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# Non-linear morphology in Romance: the case of vowel length in Friulian verbs

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## 1 The facts

Friulian is a Rhaeto-Romance (Western, Gallo-Romance) language spoken by approximately 300,000 speakers (source: Ethnologue) in the Friuli region in North-Eastern Italy. Three main dialects exist in the Friulian linguistic area, each of which exhibits specific morpho-phonological features (Roseano 2015a).

Table 1: NE paradigms – PI

	Conj 1 'swim'	Conj 2 'drink'	Conj 3 'understand'
1s	'na:di	'be:f	ka'pi:f
2s	'nadas	'be:fs	ka'pis
3s	'nada	'be:f	ka'pi:f
1p	na'diŋ	be'viŋ	ka'piŋ
2p	na'daɪs	be'veɪs	ka'pi:s
3p	'nad-iŋ~aŋ	'beviŋ	ka'pi:f'iŋ

The Northern Friulian dialect spoken in Negrans (NE) displays an intriguing case of vowel length occurring exclusively in conj. 1 verbs. More precisely, vowel length occurs in the 1s of the Present Indicative (PI) (table 1) and in the 1-3s and 3p of the Present Subjunctive (PS) (table 2), as reported in Roseano (2015b). Tables 3 and 4, in turn, show data from Central Friulian as spoken in Çupicje (ÇU), in which no lengthening ever occurs in conj. 1 verbs. New data were collected by the authors in De-

ember 2018. 4 speakers were interviewed and recorded in NE, and 5 speakers in ÇU. The survey consisted of a translation task: a question was asked in Italian to trigger an answer in Friulian in which the inflected form of the verb appeared in final position.

In Friulian nouns and verbs, vowel length contrasts occur only in stressed, utterance-final position (e.g. ['bru:t] 'broth' vs. ['brut] 'ugly'; ['pa:s] 'peace' vs. ['pas] 'step'; ['fi:s] 'sons' vs. ['fis] 'fixed, dense') (Torres-Tamarit 2015). This kind of vowel lengthening is predictable from the underlying laryngeal specification of the following obstruent despite final obstruent devoicing (Vanelli 1979, Finco 2009), which turns the phonological generalization opaque (e.g. ['kru:t] 'raw-m-sg' vs. ['krude] 'raw-f-sg'; ['fu:k] 'fire' vs. [fu'gut] 'fire-dim'; [na:s] 'nose' vs. [na'zut] 'nose-dim').

The same process of vowel lengthening occurs in those verbal forms that are consonant-final and have final stress in PI in both NE and ÇU (see tables 1 and 3, conj. 2 and 3). The vowel length in 2p of conj. 3 verbs is the surface outcome of /i+i/. Interestingly, the source of vowel length observed in NE conj. 1 verbs, however, is of a different kind: it does not appear in final position, but in penultimate position, and is not conditioned by the laryngeal specification of the following consonant.

Table 2: NE paradigms – PS

	Conj 1	Conj 2	Conj 3
1s	'na:di	'bevi	ka'pifi
2s	'na:dis	'bevis	ka'pifis
3s	'na:di	'bevi	ka'pifi
1p	na'diŋ	be'viŋ	ka'piŋ
2p	na'daɪs	be'veɪs	ka'pi:s
3p	'na:diŋ	'beviŋ	ka'pifiŋ

## 2 The analysis

Table 3: ÇU paradigms – PI

	Conj 1	Conj 2	Conj 3
1s	'nodi	'be:f	ka'pis
2s	'nodis	'be:vis	ka'pisis
3s	'node	'be:f	ka'pis
1p	no'diŋ	be'viŋ	ka'piŋ
2p	no'dajs	be'vejs	ka'pis:s
3p	'nodiŋ	'beviŋ	ka'pisiŋ

and, again, only in conj. 1 verbs? The third possibility, the one we pursue here, is the following: vowel lengthening expresses conj. 1 Th(eme). In other words, conj. 1 Th can spell out as a melodically-empty mora, a prosodic morpheme that is realized as length on the stressed root vowel.

We claim that the conj. 1 Th morpheme in NE has the following lexically listed allomorphs: /'a, 'i, a, i,  $\mu$ /. Only the vowels subcategorize for specific forms (e.g. stressed vowel allomorphs subcategorize for 1p-2p forms). In the absence of subcategorization, then the default allomorph, / $\mu$ /, with any subcategorization frame, is selected. As illustrated in table (5), there is only lengthening when the T/M morpheme is not realized as a vowel.

Table 5: NE: analysis of PS

	root	Th	T/M	$\phi$ -Fs
1s	'nad	$\mu$	i	$\emptyset$
2s	'nad	$\mu$	i	s
3s	'nad	$\mu$	i	$\emptyset$
1p	nad	'i	$\emptyset$	ŋ
2p	nad	'a	$\emptyset$	is
3p	'nad	$\mu$	i	ŋ

uniform analysis of the T/M morpheme as a null morpheme across the PI paradigm in all conjugations. The terminal element /i/ in 1s is analyzed as a  $\phi$ -feature morph, and crucially cannot express Th.

This is independently supported by (i) /i/ also appears in 1s Imperfect Indicative after the Th vowel /'a/ (e.g. [nad-'a-v-i]), so it is reasonable not to interpret this /i/ in 1s PI as a Th vowel but as the  $\phi$ -feature for 1s across some conj. 1 tenses; and (ii) the /i/ in 1s PI is different from the /i/ in 3p PI in that only the latter stands in free variation with /a/ (e.g. [nadiŋ] or [nadaŋ]), the typical Th vowel for conj. 1.

This variation indirectly suggests that /i/ is only

At first sight, root allomorphy could be advocated. NE conj. 1 verbs could be lexically associated with two allomorphs (e.g. /'na:d/ and /'nad/), and each allomorph would be inserted in a specific morphosyntactic environment. This path raises a question we cannot answer to, namely: why are only conj. 1 verbs specified as root-alternating verbs? The second possibility is to analyze lengthening as a T(ense)/M(ood) morpheme: lengthening occurs in PS. If so, however, why does it also occur in 1s PI

Table 4: ÇU paradigms – PS

	Conj 1	Conj 2	Conj 3
1s	'nodi	'bevi	ka'pisi
2s	'nodis	'bevis	ka'pisis
3s	'nodi	'bevi	ka'pisi
1p	no'dini	be'vini	ka'pini
2p	no'dadis	be'vedis	ka'pidis
3p	'nodiŋ	'beviŋ	ka'pisiŋ

The fact that Th vowels and lengthening stand in complementary distribution supports the hypothesis that lengthening is in fact one of the possible phonological realizations of the Th morpheme. According to this analysis, the T/M morpheme in PS is realized as /i/, or zero when the Th morpheme is realized as a stressed vowel. In PI, only 1s exhibits vowel length. As illustrated in table (6), 1s is the only form in which Th is not spelled out as a vowel.

This morphological segmentation allows for a

Table 6: NE: analysis of PI

	root	Th	T/M	$\phi$ -Fs
1s	'nad	$\mu$	$\emptyset$	i
2s	'nad	a	$\emptyset$	s
3s	'nad	a	$\emptyset$	$\emptyset$
1p	nad	'i	$\emptyset$	ŋ
2p	nad	'a	$\emptyset$	is
3p	'nad	i~a	$\emptyset$	ŋ

Th in 3p PI but not in 1s PI. Note that the /i/ in 3p PI is different from the /i/ in 3p PS. Only in PS /i/ expresses uniformly the T/M morpheme in 1-3s and 3p. This is the reason why there is only vowel length in 3p PS, where /i/ is the T/M morph, but not in 3p PI, where /i/ (or /a/) is a Th vowel (table 7). Dialect ÇU, in turn, never displays vowel length in conj. 1 verbs because Th in this dialect simply does not include any prosodic allomorph.

### 3 OT formalization

We propose a formal analysis of morphological length in Friulian couched within OT that makes use of internally layered ternary feet (Martínez-Paricio 2013), general well-formedness markedness constraints on the size of syllables and two morphology-phonology interface constraints on compliance with lexical subcategorization frames and the realization of morphs, respectively. Below we define the set of constraints used in the analysis:

Table 7: Analysis of 2p PI vs. PS

	root	Th	<b>T/M PI</b>	$\phi$ -Fs
3p	'nad	i~a	∅	ŋ
	root	Th	<b>T/M PS</b>	$\phi$ -Fs
3p	'nad	μ	i	ŋ

- (1) Respect: Respect idiosyncratic lexical specifications (Bonet et al. 2007). = It enforces compliance with lexical subcategorization requirements.
- (2) All-Feet<sub>Max</sub>-Right: Every maximal foot must be right-aligned (no intervening  $\sigma$  between Ft<sub>Max</sub> and  $\omega$ ). = It prohibits long vowels in stressed antepenultimate position.
- (3) \*SuperHeavy: Superheavy, trimoraic syllables are banned. = It prohibits long vowels in closed syllables.
- (4) Max-Morph: Morphs cannot be deleted. = It enforces morpheme realization.
- (5) All-Feet<sub>Max</sub>-Right  $\gg$  Max-Morph: /μ/ is not realized if stress is antepenultimate (e.g. ['canti] 'I sing' cf. \*[ca:nti]).
- (6) \*SuperHeavy  $\gg$  Max-Morph: /μ/ is not realized if the stressed syllable of the root is closed (e.g. ['liberi] 'I free' cf. \*[li:beri]).
- (7) The undominated position of Respect ensures absolute compliance with subcategorization requirements.

### 4 Conclusion

The present analysis of morphological length in Friulian shows that there is no need for an L-shaped morpheme analysis of the data (Maiden 2004). In our analysis, each morph, including length, spells out a morphosyntactic feature.

### 5 Selected references

- Bonet, Eulàlia, Maria-Rosa Lloret & Joan Mascaró (2007). Allomorph selection and lexical preferences: two case studies. *Lingua* 117: 903–927.
- Finco, Franco (2009). Fonetiche e fonologjie dal furlan centrâl. *Gjornâl furlan des sciencis* 11: 53–85.
- Maiden, Martin (2004). Morphological autonomy and diachrony. *Yearbook of Morphology 2004*:

137–175.

Martínez-Paricio, Violeta (2013). An exploration of minimal and maximal metrical feet. PhD dissertation, University of Tromsø-Arctic University of Norway.

Roseano, Paolo. (2015a). Dialetti. In Sabine Heinemann and Luca Melchior (eds), *Manuale di linguistica friulana*. Berlin/Boston: De Gruyter.

Roseano, Paolo. (2015b). Morfologia non-lineare in Romanzo: la flessione verbale del friulano gortano. *Archivio glottologico italiano* C(I): 85–110.

Torres-Tamarit, Francesc. (2015). Length and voicing in Friulian and Milanese: or why rule-free derivations are needed. *Natural Language & Linguistic Theory* 33: 1351–1386.

Vanelli, Laura (1979). L'allungamento delle vocali in friulano. *Ce fastu?* 55: 66–76