

## “Neither to the Weak nor to the Strong Did I Do Wrong”: a Moraic Analysis of Gemination in Iron Ossetic

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Gemination is thought to be one of the more problematic characteristics of Ossetic phonology (Testen 1997; Cheung 2000). It is mostly found in verbal inflectional morphology, the formation of plural nouns and the derivation of prefixed verbs and denominal adjectives (Abaev 1959). Earlier descriptions of Ossetic phonology do not provide a unified formal analysis of different instances of gemination, dealing either with the phonetics of gemination (Dzakhova 2009) or with the diachronic origins thereof (Cheung 2000).

The data presented is taken from Abaev (1959), Testen (1997), and the Ossetic National Corpus (Arkhangelskiy et al. 2012). In our analysis we consider gemination occurring in the plural marker and induced by the derivation of /nə/-prefixed verbs in the Iron dialect of Ossetic.

The plural form in Iron is formed using the suffix /t/ (1); it then attaches a case ending which begins with a vowel in the plural paradigm. Under certain conditions, this suffix appears in its geminate form /tt/: (a) the lexically conditioned weakening of the last stem vowel (/a/, /o/ → /ɜ/); (b) the stem end has the shape VN where V is the vowel weakened and N is a high sonority consonant (a nasal, a liquid or a glide; see example 2). The gemination does not occur when the vowel is initially weak (3). When the stem ends with a complex coda consisting of low sonority consonants, the plural suffix appears as the allomorph /ət/, ablaut notwithstanding (see example 4).

In our analysis we assume that strong vowels are bimoraic, while weak vowels (/ə/ and /ɜ/) are monomoraic. This agrees with the proposal of Borise, Erschler (2022) concerning stress assignment in Iron.

Sonorants following a vowel segment can be thought of as an extension of the nucleus and thus do not independently contribute to the moraic structure of a given word. A coda consisting of a low sonority consonant bears a mora. This condition is met only when the preceding nucleus is monomoraic given the assumption that a syllable cannot have more than two moras.

Thus, we consider stem ablaut in (2) a delinking of the second mora. If a coda can bear a mora, this mora is then associated with such a coda. Otherwise the onset of /tɜ/ becomes associated with the stem's empty mora yielding a true geminate (see figure 1). This process can be seen as an example of inverse compensatory lengthening, a typologically rare phenomena described previously in Luganda (Clements 1986) and Pali (Hock 1986).

The prefix /nə/- triggers gemination of the first verb stem consonant (see example 5). To explain this, we propose that /nə/- has a peculiar moraic structure with two moras. The first mora is linked with the /ə/ and the second one remains segmentally unaffiliated (see figure 2). The second mora is filled by gemination of the consonant spreading from the right and not by lengthening of the vowel. This fact is governed by two Optimality Theory constraints: Dep(V) which prohibits differences between vowels in the input and in the output and MSeg(μ) which requires that every output mora should correspond to an input mora (see tableau 1).

Given the above, in our research we extend Borise and Erschler's (2022) moraic analysis of Iron, applying the principles of moraic theory (Hayes 1989) and Optimality Theory to gemination in Ossetic, uncovering the typologically rare inverse compensatory lengthening which has previously gone unnoticed in the literature on Ossetic.

## Examples

- (1) əšt'ol → əšt'ol-t-3  
table table-PL-NOM
- (2) kaw → kɜw-tt-3  
wattle<sup>1</sup> wattle-PL-NOM
- (3) žɜj → žɜj-t-3  
avalanche avalanche-PL-NOM
- (4) a. χɜfš → χɜfš-ət-3      b. mašt → mɜšt-ət-3  
frog frog-PL-NOM      insult insult-PL-NOM
- (5) nə- + sɜw-ən → nə-ssɜw-ən<sup>2</sup>  
PV go-INF PV-go-INF

## Tableaux

nə + sɜwən	MSeg(μ)	Dep(V)
☞ nə.sɜ.wən		
ni.sɜ.wən		*
nə.sɜ.wən	*	

Tableau 1. Gemination in the nə- prefixed verb

## Figures

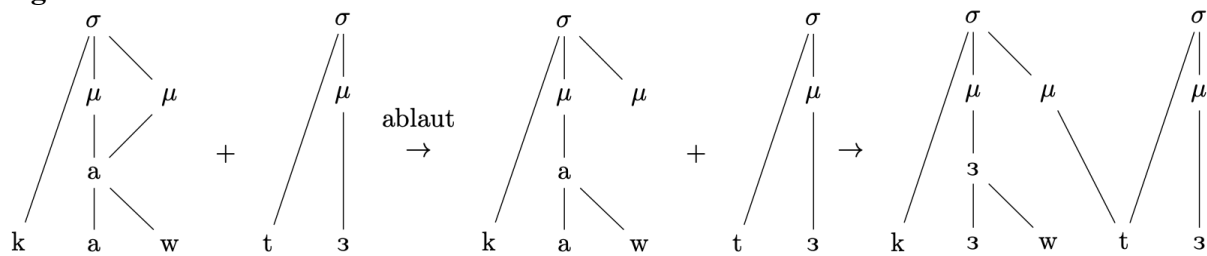


Figure 1. Delinking of the second mora and gemination in the plural form of the noun

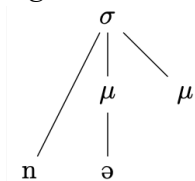


Figure 2. The moraic structure of the prefix nə-

## Glosses

INF — infinitive form, NOM — nominative case, PL — plural form, PV — preverb

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<sup>1</sup> Wattle is a fence made by weaving together wooden branches.

<sup>2</sup> /ss/ is pronounced as [c:]

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