

The Moraic Analysis of Length and Laryngeal Alternations in North Saami

This paper gives a moraic analysis of laryngeal and gemination alternations associated with consonant gradation in North Saami. A fact of theoretical interest about North Saami is that gradation gives rise to a surface three-way length distinction in consonant length, as well as length differences in vowels and diphthongs. Yet in underlying representations, the only lexically-registered prosody is the fact of certain consonants being moraic — one must know for a morpheme whether it has an underlying geminate versus single consonant. The development of surface three-way consonant length and two-way nuclear length is thus the consequence of interactions in the rule system. Our analysis of underlying versus surface distinctions underscores the problem of asking about contrasts in an undifferentiated inventory because a given fact (long diphthong versus short diphthong; simple preaspirated versus overlong preaspirated stop) may be “contrastive” at a more superficial level but noncontrastive at a deeper level.

The central segmental puzzle of the gradation system is the connection between gemination / overlength alternations, and analogous preaspiration and glottalization alternations. These laryngeal alternations are easily explained by positing underlying aspirated stops and glottalized nasals, thus treating superficial clusters such as in [goahti] ‘big tent (n.s)’, [laʔnja] ‘room (n.s)’ as single long segments, /koat^h:i/ and /laŋ^ʔ:a/, which are structurally parallel to geminate consonants as in [guolli] ‘fish (n.s)’. At a certain point in the derivation, laryngeal features undergo mitosis to become independent sequences, thus [goahti] and [laʔnja]. Under appropriate prosodic conditions of the weak grade, when the consonant is short, these laryngeal properties are lost, as shown by weak grade (accusative singular) [goađi] and [lanja], parallel to [guoli]. This is an automatic consequence of our moraic analysis of gradation and syllable structure, under the assumption that preglottalization and preaspiration is the phonological result of a consonant-diphthongization rule, interacting with Stray Erasure which deleted unsyllabified segments. Finally, we show phonological evidence that preaspirated and preglottalized segments cannot be underlying consonant clusters, and that they must be surface consonant clusters: in other words, the language does not give a single representation analysis of laryngeally-modified consonants.