

## Ternary syllable weight in Finnish

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The Weight-to-Stress Principle, or WSP, (Prince 1990) allows for only a two-way distinction in syllable weight, light versus heavy. This is based on the standard view in moraic theory (McCawley 1968, Prince 1976, Prince 1983, van der Hulst 1984, Hyman 1985, McCarthy and Prince 1986, Hayes 1989, Ito 1989, Zec 1988) in which each element of the rhyme projects a mora and syllables are maximally bimoraic, or, in exceptional cases, trimoraic. CV syllables are thus monomoraic, while CVC and CVV syllables are both bimoraic. To account for the different patterning of CVC syllables across languages as heavy versus light, Hayes (1989) proposes the parameter of Weight-by-Position, which assigns moras to vowels obligatorily but to coda consonants optionally. This proposal allows for flexibility in the treatment of CVC syllables, but still allows only a two-way distinction in syllable weight, with CV versus CVC/CVV syllables on the one hand and CV/CVC versus CVV syllables on the other.

In Finnish, the evidence from both stress facts and minimal word effects argues for a three-way distinction in syllable weight, with CVV syllables acting heavier than CVC syllables, and CVC syllables heavier than CV syllables (Karvonen 2005). Outside the first two syllables of the word, CVV and CVC syllables both pattern as heavy and attract secondary stress, disrupting the normal alternating rhythmic pattern. However, content words in Finnish must be minimally (C)VV or (C)VVCV (Hanson & Kiparsky 1996, Harrikari 2000), suggesting that CVC here patterns as light, as shown in (1) below:

(1)	.maa.	‘land’	.ka.la.	‘fish’
	.suo.	‘marsh’	.u.tu.	‘mist’
	.yö.	‘night’	.lu.mi.	‘snow’

CV and CVC content words do not exist, and a potential subminimal word like *mi* ‘what’ is augmented to the CVCV form *mikä* on the surface, an observation originally made by Harrikari (2000). This results in a conundrum, since CVC syllables pattern as heavy in terms of stress assignment, but as light in terms of minimal word effects. An additional wrinkle comes from the stress patterns of adjacent word-medial CVC and CVV syllables in pentasyllabic and longer words. In such cases, the CVV syllable is always stressed, regardless of the linear order of the two heavy syllables:

(2)	<i>Word-medial CVC.CVV and CVV.CVC sequences: CVV always stressed</i>
	hó.ri.son.tàa.li      ‘horizontal’
	dí.ag.nos.tiik.ka      ‘diagnostics’
	á.ka.tèe.mik.ko      ‘Academy member’
	á.na.lÿy.tik.ko      ‘analyst’

The data in (2) provides the crucial evidence for a clear three-way distinction. Finnish is not alone in this regard; Gordon (1999) discusses other languages which have more finely articulated scales of syllable weight, with three- and even four-way distinctions in weight. Such languages prove difficult to analyze within traditional moraic theory, which

allows for only a two-way distinction in syllable weight. Following a proposal by de Lacy (2002), I suggest a solution to the problem by splitting the WSP into a family of syllable weight markedness constraints based on relative syllable prominence, militating against stressless syllables of various types. This proposal allows for cutoffs at various points along the scale, accounting for more fine-grained distinctions in weight and predicting a richer typology of syllable weights than previously reported.

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