An acoustically-based differentiation of stops in Siwi (Berber)
Christfried Naumann

Max-Planck-Institut for Evolutionary Anthropology, Leipzig - Germany

Siwi (or ∂ǧlan n-Isiwan 'the language of the Siwis') is the most easterly Berber language spoken by approximately 20,000 people in the oasis of Sīwa in Western Egypt. Similar to other Berber varieties, it has a rich inventory of consonants due to the presence of guttural segments and segments with secondary articulations (pharyngealisation, labialisation). Length is contrastive for all consonants (simple vs. geminate) with no systematic qualitative difference.

In this contribution, acoustic features for the differentiation of stop categories are proposed. Acoustic features for the distinction between consonant classes ('major types') are in principle simple, i.e., they can be expressed in terms of one gross property. Acoustic features correlated to the place of articulation, on the other hand, are presented here as one complex set of parameters. In the past, several suggestions have been made as to invariant cues for place of articulation derived from gross spectral properties of stop burst releases (e.g. Stevens & Blumstein 1978) or from formant transitions. These approaches seem to be insufficient for larger inventories. Instead, the present study follows Fant (1973:136) who stresses that "transient burst and the first part of a vowel ... should be regarded as a single stimulus rather than as a set of independent cues". Categories of stops in Siwi are shown to be distinctive on the basis of context-dependent and simultaneous parameters from burst spectra and transitions.