LENTH AND SYLLABIFICATION IN ICELANDIC

Margaret Stong-Jensen

Department of Linguistics
University of Ottawa
Ottawa, Ontario K1N 6N5 Canada

ABSTRACT

The domain of length in Modern Icelandic is the syllable Rhyme. Length in stressed syllables is realized by either a branching Nucleus or a branching Coda. The consonant at the end of a word is extrametrical. Arguments are presented against an analysis in which the domain of length is the syllable Nucleus. The analysis takes into account the lengthening of preconsonantal consonants in stressed syllables observed by traditional scholars. The resulting analysis predicts length by a single lengthening rule, and avoids syllable restructuring and vowel shortening rules.

INTRODUCTION

Modern Icelandic exemplifies the close relation between stress and quantity that has been observed in many languages. In Modern Icelandic, length of syllables is predictable from stress: stressed syllables are long, and unstressed syllables are short. Icelandic thus contrasts with English, in which stress is at least partly predictable from syllable length. Quantity in Icelandic has been approached from both a prosodic and a segmental point of view. For Haugen [11], quantity belongs to syllables; in particular to the Nucleus, which Haugen claims is complex in long syllables. Anderson [1] and Arnason [3] refine Haugen's proposal by saying that the Nucleus is branching in long syllables and nonbranching in short syllables. Benediktsson [4] adopts a segmental approach to length, arguing that quantity can be represented at a phonemic level by the contrast between long and short consonants, with vowel length predicted by allophonic rules. I will argue for the prosodic approach to Icelandic quantity, using an autosegmental framework. I will claim that length is inherent in the syllable Rhyme rather than in the Nucleus alone.

In Icelandic, primary word stress falls on the initial syllable of a word, and secondary stresses occur in alternating patterns, with morphologically determined variations [2]. Syllables are long under both primary and secondary stress, although some shortening occurs under secondary stress [6]. In stressed syllables, long vowels and long consonants are in complementary distribution, as in (1).

(1) a. VC: menn 'men' (nom.pl.) [menn] b. V:C men 'necklace' [m:n] c. V: bů 'household' [bu:] A syllable with a V or VC Rhyme is not long, and a V:C: Rhyme is not permitted. Icelandic is thus unlike English, in which a VC syllable may be long, and unlike Estonian, in which a long syllable may be V:C: [14].

Öfeigsson [16] and Einarsson [5, 6] have noted in addition that preconsonantal consonants are lengthened under stress, as in hestur 'horse' and ísja 'industry,' which Einarsson [6] transcribes as [hES'tyr] and [ís'ja]. This consonant lengthening is most apparent under contrastive stress [3] and in words used as citation forms. Öfeigsson and Einarsson transcribe the lengthened consonants as half-long, assuming a degree of length between long and short. Liberman [15] did not find any significant difference in duration between the g in last 'blame' and the g in guða 'most yellow,' which should be short since it is in an unstressed syllable. But Liberman notes that the phonetic correlates of quantity are as yet ill-determined and may involve intensity as well as duration. Liberman concludes that consonants such as the g in mynd 'picture' and the g in last carry the "quantitative peak" and leaves the phonetic realization indeterminate. In this paper, I shall adopt Haugen's proposal [11] that preconsonantal consonants have full length phonologically under stress. I shall not address the question of their phonetic value, but I shall assume with Haugen that they may be reduced by reduction processes operating in consonant clusters. Lengthening applies to continuants, sonorants, and voiced stops, as in (2).

(2) a. hafói [hav'dt] 'had'
   b. lax [lax-s] 'salmon'
   c. sagař [say's] 'said'
   d. sandur [san'dyr] 'sand'
   e. hárður [har'dyr] 'hard'
   f. sigla [si'glə] 'to sail'

Voiceless stops are preaspirated in this position [19], a topic I cannot explore here.

SYLLABIC ANALYSES

Arnason [3] proposes a syllabic account of quantity in Icelandic which incorporates lengthening of preconsonantal consonants under stress. He assumes with Haugen [11] that quantity is localized in the Nucleus and that the lengthened consonant is part of the Nucleus. Arnason represents vask [vas'k] 'sink' (acc.sg.) and nú as in (3).

(3) Syllable
   Onset Rhyme Coda
   v: nucleus
   b: as
   u: k
   ŋ

A syllable with a V or VC Rhyme is not long, and a V:C: Rhyme is not permitted. Icelandic is thus unlike English, in which a VC syllable may be long,
Amazon speaks of elements in the Nucleus as being "stretchable." In more formal terms, we can say that the last segment in the Nucleus is lengthened, giving a long g.

Another way of giving a more formalized analysis is to assume that length is localized in the last consonant. However, he does not consider the consonant's lengthening. He defines stressed syllables as those that have branching nuclei, which need not be included in the domain of pronunciation to be made, but are reduced to binary branching on the surface. A stressed syllable with a short vowel after it in the Nucleus by evoking the consonant in the Coda into the Nucleus, as in (4), which represents the rhyme of vask. Here, the association of the consonant to the Coda is broken and the consonant is reassociated to the Nucleus. C stands for Coda.

(4) Ye can formalize the lengthening of the g by a rule that adds a C slot to the Nucleus, as in (5).

Ternary nuclei must be limited to this structure, since Icelandic does not have overlong vowels or overlong syllabic consonants. The need for a lengthening rule shows that Anderson's movement rule must be abandoned in accounting for the data. By giving up the movement rule and lengthening the consonant, its base position is possible in the generative position in the Coda, we will achieve the same effects as in the traditional analyses. The grammar without the movement rule must also give up the requirement that long syllables have branching nuclei, since the nucleus in vask will be non-lengthening.

A problematic aspect of length is the difference between monosyllables and polysyllables. In monosyllables, a vowel of lengthening is long if it ends the word, as in skul [skul] 'skull' and af [af] 'a', or if it is followed by just one consonant, as in skip [skip] 'skip' and haf [haf] 'hath'. It is debatable whether the part of the diphthong is lengthened. Haugen [10] claiming it to be the off-glide. I will not pursue the matter here. In monosyllables ending in two consonants, the consonant immediately following the vowel is lengthened, as in skip [skip] 'skip' and skul [skul] 'skull' (gen.sg.). In polysyllables, the stressed vowel is lengthened if it ends the syllable, as in haf [haf] 'hath' and af [af] 'aff'. This is debatable which part of the diphthong is lengthened. Haugen [10] claiming it to be the off-glide. I will not pursue the matter here. In monosyllables ending in two consonants, the consonant immediately following the vowel is lengthened, as in skip [skip] 'skip' and skul [skul] 'skull' (gen.sg.). In polysyllables, the stressed vowel is lengthened if it ends the syllable, as in haf [haf] 'hath' and af [af] 'aff'. This is debatable which part of the diphthong is lengthened. Haugen [10] claiming it to be the off-glide. I will not pursue the matter here.
The last monosyllabic type is vasks (25). Here, Lengthening (17) does not apply.

This analysis needs no additional rules to account for the alternation in length of the s in vask [vask] and vasks [vasks], which follows from the application of Lengthening (17) to the input structures in (24) and (25). The alternation in vowel length shown in vor [vor] and vor-s [vor-s] 'spring' (gen.sg.) is likewise handled by Lengthening (17), which applies to vor in (26) to derive the short-vowel form. Compare (23), in which (17) derives a long vowel.

This alternation in vowel length occurs regularly when a consonantal suffix is added to a monosyllable ending in a single consonant, such as skip [skip] 'ship' and skips [skips] (gen.sg.); bat [bat] 'boat' (acc.sg.) and bats [bats] 'boat' (gen.sg.). My analysis accounts for the alternation in vowel length, as well as the alternation in consonant length, by the general lengthening rule (17), without needing recourse to the additional shortening rule needed in Anderson's analysis [1]. (Consonant assimilations in these examples are due to other rules.) Finally, the minimal pair menn and men (1a, 1b) are derived in (27) and (28).

The final nasal cluster in menn (27) is reduced by later rules to obtain the approximately equal duration found by Garnés [7] for menn and men.

To summarize, the rule of Lengthening (17), with the syllabification conventions (12)-(14), accounts for Icelandic syllable quantity in a simpler and more empirically adequate way than does the analysis proposed by Anderson [1], which appeals to additional syllable restructuring and shortening rules.