

# Abruzzese Metaphony

Between phonology, morphology and lexicon

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## Metaphony in Romance

- ▶ Many Romance dialects, in Italy and elsewhere, show a process of metaphony, in which (stressed) stem vowels change their quality in certain morphological contexts (e.g. plural of masculine nouns, 2S forms of verbs)
- ▶ There is a lot of (micro)variation among these dialects.
- ▶ We concentrate here on the dialect of Arielli, a village in the province of Chieti in Abruzzo, Italy.

# Metaphony

SG	PL	
waglione	wagliune	'young person'
mbrel:ə	mbril:ə	'umbrella'
mat:ə	mit:ə	'madman'
1P (SG.)	2P (SG.)	
dormə	durmə	'sleep'
səndə	sində	'hear'
wardə	wirdə	'look'

## Interaction with the appearance of [a]

- ▶ ▶ la cas[a] n[o]v[ə] ‘the new house’ (FEM., SG)
- ▶ ▶ li cas[a] n[u]v[ə] ‘the new houses’ (FEM., PL)
- ▶ ▶ la port[a] chius[ə] ‘the closed door’ (FEM., SG)
- ▶ ▶ li port[a] chius[ə] ‘the closed doors’ (FEM., PL)
- ▶ ▶ lu mut[o]r[ə] n[o]v[ə] ‘the new motor’ (M., SG)
- ▶ ▶ li mut[u]r[a] n[u]v[ə] ‘the new motors’ (M., PL)
- ▶ ▶ lu c[a]n[ə] ci[o]pp[ə] ‘the lame dog’ (M., SG)
- ▶ ▶ lu ch[i]n[a] ci[u]pp[ə] ‘the lame dog’ (M., PL)

## Empirical issues

- ▶ The process is fully productive, and applies also to recent loans (e.g. [fiksə] ‘faxes’); given this, we need to have a grammatical mechanism which is responsible. Is this phonology? Morphology? Something else?
- ▶ What brings about the metaphonic changes (i,e,a→i, u,o→u) in some morphological cases?
- ▶ Why does the masculine in the plural (i.e. at the same time as there is metaphony) sometimes shows up with an [a]?

Data

Metaphony and Element Theory

Aside: Metaphony and Feature Theory

Proposal: |A| Eaters

Conclusion

## Metaphony and Element Theory

- ▶ Element Theory holds, that  $[a] = |A|$ ,  $[i] = |I|$ ,  $[u] = |U|$ ,  $[e] = |A.I|$ ,  $[o] = |A.U|$
- ▶ We will put aside for now the distinction between  $[e]$  and  $[\varepsilon]$ , or  $[o]$  and  $[\text{ɔ}]$ , which is irrelevant for our concerns.
- ▶ This means that the metaphonic change involves:
  - ▶  $a \rightarrow i = |A| \rightarrow |I|$
  - ▶  $e \rightarrow i = |A.I| \rightarrow |I|$
  - ▶  $o \rightarrow u = |A.U| \rightarrow |U|$
- ▶ In other words, this is to be seen as loss of  $|A|$  (and addition of  $|I|$  when the resulting vowel would otherwise be empty)

## Items-and-Arrangement models

- ▶ How do we formalise *loss* of an element in a morphologically complex form — assuming that plural is more complex than the singular — in an Items-and-Arrangement model of phonology?
- ▶ (An Items-and-Arrangement model of morphology is morpheme-based: it assumes that a morphologically complex word contains several morphemes which each have their phonological specification.)
- ▶ So what could the phonological exponent of a plural or 2S suffix possibly look like?
- ▶ Is deletion of elements ever an option at all?

## The paradigm generator

- ▶ For these reasons, Pöchtrager & Kaye have proposed (in unpublished work) that these data are not treated by phonology or by morphology *strictu sensu*, but that there is a separate module, a *paradigm generator* (PG)
- ▶ PG takes a singular form (say, *fax*) and generates phonological shapes for the whole paradigm, which are then stored.

## Problems with the PG

- ▶ There are many problems with introducing the notion of a paradigm into a generative frame (see e.g. the work of Bobaljik 2008)
- ▶ At the very least there is some potential redundancy when we are introducing a separate module that can handle phonological objects
- ▶ So far, it is unclear what the restrictions on the PG are; and without such restrictions, it threatens to make the whole model of grammar unrestrictive.

## Aside: Metaphony and Feature Theory

- ▶ As a first approximation, feature theory has fewer problems with the issue: there could be a metaphonic feature [high] (or [+high]), plus some repair mechanisms for e.g. resulting [+high,+low] combinations (in the vein of Calabrese 2011).
- ▶ However, such a theory obviously suffers its own problems of lack of restrictiveness.
- ▶ Plus, it has no explanation at all why all of a sudden a *low* vowel shows up in the suffix, e.g. in *li mut[u]r[a] n[u]v[ə]*

## Proposal: |A| Eaters

- ▶ Our proposal is that some morphemes (in our example, PLURAL and 2S have as their exponent a ‘needy’ syllabic position, a position which is itself empty but wants to be filled by an |A| element, which it then attracts from the environment
- ▶ The concept of ‘needy’ vowels was introduced into phonology by Nevins (2010) in order to understand vowel harmony, and is based on a parallel concept in the theory of syntactic agreement.

## Syntactic example

- ▶ *l'insegnante bravo* 'the good teacher' (M)
- ▶ *l'insegnante brava* 'the good teacher' (F)

The feminine feature shows up on the adjective, but it does not really semantically 'belong' there. Semantically, it is a property of the noun, which however does not show it in Italian nouns in -e.

## Another parallel: Tohono O'Odham truncation

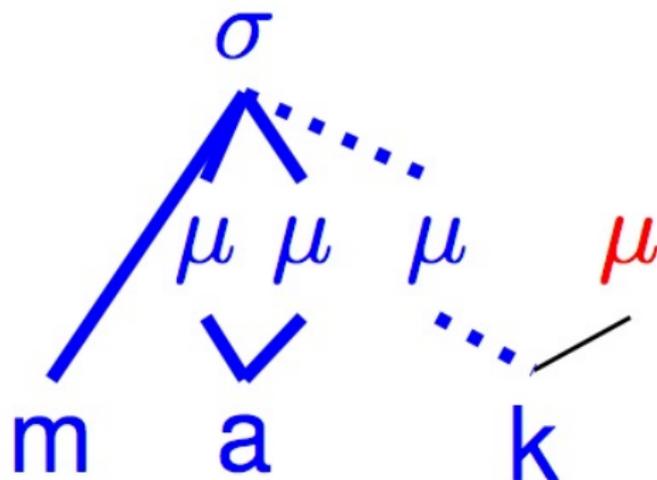
- ▶ Truncation is another famous problem for Items-and-Arrangement views on morphology.
- ▶ Here is a well-known set of data from Tohono O'Odham (Fitzgerald 1997):

IMPERFECTIVE	PERFECTIVE	
bisck	bisc	'sneezed'
ñeok	ñeo	'spoke'
ma:k	ma:	'gave'

## Trommer and Zimmermann's analysis of truncation

- ▶ According to Trommer and Zimmermann (2012), the Perfective in Tohono O'Odham is a syllabic position (for them, a mora)
- ▶ The syllabic position cannot really be integrated into the prosodic structure. It therefore remains unparsed and unpronounced.
- ▶ However, perversely, and due to a separate WFC-like requirement, it has meanwhile 'eaten' the final consonant of the stem.

## Tohono O'Odham Perfective Structure



- ▶ No (prosodically unlicensed) mora should be empty.
- ▶ No segment should be linked to more than one position
- ▶ Syllables cannot have more than three moras

## Ariellese is like Tohono O'Odham

- ▶ The relevant Ariellese morphemes also are empty positions that need to be filled
- ▶ A difference is that they do not need the whole structure, but only the most sonorant element (an |A|)
- ▶ This |A| likewise cannot be linked to two positions, and therefore gets delinked from the original position.
- ▶ But the morpheme itself cannot be integrated into the prosodic structure and remains unpronounced.

## Abruzzese phrase-internal |A| positions

- ▶ An important, and crucial, difference, obviously is that the |A| eating morpheme can show up in Ariellese, viz. when it is in the middle of the phrase
- ▶ (Notice that the feminine suffix can always show up with the |A|).
- ▶ For this, see Passino (this conference)

## Why |A|?

- ▶ Why is the suffix eating the |A|, rather than the whole vowel (or some other element)?
- ▶ One suggestion is that this |A| element is some kind of theme vowel in the nouns which have it; so it always occupies its own morphosyntactic position. If the plural/2S suffix is not there, it gets realized on the stressed vowel in the root; otherwise, it gets realized on the suffix.

## Ariellese is like Brazilian Portuguese

- ▶ A parallel for this might be the well-known Brazilian Portuguese tense/lax vowel alternations, which are also triggered by a, sometimes, invisible ‘theme vowel’.

2nd person		1st person		
/mɔr-a-s/	[móras]	/mɔr-a-o/	[móro]	‘reside’
/mɔv-e-s/	[móves]	/mɔv-e-o/	[móvo]	‘move’
/sɛrv-i-s/	[sérves]	/sɛrv-i-o/	[sírvo]	‘serve’

## The [a]-[i] alternation

- ▶ What about *mattə-mittə* alternations?
- ▶ We need to say that the |I| gets inserted because stressed schwa is not allowed.

## Conclusions

- ▶ Ariellese metaphony really needs a more refined view on the interaction between phonology and morphology.
- ▶ However, it does *not* force us to take into consideration paradigms, paradigm generators, or anything else beyond Items-and-Arrangement morphology
- ▶ Phonologically, it seems to provide evidence in favour of an elements-based view, given that otherwise we do not understand why sometimes a low vowel shows up as the 'source' of the 'height assimilation'.