

Contrast in Buchan Scots Laryngeal Assimilation

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This paper incorporates the view that phonology is to be regarded as an abstract cognitive system and considers as primary evidence the system of contrasts, regardless of its phonetic and acoustic correlates (Dresher and Zhang 2000). In light of this view, I argue that phonological activity is dependent on the structure of the contrast system of a given language. Based on the system of contrast, the analysis of language into an economic and exhaustive set of features is achieved, and the resulting set of distinctive features is able to uniquely define natural classes of segments, which are responsible for all kinds of phonological behavior in language. I illustrate this with regard to one phonological process in which a vocalic laryngeal feature assimilates to neighboring segments with complex consonant-vowel interactions, namely lowered larynx assimilation in Buchan Scots.

The distribution of vowels in Buchan Scots (1a) provides evidence that this dialect exhibits a unique type of assimilation unknown to other dialects of English. Paster (2004) has characterized the assimilation as vowel lowering harmony blocked by voiced obstruents. However, since unstressed non-high vowels never follow high vowels in trochees, the assimilation must be one of raising, i.e. target vowels are underlyingly non-high. Furthermore, the parallel effect of voiced obstruents and “stopped sonorants” on stressed vowels in monosyllabic trochees (1b) (Trigo 1986, Wölck 1965) and on unstressed vowels in disyllabic trochees (Dieth 1932, Fitzgerlad 2002) (1c) suggests that raising is triggered by these consonants in both environments.

(1) (a) *Apparent vowel height harmony (disyllabic trochees)*

[drixi]	‘dreary’	[twɪnti]	‘twenty’	[budi]	‘ghost’
[beke]	‘container’	[bæte]	‘bit (dim.)’	[borə]	‘borrow’

(b) *Only stressed high vowels before voiced obstruents (monosyllabic trochees)*

[sɪb]	‘sib’	[gɪd]	‘go & give’	[dɪv]	‘do’
[tɪnt]	‘tent’	[skɪmp]	‘skimp’	[bɪŋk]	‘bench’

(c) *Only unstressed high vowels after voiced obstruents (disyllabic trochees)*

[robin],	*[robən]	‘robbing’	[lodi],	*[lode]	‘loadie (dim.)’
[lavi],	*[lave]	‘lovey (dim.)’	[feʒin],	*[feʒən]	‘pheasant’
[lɑmpi],	*[lɑmpe]	‘lumpy’	[grantɪt],	*[grantət]	‘granted’

I propose a non-linear analysis of these facts in the framework of the Parallel Structures Model of feature geometry (Morén 2003, 2006). The analysis of Buchan phonology within this model provides a unified account of the assimilation facts based on contrastive phonological evidence for all feature specifications. Importantly, all triggers of assimilation (whether consonants or vowels) form one natural class of segments; they are underlyingly specified for the vocalic feature [Lowered Larynx]. This phonologically abstract feature uniquely captures the contrasts between voiced and voiceless obstruents and between high and non-high vowels in the language. [Lowered Larynx] harmony in Buchan is sponsored by an underlying [LL] segment which targets non-high vowels. These structurally simple non-high vowels acquire an [LL] feature which they add to their structure to form the featurally more complex high vowels. There are no blocker segments for this process, but there is a class of transparent segments, namely all consonants except the triggers. I provide autosegmental representations of the Buchan assimilation pattern as such and show that the relevant features behave independently of their respective segments.