empty consonantal slot behind) (1-b).

(1) a. *d' ól mé*
HIST drink 1.SG
'I drank'
b. *d' **fh**an mé*
HIST **L**.stay me
'I stayed'

In an inside out spell-out system, the allomorph selection process is unable to look ahead in the derivation. This means that the mutation must have taken place prior to the insertion of *d'*. Therefore, the mutation-inducing material must be distinct from the element *d'* – in other words, this is an instance of Type 2 mutation. A similar effect is observed in certain dependent copular clauses: the copular particle *-b* only emerges before words that have an empty consonantal slot post-lenition. Again, this implies that *-b* is not the mutation trigger, and the mutation is of Type 2.

2. Non-sensitivity to peripheral structure: the domain of coronal blocking of mutation

In some cases, the expected mutation is blocked when two coronal consonants come together at a word/morpheme boundary (2-a). However, this coronal blocking (CB) of mutation is only observed in a subset of mutation environments. For example, the initial consonant of *dearg* in (2-b) is mutated, in spite of the preceding coronal consonant.

(2) a. ***an t**eanga / *a**n th**eanga*
the language / the **L**.language
'the language'
b. *trae**in dh**earg / *trae**in d**earg*
train **L**.red / train red
'a red train'

I propose that CB is a consequence of a coronal fusion rule, which requires two adjacent segments to share their [+cor] feature (Ní Chiosáin 1991). Once a segment has undergone this process, it is no longer accessible as a host for the mutation-inducing features, so mutation is blocked.

The domain of applicability of CB can be linked to whether the preceding coronal consonant is present when the mutation features are inserted. In Type 1 mutation environments, the mutation-inducing features are by definition tied to the the trigger word. This means that the conditions for coronal fusion are met at the point when this trigger word is inserted. The coronal fusion process therefore applies, and mutation is blocked. In Type 2 mutation environments, the mutation-inducing features are spelt out before the preceding word. Because these features are insensitive to peripheral structure, they are unable to "see" the preceding coronal consonant; thus, they are free to dock onto the initial consonant of the target word, causing it to mutate. By the time the preceding coronal consonant is spelt out it is too late for CB to apply. The presence or absence of CB effects in a given mutation environment can therefore be used to distinguish between the two possible sources of mutation-inducing features identified above.

In summary, the cases outlined here demonstrate how considerations of myopia can shed light on the differences between two distinct classes of initial consonant mutation in Irish.

References

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