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Stress-dependent height harmony in Nivkh

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A characteristic trait of many languages of Northeast Asia is retracted tongue-root harmony. Recent work has reconstructed Korean, Mongolic and Tungusic – all classified as Altaic by Poppe (1960) – with RTR harmony (Vaux 2009, Ko *et al.* 2014). Ko *et al.* argue that Nivkh, a genetic isolate of the Russian Far East, also shows vestiges of RTR harmony, which it may have inherited through contact with neighbouring Tungusic tribes (see also Comrie 1997).

While we do not rule out the possibility of a formerly active RTR feature, our data show that the synchronic co-occurrence restrictions on Nivkh vowels are better analyzed in terms of stress-dependent height harmony. (For the notion of stress-dependent harmony see Majors 1998, Barnes 2006, Delucchi 2013.) Nivkh permits each of the vowels /i ɨ u e o a/ in stressed syllables, but imposes various restrictions on vowels in unstressed syllables. Inspection of our own corpus of 305 disyllabic (V_1…V_2) Nivkh roots reveals a number of arguments that support a pattern of stress-dependent height harmony:

1) The three contrastive heights in the stressed V_1 position are reduced to two heights in the unstressed V_2 position. Of the two mid vowels, /e/ occurs in V_2 only sporadically and /o/ is found in V_2 primarily when V_1 is also /o/. In addition, /a/ in V_2 undergoes centralization in connected speech. Such asymmetries between stressed and unstressed vowels are not observed in Tungusic RTR harmony.

2) Nivkh diphthongs are restricted to V_1 position. Diphthongs in V_2 in loanwords are typically accommodated as monophthongs, e.g. *p^{h}enci* 'type of ship' (< Ainu *pencay*). Elimination of height and quantity contrasts is a characteristic property of languages with unstressed vowel reduction (Barnes 2006).

3) Nivkh has a preference for disyllabic roots with identical vowels in V_1 and V_2 (37.7

4) An acoustic investigation (based on data collected from three Nivkh speakers) shows that the duration of unstressed vowels (in V_2) falls between 67 and 90

One interesting result of our analysis concerns the status of /ɨ/. Its distribution in V_1 position suggests that the vowel patterns as high (contrary to what is suggested by Ko *et al.*), since in such cases V_2 is restricted to a high vowel. However, inspection of the V_2 position suggests that previously observed cases of /ɨ/ in V_2 must in fact be re-interpreted as intrusive. There are two reasons for this. First, while /i u/ in V_2 can be preceded by all of /i ɨ u e o a/, /ɨ/ in V_2 occurs almost exclusively with a preceding /i/ or /ɨ/. Second, our corpus lacks minimal pairs of the type /$C_1VC_2C_3$ɨC_4/ ~ /$C_1VC_2C_3C_4$/ (where C_3 is a sonorant), and native speakers' spelling of the /ɨ/ in these forms is inconsistent, suggesting that the vowel is not lexical.