

**Tonal behavior in the noun-noun possessive construction in Northern Mao:
Downstep and double downstep?**

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Double downstep is attested in only a handful of languages, the most analysed being Bamileke-Dschang (Snider and van der Hulst 1993). It is therefore of interest to look at an apparent case of double downstep in Northern Mao (an Omotic language spoken in Ethiopia) to see if current theories can account for the data where a tone is apparently lowered in register twice giving a pitch which is lower than the regular downstep pitch. As regular downstep is often analysed as being the surface realisation of a floating L, we might expect two floating Ls for double downstep, but no-one has made such a claim. Register Tier Theory (Snider 1990) accounts for the cases attested so far and will therefore be used for the analysis of double downstep presented in this paper.

In this paper we present data and a statistical analysis of downstepping, including measurements of over 400 tokens. Our explanation combines a diachronic account with a synchronic account and we claim that although there appears to be double-downstep, in fact, one of cases for downstepping is better seen as a frozen form in the lexicon which possibly developed from a downstepping process in the past.

This paper concentrates on the noun-noun possessive construction in Northern Mao. The tonal melodies on these nouns are in themselves interesting even when there is no downstep. It appears that each noun has two independent melodies. Further investigation reveals that one of the melodies appears on the citation form of the noun and the noun when it functions as a modifier; the other melody appears on the modified head noun. The first noun in the noun-noun construction carries the primary melody (that which is associated with the citation and modifier forms). The following seven tonal melodies are associated with this noun: H, M, L, HL, MH, ML and LH (Ahland 2008). The second noun in the construction is the head noun of the noun phrase and thus exhibits the melodies associated with nouns which are modified. The 3 tonal melodies associated with this construction surface as M, ML and L.

Although the main focus of this paper is descriptive, it also raises interesting questions about the nature of double downstep, the ways in which a mid tone can develop, and the role of diachronic and phonetic processes in shaping the synchronic phonology. It also provides an example of a language which stores at least two independent melodies in the lexicon for each noun.