Vowel length in Icelandic compounds and the role of FENs

The paper addresses the issue of peculiar phonological behaviour of some morphologically complex words in Icelandic (compounds and some derived forms). A cursory look at the data may make an impression that the phenomenon violates modularity. It will be argued that a purely phonological account is possible in a modified model of CVCV which eliminates Proper Government (introducing two types of Interonset Government instead) and ascribes special properties to FENs.

Icelandic is a language with tonic lengthening, in which all stressed vowels in open syllables are lengthened (with the proviso that word-final consonants are extrametrical, hence lengthening in CVC words). When CVC words occur as the first part of the compound, length of the vowel should be dependent on whether the concatenated second member attaches synthetically or analytically. This should be decided by morphosyntax and be a property of a given morpheme. Often in such cases semantic factors may play a role - for example, whether the meaning is compositional or not. It is, however, unusual that this fact is dependent on melody. Consider the following data:

(1) von [vɔːn] ‘hope’
    haf [haːv] ‘ocean’
    vor [vɔːr] ‘spring’
    raudur [ˈrøːːfur] ‘red’

(2) brosa [ˈprɔːsa] ‘to smile’
    bak [paːkʰ] ‘back’
    hvítur [ˈkʰviːːtʰyr] ‘white’

If the stem ends in [pʰ, tʰ, kʰ, s], vowel length in the compound is retained, regardless of what is concatenated. Otherwise, the arising cluster blocks lengthening. Thus, Icelandic compounds, the first member of which is a monosyllabic CVC word, seem to follow the following pattern:

(3) if the last consonant of the first member of the compound is a fortis plosive or /s/ (=contains {H}), concatenate the second member analytically
(4) if the last consonant of the first member of the compound is any other consonant (=does not contain {H}), concatenate the second member synthetically

The nature of the second member (e.g. whether it begins with a sonorant or obstruent) does not matter. This is why it cannot be stated that the clusters in (2) are branching onsets: [s] or [tʰ] are never branching onsets morpheme-internally, and certainly nobody would postulate it for [kʰpʰ].

The generalisation presented in (3) and (4) would be unacceptable for any linguist assuming a modular view of grammar. Melodic conditioning for spell-out is an unheard-of phenomenon. The structure is sent to interpretation either as [root-suffix] or [root][suffix], and the causation of one or the other always lies in the morphosyntax.

Scheer (2012) introduces the theory of Direct Interface, according to which morpheme boundaries can be represented as empty syllabic space. An empty CV unit may well be made responsible for the long vowel in the right-hand examples in (2), but what still remains unsolved is the motivation for translating morpheme boundary into a CV. This still seems to be caused by the presence of {H}. In this way, neither a procedural nor a representational analysis can explain melodic conditioning for spell-out.

The proposal issued here will be couched within a modified model of CVCV which uses only two types of Interonset Government to close domains: Leftward and Rightward IO. Proper Government is eliminated and the role of licensing is significantly enhanced. Rightward Interonset corresponds to ‘branching onsets’, i.e. usually steep TR clusters. Leftward Interonset Government can be established in
all other clusters: RT, TT, RR, and flat TR. Its environment is best characterised as ‘elsewhere’. Both relations belong to computation and may be established only when the governor is government-licensed by the following nucleus. LIO and RIO have different effects on the intervening nucleus: whereas LIO completely disables its licensing abilities, nuclei enclosed in RIO may still licence the preding nucleus (intervocalic licensing is a condition responsible for tonic lengthening).

Within the present analysis it will be argued that although LIO per definitionem can be established in every cluster which is not the domain of RIO, there are language-specific restrictions or deviations from this state of affairs. Also, FENs will be postulated to play a very special role in the process of establishing LIO.

In all examples from (1) and (2) concatenation is of the same type: it is analytical, which means that the boundary is translated. However, it will be argued that Direct Interface needs to be adjusted to the Icelandic data. The output of translation is not an empty CV slot, but the Translator’s Office switches on the FEN status of the last nucleus in the string. This status significantly influences what relations can be established across such a nucleus.

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\begin{array}{cccc}
C & V & C & \text{Lic} \\
\text{\ldots} & \delta & \emptyset & \text{GL} \\
LIO \\
\end{array}
\]

\[
\begin{array}{cccc}
C & V & C & \text{Lic} \\
\text{\ldots} & \emptyset & \text{GL} \\
LIO \\
\end{array}
\]

\[
\begin{array}{cccc}
\text{\ldots} & \text{\ldots} & \text{(FEN)} & \text{\ldots} \\
\text{(FEN)} & \text{\ldots} \\
\end{array}
\]

\[
\begin{array}{cccc}
C & V & C & \text{Lic} \\
\text{\ldots} & \emptyset & \text{GL} \\
\text{\ldots} & \text{GL} \\
LIO \\
\end{array}
\]

Icelandic badly tolerates truly fortis plosives in the coda position. Thus, within an Icelandic morpheme a sequence of *VT'C never occurs on the surface. If it is present underlyingly, it is repaired on the surface through some kind of lenition: preaspiration /pʰapʰθ/ → [pʰapʰ], or spirantisation /vɛikʰð/ → [vɛxt]. Within the present model lenition in the quoted examples is caused by the fact that the first consonant in the cluster is governed by the second one. Government ‘spoils’ the target and leads to its melodic depletion. However, it seems that conditions on establishing LIO in Icelandic are more complex than that. Although morpheme-internally LIO can be always established and lenition may be enforced on the governed plosive, FENs are stronger obstacles than morpheme-internal empty nuclei to establish a lateral relation across. When the potential governee is not too complex itself (e.g. is a sonorant), LIO is still successful. But a complex target guarded by a FEN is too strong a defense for LIO to get through. For this reason, the FEN in examples like hvítleitur remains ungoverned, which is why it does not lose its licensing abilities and the preceding vowel may emerge as long. Also, the [tʰ] remains ungoverned, hence it is not lenited and may be aspirated.

In order for the explanation described above to function, it is necessary to accept two modifications of CVCV: elimination of Proper Government (which applies blindly irrespective of melodic considerations), and the fact that FENs may be granted a special status by the Translator’s Office. This is the way to eat your cake and have it – to work with purely phonological vocabulary and explain why Icelandic compounds sometimes look as if they were created via synthetic concatenation, and sometimes analytic.

References: