## The phonetic and phonological effects of moribundity

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Structural change in a language are considered nearly inevitable consequences of language death (Campbell and Muntzel 1989, Wolfram 2002). The literature on sound change in endangered languages has focused on whether the changes are internally or externally motivated, and, therefore, the difference between categorical sound shifts and gradient phonetic effects has been overlooked (cf. Cambpell & Muntzel 1989, Woolard 1989, Dorian 1993). In addition, this research has been largely impressionistic in nature, leaving subtle variation that is beyond the scope of narrow transcription out of the discussion (Schmidt 1985, Goodfellow 2005, among others).

This paper discusses sound change in Mono Lake Northern Paiute – an American Indian language spoken in California – through two instrumental experiments that investigate the difference between categorical changes in the phonological inventory and subphonemic variation within a category. The first experiment examines the maintenance of a three-way oral stop contrast in laryngeal setting across three generations of speakers. The results suggest that while the youngest generation of speakers generally patterns like the elder generations, there is an increase in the amount of variability in consonant production. Static palatography was employed for the second experiment to investigate a shift in place of articulation for the sibilant across two generations of speakers. The findings illustrate that the traditional palatalized retroflexed sibilant has been replaced by a fricative identical to American English /s/, causing interesting changes to a phonetically motivated allophonic pattern in the traditional form of the language.

After considering the sound changes described in languages experiencing attrition, this paper concludes by arguing that sound change in obsolescing languages takes one of two predictable paths: approximation or transfer (terms originally applied to patterns of vowel mergers in Trudgill and Foxcroft (1978). Approximation, a type of change being experienced by the sounds examined in the first experiment, involves the expansion of phonological categories within the moribund language. Transfer, a type of substitution (e.g. Weinreich 1953, Thomason and Kaufman 1988), is exemplified by the second experiment where a dominant language phoneme replaces a similar sound in the obsolescing language. These types of changes, at least in their current state in Mono Lake Northern Paiute, do not cause neutralizations in the phonological system. This contradicts claims made by Andersen (1982), who argues that ultimate speakers of moribund languages fail to make phonological distinctions in the endangered language that are not supported by identical distinctions in the dominant language.

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