# Two Dialects of Nganasan: What They Tell us about Prosody 

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The Problem The equivalence of long voweled syllables (CVV) and closed syllables (CVC), as opposed to open syllables containing short vowels (CV), is found in many languages under a variety of circumstances. Traditionally, this has been seen as a difference in syllable weight. CVV and CVC are heavy, and CV are light. It has also been shown that in languages with a CV/CVV distinction, CVC syllables do not always pattern with CVV, but may count as light and pattern with CV (e.g. Zec 1988). Under Moraic Theory (Hyman 1985, Prince 1976, 1983, Hayes 1989, among others), the equivalence of CVV and CVC has been captured via bimoraicity. In contrast, in languages where closed syllables pattern with CV, both of these syllables are monomoraic.

Recently, there has been several proposals (Rosenthall and van der Hulst 1999, Moren 1998) that closed syllables may vary in weight within one language depending on context, notably constraints on stress placement. According to this approach, contextually-dependent weight is a consequence of constraint interaction that determines the moraicity of coda consonants.

This paper focuses on the two theories as applied to prosody-sensitive phenomena in a Uralic Samoyedic language, Nganasan. I present data from two close dialects of the language, Avam and Vadey, and focus on the difference in their treatement of consonant gradation. I argue that while the variable weight-type analysis is necessary, it is insufficient to account for all the relevant Nganasan data from one of the dialects. My proposal can be seen as an extension of the variable weight analysis.
Data Source The data in this paper is partly taken from source grammars (Helimsky 1998, Tereshenko 1979, Prokofjev 1937) and subsequently checked with native speakers, and partly comes from field work on the language in March 2000 and October 2000. All the discrepancies between grammars and my field work are noted.

## The Proposal

Consonant gradation is analyzed as intervocalic Lenition. Consonants are shown to lenite when they are intervocalic (1,2), and stay the same when they are word-initial (3), postconsonantal or syllablefinal (4,6). Importantly, however, consonant gradation takes place only if the consonant in question is foot-initial. Foot-medial and foot-final consonants do not lenite. Contrary to stress assignment, consonant gradation picks out two prosodic domains: closed syllables (5) and moraic feet. I show that closed syllables crucially do not uniformly pattern with either CV or CVV syllables in the language (7). I further argue that only a variable weight-type analysis of closed syllables in the language will yield CVC syllables parsed as separate feet in a certain context, exactly like a regular foot consisting of a syllable with a long vowel or two CV syllables. Thus it gives us the right prosodic constituents to account for the location of gradating consonants.

I will claim that such a result also falls short of fully accounting for the data from one of the dialects (Avam). While one of Nganasan dialects treats all feet equally (8), the other dialect crucially descriminates between feet formed from CVC syllables and feet with two vocalic moras (9). The descriminating dialect has different reflexes of consonant gradation for prenasalized consonants. On the basis of Nganasan data, I propose that (at least some) segmental information must be "passed up" to the prosodic constituents, in order for the language to be able to tell apart different types of feet. I show how the proposed analysis works for deriving the right reflexes of consonant gradation for both types of feet in the language.
Conclusion My analysis yields a direct argument that the recent proposals to analyze closed syllables as having variable weight within the same language are on the right track, but extends these proposals to fully account for the difference in consonant gradation treatement in both dialects Nganasan. The analysis shows that the difference in reflexes of consonant gradation between the two dialects shows us that some featural content of segments has to be available to higher levels of prosodic hierarchy.

## Selected Data:

(1) Intervocalic $[t] /[\varnothing]$ ([t]//[d]) gradation
nï-tï "his/her/its wife"
məku-ðu "his/her/its spine" (Vadey moku-du)
su:ðə:-ðu "his/her/its lung" (Vadey su:də:-du)
(3) Word-initial (no gradation)
fühü "sledge"
bay "dog"
kita "cup"
tor "hair"
(5) Closed syllable condition

Nom.sg. Nom.pl.

| kuhu | kubu? "skin, hide" |
| :--- | :--- |
| kaðar | katarə? "light" (Vadey ka dar) |
| cifar | cisare? "benefit" |
| guta | yuða? "berry" (Vadey yuda?) |

(2) Intervocalic $[\mathrm{k}] /[\mathrm{g}]$ gradation nï-rəgï "similar to a woman" bïnï-rəkï "similar to a rope" ta:-rəkï "similar to a deer"
(4) Postconsonantal (no gradation) tor-tu "his/her/its hair"
kaðar-tu "his/her/its light"
berip-si "tear up"
tas əgim-s a "bitter"
(6) Closed syllable after another
consonant (cf. kuhuð un stem /kuHu-/)
trr-tuy "their hair"
yoj-tuy "their foot"
kaðar-tuy "their light"
ho ${ }^{\text {n }}$ fir-tuy "their edge, side"
(7) CVC parses into feet

| CVC as light *(kuhu?) | CVC as heavy (ku)(bu?) | CVC as light (kəə)(Кü?kü)-(ðü) | CVC as heavy *(kəə)(Kü $)($ kü-tü $)$ |
| :---: | :---: | :---: | :---: |
| *(fakü?) | (ła)(gü?) | (jemıi) (ðü) | *(fem)(ni-tü) |

(8) Gradation reflexes (Vadey)

| strong grade | h | t | k | S | Ç | ${ }^{1} \mathrm{~h}$ | nt | ${ }^{\text {7 }}$ k | ns | ${ }^{\text {n }}$ ç | ```Vadey baarbə-"tənu "master, chief"(Loc.sg.) cï̈psində-"tənï "wrist" (Loc.sg.) kubu-"dənu "skin, fur" (Loc.sg.) fühü-"d}d\mp@code{nu "sledge" (Loc.sg.)``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CVCV (CVV) foot weak grade | b | d | g | f | $\mathfrak{f}$ | mb | nd | ${ }^{7} \mathbf{g}$ | ${ }^{\mathrm{n}} \mathrm{f}$ | Ç |  |
| CVC foot weak grade | b | d | g | $\mathfrak{J}$ | f | mb | nd | ${ }^{7} \mathbf{g}$ | ${ }^{\mathrm{n}} \mathrm{f}$ | ${ }^{\mathrm{n}} \mathrm{f}$ |  |

(9) Gradation reflexes (Avam)

| strong grade | h | t | k | S | Ç | ${ }^{7}$ h | nt | ${ }^{7} \mathbf{K}$ | ${ }^{n} \mathbf{S}$ | ${ }^{\mathrm{n}} \mathrm{C}$ ç | ```Avam baarbә-"tənu "master, chief" (Loc.sg.) cïïpsinəðә-"tənï "wrist" (Loc.sg.) kubu-tənu "skin, fur" (Loc.sg.) \jmathühü-tənu"sledge" (Loc.sg.)``` |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \hline \text { CVCV (CVV) } \\ & \text { foot } \\ & \text { weak grade } \\ & \hline \end{aligned}$ | b | ð | $g$ | f | $\mathfrak{J}$ | h | t | k | S | Ç |  |
| CVC foot weak grade | b | ð | g | f | f | mb | nd | ${ }^{7} \mathbf{g}$ | $\mathrm{n}_{\mathrm{f}}$ | ${ }^{\mathrm{n}}$ |  |

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