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MORPHOLOGICAL COMPLEXITY WITHOUT ABSTRACTNESS: ITALO-ROMANCE METAPHONY

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ABSTRACT

This paper considers some selected cases of stressed vowel alternations arisen from the application of metaphony in Italo-Romance dialects. While similar cases are often reported in the literature, the ones picked up here stand out because they resist, for several reasons, any analysis treating metaphony as a synchronic phonological rule (albeit opacized), deriving the surface alternants from abstract underlying representations. Such analyses, as standardly practiced in the Generative paradigm from the 1960s to this day, would face insurmountable problems in accounting for the morphological paradigms that capitalize on the metaphonic alternants putting them into service as exponents of morphosyntactic categories. Thus, the study of morphological complexity yields supporting evidence for phonological theories like Natural Phonology, which severely constrains the amount of abstractness permitted to underlying representations.

KEYWORDS: Phonology–morphology interface; morphology–syntax interface; abstractness; Italo-Romance dialects (Romagnolo, Calabrian, Salentino).

1. Introduction*

In this paper, I will show that the (dynamic) model of Natural Phonology (cf. Stampe 1969; Donegan and Stampe 1979; Dressler 1985), which does not allow

* I thank the participants in the Workshop "Complexity in Natural Linguistics", held at the Forlì SLE annual meeting 2008 (17–20 September), for comments on the oral presentation of this paper, as well as Ulli Dressler and two anonymous referees for their remarks on a first draft. Usual disclaimers apply. The following abbreviations will be used: AMR = allomorphic morphological rule; f = feminine; M&S = Manzini and Savoia (2005); MPR = morphonological rule; NP = Natural Phonology; m = masculine; OT = Optimality Theory; pl = plural; PR = phonological rule; PtP = past participle; sg = singular; SPE = Chomsky and Halle (1968).

for (non-motivated) abstract phonological representations, is better suited for the analysis of metaphony than generative models which assume abstract phonological representations motivated solely on internal evidence. The superiority of a NP-style analysis will be demonstrated drawing on evidence from Italo-Romance dialects, the vast majority of which has undergone metaphony, in some form or other.[1]

In §2, I will start by considering stressed vowel alternations caused by the application of metaphony within the verbal paradigm in the Romagnolo variety of Forlì. In §§3–4, I will briefly recall some aspects of the abstractness controversy and review different, more or less abstract, analyses of metaphony. Elaborating on the premises laid in §4, I will then present an analysis of Forlivese metaphony in §5. In this dialect, I will show, the interaction between metaphony and morphological structure provides solid evidence against abstract analyses. Evidence pointing to the same conclusion will be considered in §6, taking into account the interplay of metaphony and past participle agreement in another Italo-Romance dialect spoken in Castrovillari (Calabria, southern Italy).

2. Prologue: metaphony in the dialect of Forlì

In (1), the imperfect indicative paradigm of the Romagnolo dialect of Forlì is displayed, as reported in Manzini and Savoia's (2005, I: 285) monumental work on the syntax of Italo-Romance dialects. (The standard Italian counterparts are added for comparison.)

(1) Imperfect indicative (Romagnolo dialect of Forlì)

Person	Subj. clitic	Verb	Standard Italian *vedere* 'to see'
1 sg	a	ˈvdeva	*vedéva (-o)*
2 sg	t	avˈdifta	*vedévi*
3 sg	l	avˈdeva	*vedéva*
1 pl	a	vaˈdɛma	*vedevámo*
2 pl	a	ˈvdivja	*vedeváte*
3 pl	i	avˈdeva	*vedévano*

[1] Metaphony, often subsumed under the broader label "vowel harmony" in current work in theoretical phonology (cf. e.g. Nibert 1998; Walker 2005), is an assimilation process through which stressed vowels were either raised or became diphthongs (according to dialects) when preceding a high final vowel. Cf. Maiden (1991) for a comprehensive review of the many different types of metaphony (and metaphonic alternations) to be found across the Italo-Romance dialects.

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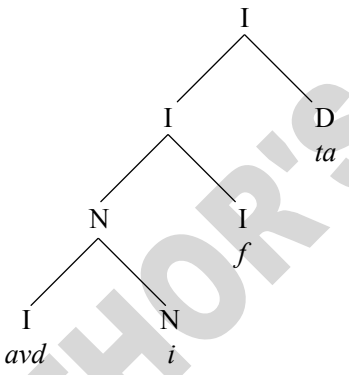
M&S describe this paradigm among many from other dialects of northern and southern Italy which display stressed vowel alternation across person in the verb stem, arisen through metaphony. In many dialects, a final high vowel *-i* originally occurring as 2nd person ending, brought about raising of the stressed vowel. Thus, in Forlivese, 2sg [avˈdifta] is the diachronic successor of a Proto-Romance form pretty similar to the standard Italian counterpart *vedévi*, as the (Florentine-based) standard language did not undergo either metaphony or any other of the sound changes which affected the Forlivese verb forms in (1).

The final result is, in Forlivese, alternations like 2sg [avˈdifta] (with metaphonic raising) as opposed to 1st and 3rd person [ˈ(a)vdeva], with the original Proto-Romance stressed [e] preserved. The analysis the authors propose for verb forms whose stressed vowels underwent metaphony is shown for the 2sg in (2).[2]

(2)



The authors make a case for what they call a morphological analysis of the vowel alternation which have arisen through metaphony.[3] Basically, they claim that person agreement in verbal forms such as that analyzed in (2) is marked twice, once on what they call a D-inflection (the ending *-ta*) and once again on

[2] In M&S, I 286, the structure in (2) is exemplified with data from another Italo-Romance variety, the dialect of San Vittore (province of Frosinone), which also shows metaphonic alternation, with stressed [i] in the 2sg ([vəˈrivə]) as opposed to [e] preserved in 1sg and 3sg ([vəˈrevə]). As readily apparent from M&S's I 281–282, 286 discussion, the same representation must be assumed for Forlivese too.

[3] M&S's theory is a version of minimalism, which bears several resemblances to Distributed Morphology. Crucially, it programmatically conflates morphology and syntax, as declared in the title of M&S's (2007) abridged English translation. This non-distinction is signalled by the node labels in (2), which are reminiscent of the functional heads I(nfl), D and N in generative syntax.

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the thematic vowel following the stem, *-i-*, singled out as a morpheme signalling 2sg, dominated by an N node. (The definition of N vs. D nodes rests on theory-internal criteria, which need not detain us here.)

3. From abstractness to opacity

By now two questions will probably have come to the reader's mind: (a) what have these data – and their treatment in a study devoted to the morphosyntax of Italian dialects – possibly to do with the abstractness controversy in phonology? and, (b) why on earth take up, in 2011, a debate that was raging in the 1970s?

Among phonologists, indeed, there seems to be nowadays a general feeling that the issue of abstractness has long ceased to feature as a prominent topic in the current research agenda, at least ever since the 1980s: "abstractness as a topic of phonological debate played little or no role in the 80s and further on" (Scheer 2004: 375). Thus, in recent work in phonological theory, the topic is mentioned cursorily among the introductory remarks, if at all. In such contexts, a name recurs with more than chance frequency, that of Theodore Lightner. Thus, for instance, Scheer (2006: 18), discussing *How non-phonological information is processed in phonology*, takes issue with Lightner (1978: 18–19), according to whom

> because of *h–k* (*heart – cardiac*), *d–θ* (*third – fourth*) and *s–h* (*sweet – hedonism*), Grimm's Law, Verner's Law and the Ancient Greek *s* > *h* shift are active rules in the modern English grammar.

The idea that underlies such introductory quotations is that, although there have been some exaggerations in the past, the concern about those exaggerations is not anymore an actual topic. This is the explicit line of argument of McCarthy (2007: 108):

> Certainly, there have been dubious analyses based on opaque rules and excessively abstract underlying forms (SPE's /rixt/ → [ra:jt] *right* comes to mind – Chomsky and Halle 1968: 233–4), but complete denial of opaque interactions is an overreaction.

As an example of this overreaction he quotes Vennemann's (1974) and Hooper's (1979) Natural Generative Phonology, and its requirement that a phonological representation be surface-true. As seen in the quotation, the magic word to rescue discredited "abstractness" is (Kiparskyan) "opacity" (cf. Kiparsky 1971,

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1973a–b), a topic which indeed figures prominently in current theoretical debate (cf. e.g. McCarthy 1999; Baković 2007). It is not the aim of the present paper to add to this growing body of literature. What I intend to do is to show, discussing analyses of metaphony in §§4–6, that – in this empirical domain, at least – very little has changed, and that generative phonologists keep on applying analytical procedures quite similar to those that were popular in the Seventies, and with quite similar results.[4]

Before turning to metaphony, however, let us quickly complete our trip back to the 1970s providing some concrete examples, to the benefit of readers not familiar with the history of research in phonology. Let us choose, at random, one issue of *Language*, for instance, the 1975 one. There one finds some papers in phonology, including Douglas Walker's on stress in French, in which the author reproaches Schane (1968) – who is in turn deservedly notorious for his abstract analyses (cf. §5 below) – for not being abstract enough. Walker's counterproposal, requiring some adjustments in the underlying representation, is recommended by the author as follows: "Such a reformulation leads to a synchronic rule in Modern French that is very similar to the Latin stress rule" (Walker 1975: 887).

Thus, taking two related words like, say, French *semaine* [s(ə)mɛn] (nowadays monosyllabic, in ordinary connected speech) and its Latin quadrisyllabic etymon *septimana(m)*, both are represented in basically the same way, so that the word-stress algorithm can operate identically for the two languages.[5]

Last but not least, in the same *Language* issue, Theodore Lightner criticizes the SPE representation /rixt/ for *right*, which McCarthy (2007: 108), as we saw,

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[4] Interestingly, the results of those procedures, along with the corresponding terminology that was current in theoretical phonology in the 1970s, persist much longer in neighbouring fields such as psycholinguistics, where it is not uncommon to come across SPE-style phonological representations (and corresponding terminology, including "abstractness") in the new millennium. Consider the following quotation: "Syllabification is conceived of as operating on an *abstract* segmental representation" (Indefrey and Levelt 2004: 124; italics added, M.L.). That abstractness is meant technically, in this literature (on lexical access), is readily apparent in the following passage: "the same underlying word form will surface in rather drastically different ways, depending on the morphonological context (as in *period/periodic* or *divine/divinity)*, a core issue in modern phonology. These and other phenomena [...] require rather abstract underlying form representations" (Levelt et al. 1999: 37, n. 6).

[5] Studies on (Romance) stress over the few past decades, within metrical (autosegmental) phonology and/or OT, basically replicate the same pattern, if with up-to-date formalism, computing stress assignment in the modern Romance languages on underlying representations containing, for instance, final (abstract) vowels in positions were Latin vowels were deleted, and the like (cf. e.g. Bullock 1995a–b on French, Chitoran 2002 on Rumanian etc.).

dubs as "excessively abstract", claiming that it is not "reasonable", but for the opposite reason: "A more reasonable lexical representation of the root in *right(eous)* is *-reg-* with a meaning something like 'lead straight, guide, conduct'" (Lightner 1975: 621).

Lightner's analytical procedure leads straight to postulating Proto-Indoeuropean roots as part of the underlying mental representation of words in the competence of speakers of modern European languages like English.

This quick excursus into the history of (generative) phonology from Lightner to McCarthy suggests that the issues discussed in the 1970s under the label "abstractness controversy" are far from exhausted, and the reason is easy to grasp: the abstractness controversy largely coincides with the issue of the division of labour between different components of language structure.[6] And, to be sure, the topic is never exhausted, because the "right" division of labour is never attained. Indeed, much of the theorizing in linguistics, all along its history, revolves around this issue, under one label or other.

4. Two models for the description of metaphony: NP vs. Generative Phonology

There is another way of looking at things than that summarized in §3. Since a paper such as the present one cannot host a full-fledged treatise in linguistic historiography, I shall limit myself to illustrate this alternative view with the two quotations in (4).

(4a) Dressler (1985: 3): "there are prototypical morphonological rules (MPRs) with fuzzy boundaries to phonological rules (PRs) and allomorphic morphological rules (AMRs)."

(4b) Dressler (1980: 117): "In regard to internal phonological change, I claim that PRs can only deiconize (or die […])."

[6] One obvious aspect of this division of labour, to be addressed in what follows (§4), is that between different levels of analysis (phonology vs. morphology, in our case). Another related aspect – which will however not be focused on specifically here – is that of the trade-off between (economy of) representation and computation. For instance, Scheer (2004: 379), within CVCV (Government Phonology), advocates for highly abstract underlying representations, and criticizes at the same time OT for having shifted interest away from representational questions: "Computation is king: representations are only decorative in OT".

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In (4a), Dressler (1985: 3), elaborating on Stampe's (1969, 1979) Natural Phonology, sets up a taxonomy of rules, establishing a continuum PRs/MPRs/AMRs. The three classes of rules are distinguished along several parameters: the two of them that are crucial for the present discussion are (a) (decreasing) phonetic transparency/motivation; and (b) the non-encoding (PRs) vs. encoding (MPRs, AMRs) of morphological meaning. In (4b), this continuum is applied to diachrony: change often takes the form of what Dressler calls the deiconization of PRs. In describing this deiconization path, he joins a well-established tradition going from Baudouin de Courtenay (1895) to Kiparsky's (1995) life cycle of PRs.

Metaphony has been studied cross-linguistically in this perspective. For instance, Dressler (1985: 127) analyzes German umlaut along these lines: in modern High German, /gast/ 'guest' → /gɛstə/ pl. is an AMR, whereas before the merger of final unstressed vowels in early Middle German, the rule still had surface phonetic plausibility (causing fronting and raising of /a/ before a final high front vowel), therefore still qualifying as an MPR at that stage.

I am now going to show how the view of phonology synthesized in (4) can be applied to the description of vowel alternations arisen through metaphony in Italo-Romance.

In proposing the synchronic analysis seen above in (2) for metaphonic alternations within the verbal paradigm in dialects like Forlivese, Manzini and Savoia (2005, I: 281) compare their account with some conceivable alternatives:

> La comparsa di *-i-* alla 2ps è trattata nella letteratura storico-descrittiva come il risultato della metafonia provocata da un'antica *-i* finale; lo stesso trattamento può essere ripreso in termini sincronici all'interno di un quadro generativista del tipo Chomsky e Halle 1968. Rimane il fatto che all'interno del modello da noi proposto siamo in grad[o] di rendere conto del fenomeno senza postulare l'elemento astratto finale *-i*.
>
> [Occurrence of *-i-* in the 2ps [in *avdífta*] is treated in the historical-descriptive literature as the result of metaphony induced by a former final *-i*; the same treatment can be recast in synchronic terms in a generative framework *à la* Chomsky and Halle (1968). The fact remains that within our model we are in a position to account for the phenomenon without assuming the abstract final element *–i.*]

Their syllogism is made explicit in (5):

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(5a) the *-e/i-* alternation in the theme vowel arose diachronically through metaphony, whose trigger was then deleted (opacization);

(5b) Generative Phonology would assume this alternation is still the product of a synchronically active PR, triggered by an abstract final /-i/.

(5c) since (5b) would imply an abstract analysis, the synchronic solution in (2) is preferable.

M&S are surely right in claiming (cf. (5b)) that a phonological account *à la* SPE would postulate an abstract vowel as a trigger for metaphony. In fact, there are many such analyses, from the SPE-era up to OT: e.g. Saltarelli (1968), Calabrese (1984–85, 1998), Sluyters (1988), Kaze (1991), Bolognesi (1998: 20–21), Frigeni (2003), Walker (2005), etc. All of those authors do indeed treat metaphony in Italo-Romance dialects as a synchronic PR (or its OT equivalent, cf. (22) below), independently of the degree of opacization the rule has undergone in this or that variety. Take for instance Calabrese's (1984–85) analysis of metaphony in the northern Salentino dialect of Francavilla Fontana. The relevant data are summarized in (6).[7]

(6)	(a) Northern Salentino			(b) Proto-Romance			Latin	Gloss
	M	F		M	F			
SG	ˈfridd-u	ˈfredd-a	<	ˈfredd-u	ˈfredd-a	<	*frigidum*	'cold'
PL	ˈfridd-i	ˈfredd-i		ˈfredd-i	ˈfredd-e		etc.	

Two changes are responsible for the evolution of the Proto-Romance forms (6b) into their modern outcomes (6a): first, metaphony raised the stressed vowel before final high vowels, then final unstressed mid vowels rose in turn, so that fpl [ˈfredd-e] became [ˈfredd-i], whose ending is non-distinct from that of the mpl [ˈfridd-i], which has undergone metaphony unlike the fpl.

Calabrese's analysis treats both changes as synchronic rules. In (7), I reproduce only the formalization of metaphony, represented as a (synchronic) spreading of the feature [+high].

[7] For most of the examples discussed throughout the paper, I adopt a simplified glossing procedure: more detailed Leipzig-style glosses are provided only where necessary (cf. (11), as well as §6).

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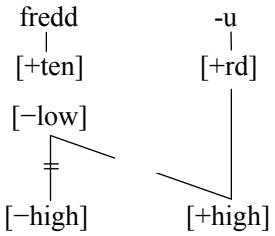
(7)



→ friddu

Calabrese (1984–85: 29)

metaphony

(later in the derivation final vowel raising applies)

For both changes (metaphony and final vowel raising), there is no synchronic evidence, apart from the alternation itself.

An alternative NP account of Northern Salentino metaphony along the lines synthesized in (4) would take it to be an MPR, rather than a PR. The rule has phonemes as both input and output, since /i/ vs. /e/ contrast elsewhere in the language: e.g. [ˈveu] 'drink.1sg' vs. [ˈviu] 'alive.msg', [ˈt(:)ʃe] 'what' vs. [ˈtʃi] 'who' (Ribezzo 1912: 26, 26, 75). Besides, there is evidence that the rule, which surely arose at first as an assimilation PR of the sort formalized in (7), is nowadays to be conceived as an inverted MPR, in order to account for paradigms like that in (6). Compare for instance what happened in the case of Spanish monophthongization (*ue* → *o, ie* → *e*), which Dressler (1985: 125) takes to be the morphonologized successor of an original PR of diphthongization:

> The inverted MPR *ue* → *o* (*afruento*, *afrontar*) can be classified as a MPR because monophthongization in unstressed position is still a remnant of phonologicalness.

The sound change responsible for the alternation originally turned Proto-Romance stressed /ɔ/ into a diphthong. However, within paradigms such as *afruento*, *afrontar* 'I/to face' the most basic alternant (the 1st/3rd singular form) has the diphthong, and the monophthong occurring in other forms of the paradigm is derived via an MPR (cf. also e.g. *bueno* 'good.MSG' → *bondad* 'goodness'). Likewise, within an adjectival paradigm such as the Northern Salentino one in (6), the most basic alternant is the msg, which has a stressed high vowel: [ˈfridd-u]. This has a diachronic explanation, since the productive adjective inflection class exemplified in (6) stems from Latin first class (*frigidus, -a, -um*), and the masculine (case) forms which survived into Proto-Romance (6b), i.e. *frigidum* for the singular and *frigidi* for the plural, all had a final high vowel.

Here too, like for Spanish *ue* → *o*, the rule is not completely morphologized though, since lowering to /e/ occurs in the derivation of the feminine stem, whose basic form (the singular) has a final low vowel: [ˈfredd-a]. The feminine

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stem is then carried over to the fpl, whose ending has become phonologically non-distinct from the mpl because of raising ([ˈfredd-i]). This cannot be effectively modelled synchronically by referring to (nowadays non-existing) phonological contrasts, but is easily done through morphonological specification within an MPR (/i/ → /e/ in the feminine stem).[8]

5. Back to Forlivese metaphony

Let us now apply to Forlivese metaphony this kind of analysis. This implies a careful distinction between synchronically active PRs and diachronic sound change, possibly reflected synchronically as MPRs/AMRs. First of all, let me spend a word on the data, which I collected during a fieldwork session in Forlì,[9] and slightly differ from those recorded by M&S (cf. (1) above). As for the non-metaphonic alternants occurring in the 1sg, 3sg and 3pl forms of the imperfect paradigm, all my informants unanimously judged them as phonologically identical (/avˈdeva/),[10] with surface differences arising from the application of low-level processes such as the deletion of initial /a/ after a preceding vowel, as shown in the examples in (8):[11]

(8a) ˈmɛ a vˈdeːva ˈtɛ̃nta ˈʒɛːte
'I saw many people.'

(8b) ˈmɛ a n la vˈdeːva
'I did not see her.'

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[8] One anonymous referee remarks: "Here it seems that the argument is not against abstractness per se, but rather against a phonological analysis of a morpho(phono)logical phenomenon." Actually, my argument is against both, since the two are inextricably related. As I explained concluding §4, the abstractness controversy largely reduces to an issue of division of labour. Clearly, the choice to represent English *decision* as /decīd + ion/, and to assume a PR accounting for the different realization of the stressed vowel in this derived noun with respect to its verbal base *decide*, is a choice for a phonological analysis of this alternation (a wrong choice, by the way, according to many: e.g. Ohala 1986: 6) over conceivable alternative analyses which account for the morphological (and semantic) relationship between the two at some other descriptive level than phonology proper.

[9] I worked there with six informants, aged between 25 and 70, on September 17, 2008.

[10] This identity comes as no surprise, if the Forlivese paradigm is placed in the broader historical and geographical perspective it belongs in. In the imperfect indicative, 1sg and 3sg became homophonous from the outset, as soon as final consonants were deleted: *vidēba(m) = vidēba(t)*. Furthermore, 3pl – in this case *vidēba(nt)* – has been generally neutralized with 3sg in all dialects of Romagna (cf. e.g. Loporcaro 2009: 108).

[11] This probably explains M&S's transcription of the 1sg [(a)vˈdeːva] without the initial vowel.

(8c) ˈmɛ a n e vˈdeːva
'I did not see him.'

(8d) ˈloː i vˈdeːva ˈbɛ̃ː
'They saw/could see well.'[12]

Abstracting away from those low-level differences, one sees that the stressed vowel of the non-metaphonic alternant [avˈdeːva] contrasts with the stressed vowel which has been raised by metaphony in 2nd person forms. Here too, my data diverge somewhat from M&S's, as I recorded variation between [avˈdiːva] and [avˈdiːfta], whereas only the latter occurs in M&S's paradigm in (1). My informants do judge [avˈdiːfta] as grammatical, if sometimes adding the comment [u ʐ̩ ˈdʒeːva] 'it used to be said (earlier)', the first answer always being [avˈdiːva]. This might suggest that M&S recorded a more conservative form.[13] Some speakers also say [ˈtɛ t avˈdeːva] 'you.SG saw', which is clearly a later innovation that does away with the morphonological alternation arisen via metaphony. The last divergence beween my data an M&S's concerns the 2pl, for which *[a ˈvdiːvja] was consistently judged as ungrammatical by all my informants, who say [a ˈvdiːva/aˈvdiːfta] instead, like in the 2sg.[14] In sum, the paradigm which results from the above is given in (9).

Thus, in comparison with M&S's description in (1), the data in (9) for the 2sg provide the supplementary information that [avˈdiːfta] is in variation with [avˈdiːva]. As for the analysis of [avˈdiːfta], Manzini and Savoia (2005, I: 281) are surely right in claiming – as seen in (5b) above – that a phonological account of this form within Generative Phonology would assume an abstract final /-i/. However, their conclusion that a "morphological" synchronic account such

[12] In the 3pl, M&S do not record (in (1)) *a*-deletion, which my informants apply. In general, postvocalic deletion of this initial /a/ is a remnant of its original status as a prosthetic vowel (cf. Sampson 2010: ch. 6). Note however that, synchronically, these verb forms do begin with an underlying /a/, not with a consonant cluster, although this originally prosthetic initial vowel has a somewhat special status. This is seen in the selection of the 3msg subject clitic form: before 3sg /avˈdeːva/, one may find either the prevocalic allomorph /l/ ([ˈlo l avˈdeːva] 'he saw', with the same subject clitic form as in [ke ˈmuːr l ˈɛ ˈtʃɔsˑ] 'that wall is thick') or the preconsonantal allomorph /e/ ([ˈlo e vˈdeːva], like [ˈlo e maˈɲeːva/kanˈteːva] 'he ate/sang'). As for the 3rd plural, a similar variation could obtain between [ˈloː j avˈdeːva], recorded by M&S, and [ˈloː i vˈdeːva] (my own fieldnotes).

[13] Their data stem from fieldwork with one informant (M&S I: xviii). While their project was started in 1997, no information is available as to when Forlivese data were collected.

[14] Here, the -[ta] form is an innovation, which spread to this cell of the paradigm from the 2sg: cf. (10g).

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(9) Imperfect indicative (Romagnolo dialect of Forlì; my data)

Person	Pronoun	Subj. clitic	Verb	Standard Italian *vedere* 'to see'
1 sg	ˈmɛ	a	(a)vˈdeva	*vedéva (-o)*
2 sg	ˈtɛ	t	avˈdiːva/avˈdiːfta	*vedévi*
3 sg	ˈlo	l	avˈdeːva	*vedéva*
1 pl	ˈno	a	(a)vˈdɛma	*vedevámo*
2 pl	vuˈiːter	a	(a)vˈdiːva/(a)vˈdiːfta	*vedeváte*
3 pl	ˈloː	i	(a)vˈdeːva	*vedévano*

as theirs in (2) is the only viable alternative, does not actually follow. To see this, we have to discern synchrony and diachrony.

Diachronically, the steps in (10) can be reconstructed (where only relevant changes are listed underneath, between each two adjacent steps).

(10) (a) Latin *vidē-ba-s* >

metaphony (b) *veˈdeːvi >

apocope (c) *veˈdiːvi >

syncope and prosthesis (d) *veˈdiːv >

analogy (e) *avˈdiːv >

agglutination (f) *avˈdiːva (>)

(g) Forlivese avˈdiːfta

The context of metaphony, triggered by final *-i* in this dialect, was destroyed by apocope, as all non-low final unstressed vowels were deleted like in most Northern Italian dialects. In a further step, the 2sg form was reshaped due to analogical pressure from the remaining singular persons in the imperfect, where final *-a* was inherited as part of the exponent of imperfect tense (Lat. *vidēbam*/*-at* > [avˈdeːva]). This analogical change is symmetric to the one that took place in (Tuscan-based) standard Italian, in the imperfect, where the original 1sg *ve-deva*, homophonous with the 3sg, was replaced by *vedevo*: in Italian, uniform signalization of person (like in the present indicative *canto/canta* 'sing.1sg/3sg') prevailed over uniform signalization of tense marking in shaping the imperfect paradigm. The opposite happened for affixal person marking in Forlivese through the change (10e) > (10f).

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Note that the 2nd person singular in (10f) is still signalled unambiguously by vowel alternation (/i/ contrasting with /e/ in the 1sg/3sg). In spite of this, a further change intervened to mark the person contrast also affixally, when a pronominal 2nd person form /t/ identical with the subject clitic was agglutinated, providing a new ending (a fairly common change in Northern Italo-Romance).[15]

Projecting all the changes in (10) into synchronic derivation would be necessary, in order to let metaphony appear as a PR in present-day Forlivese. Once this alternative *à la* SPE is discarded, however, it is still questionable that we have to assume M&S's synchronic analysis. As shown in (2), they assume that the lexical morpheme (realized as the allomorph /avd-/) is followed by three separate morphs, two of which encode person features. This is made explicit using Leipzig-style glosses in (11a).

(11) (a) avd-ˈiː-f-ta
'see-2SG-IMPF-2SG'

(b) avd-ˈiːf-ta
'see-IMPF-2SG'

(c) avd-ˈiːfta
'see-IMPF.2SG'

(d) ved-ˈeːv-i-ta
'see-IMPF-2SG-2SG'

They are forced to do so, since their view of morphology, like Distributed Morphology, is of the lexical-realizational type in Stump's (2001: 2–3) terms. In other words, they follow a strictly item-and-arrangement analytical procedure, and their model does not provide for multiple exponence. Under different views of morphology, alternative analyses are available, as shown in (11b–c). On analysis (11b), the person ending is -/ta/, whereas -/iːf/- (alternating with -/eːv/- in other persons) is the tense-mood marker.[16] Alternatively (11c), one might want to analyze -/iːfta/ as a portmanteau ending encoding TAM and person feature values at the same time. Both under (11b) and (11c), the relation between 2sg -/iːf(ta)/ and 1sg/3sg/3pl -/eːv(a)/ would be accounted for by means of an AMR, since after final *-i* deletion ((11d)), the rule (an MPR up to that point) lost phonetic plausibility.

[15] Agglutination of subject clitics to provide new verb inflections recurs in many dialects of Northern Italy. In particular, 2sg /t/ became part of the verb ending in all moods and tenses (except the imperative) in Lombard: cf. Rohlfs (1966-69, II: 248).

[16] While the [e/i] alternation, as we saw, is due to metaphony, [v] → [f] devoicing is a lower-level assimilatory process.

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Assuming a synchronic PR of metaphony, on the other hand, would create a monster, not only synchronically, but also diachronically – a problem which is not encountered in current analyses of metaphony such as Calabrese's on Salentino (discussed in §4), whose empirical scope is usually limited to straightforward cases like the one illustrated in (6)–(7), where the only cost of assuming a synchronic PR is that synchronic derivation recapitulates diachrony. In Forlivese, on the other hand, a similar assumption would force one to set up the underlying representation in (11d). The problems this representation would face are even more serious than those familiar from the literature, as exemplified by notorious cases of exceeding abstractness like SPE's /rixt/ for *right* (cf. §3 above) or like Schane's (1968) underlying representations for French. The latter are exemplified in (12) with strong and weak PtPs.[17]

(12) *fait* |faz+to#| ≠ *faite* |faz+t+a#| 'done.MSG≠.FSG' (strong PtP)
fini |fIn+I+to#| ≠ *finie* |fIn+I+t+a#| 'finished.MSG≠.FSG' (weak PtP)

Under Schane's representational assumptions, PtP inflections in modern French still contain underlyingly a final vowel in the feminine and a final *-s* in the plural. In other words, underlyingly, all inherited inflectional morphology is still there, in its canonical affixal form, in spite of the fact that this affixal material was eroded by sound change several centuries ago.[18] Schane's (and SPE's) underlying representations were criticized for projecting (even fairly remote) sound changes into synchronic phonological derivations.[19] In the case of For-

[17] One anonymous referee objects here to my mentioning Schane (1968), observing that "it seems a little unfair to ignore 40 years of theoretical development and to provide as an example of exceeding abstractness an analysis that nobody would ever think of bringing back". As I argue in fn. 4 above (cf. also Loporcaro 2011: 86–87), the same kind of underlying representations proposed for modern French 40 years ago by Schane or Walker (in particular, representations containing unstressed vowels which were deleted many centuries ago) still are assumed as input to the algorithm for stress assignment in current generative research on French phonology.

[18] Representations like those in (12) are assumed by Schane (1968) in compliance with the basic tenet of classical generative phonology according to which every morpheme must have a single phonologically invariant representation (see e.g. Linell 1979: ch. 12 for a discussion of that tenet). The derivation of (masculine singular) PtPs and the representation of feminine adjectives (not PtPs) is addressed in Schane (1968:105-112 and 142, n. 36).

[19] Considering the interplay of phonology with other components, an additional problem for the representations in (12) is that they destroy the contrast between strong and weak PtPs: (a subset of) the former still display gender agreement, whereas in weak PtPs agreement never occurs at the surface. The representations in (12) force one to assume that the child comes to master a rule of PtP agreement in contexts such as, say, *la chanson, je l'ai chantée* 'the song(F), I've sung it.F' which,

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livese [avdˈiːfta], however, the problems an abstract analysis has to face are more acute, as the underlying structure one would have to come up with would be that in (11d): as a trigger for metaphony, final *-i* is needed, that was originally the exponent of 2nd person inflection (as shown in (10b)). But on the other hand one cannot possibly get rid of underlying -/ta/, the new exponent of 2nd person inflection, which was agglutinated to replace original *-i* long after the latter was swept away by sound change. As a consequence, the underlying representation needed to let Forlivese metaphony appear as a synchronic PR has to contain at the same time both *-i* and *-ta,* which never co-occurred at any stage. In other words, underlying /ved-ˈeːv-i-ta/ (11d) – unlike, say, /rīxt/ for English *right* or /fIn+I+t+a/ for French *finie* – is not "just" a synchronic monster arising from the misrepresentation of diachronic changes as synchronic PRs. It also is a diachronic chimera, which actually never existed.[20]

6. Metaphony in Castrovillarese (N. Calabria): a case of non-morphology-free syntax

The analysis of Forlivese metaphony in the imperfect verb paradigm provides opportune evidence from morphological complexity arisen through diachronic change, which helps to dispel the widespread misconception that the choice between alternative synchronic analyses (with and without metaphony as a PR in systems like this) may be just a matter of taste – because, so to speak, some like it abstract. In the present paragraph, one more case of metaphonic alternation will be discussed, which shows that pretending that metaphony still is a PR synchronically – with the implications of such an abstract analysis for underlying

apart from orthography, do not provide any surface cues for such an agreement. More generally, another problem with those representations is that they create the illusion of an (underlying) agglutinative morphology for a language which is indeed (weekly) inflectional.

[20] Here, one anonymous referee "do[es] not see the force of this argument" since "there is no requirement that URs must mirror historically attested surface forms (even if they often do)." Actually, a considerable bulk of literature by opponents of Generative Phonology has shown that for underlying representations to recapitulate sound change is a built-in necessity of that model, given the basic assumption that morphemes be phonological invariants (cf. e.g. Linell 1979: ch. 12). This forces one to take a shared diachronic predecessor of related forms which have come to diverge via sound change (say, /decīd(-)/ for both *decide* and *decision*) and declare it as their common underlying form. Anyway, M&S themselves (in the quotation in §4 above) tell us that a phonological treatment of Forlivese alternations would have to replicate sound change (see (5b)): this is not presented as one among several options, but rather as *the* obvious procedure (for generative phonologists).

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representation – may generate monsters with consequences which go far beyond phonology and affect the analysis of morphological and syntactic structure too.

The example concerns a dialect which differs from Forlivese and is like Salentino (6) as for the degree of opacization that metaphony has undergone due to the application of later changes. Like in Northern Salentino, also in the Northern Calabrese variety of Castrovillari (cf. Pace 1993–94: 95–97, 136–149) metaphony was rendered opaque by later raising of final unstressed mid vowels: (In (13) some other changes, immaterial to the present argument, are disregarded.)

(13)	(a) Latin		(b)			(c) Castrovillarese	
MSG	*kɔk-t-u*(^{m})	>	*kwott-*	*-u*	>	*kutt-*	*-ʊ*
MPL	*kɔk-t-i*		*kwott-*	*-i*		*kutt-*	*-ɪ*
FPL	*kɔk-t-e*		*kɔtt-*	*-e*		*kɔtt-*	*-ɪ*
FSG	*kɔk-t-a*		*kɔtt-*	*-a*		*kɔtt-*	*-a*
	‘cooked’		metaphony			-V raising	

This diachronic development is found in all word classes, whenever the appropriate phonological conditions were met. The reason why it is exemplified in (13) with a PtP is that in this dialect a very unusual change took place, affecting the application of PtP agreement (cf. Loporcaro 2010: 167–172 for more detailed discussion). The effects of this change are exemplified in (14)–(15).

(14a) ˈrɔsa s=a ˈkkɔtt-a/ *ˈkkutt-ʊ
Rose REFL=have.3SG F\cook.PTP-F.SG/ M\cook.PTP-M.SG

a miˈnɛstr-a
DEF.F.SG soup(F)-SG

‘Rose has cooked the soup.’ lexical DO, strong PtP

(14b) (a miˈnɛstr-a) ˈrɔsa s=a
DEF.F.SG soup(F)-SG Rose REFL=DO3F.SG.have.3SG

ˈkkɔtt-a/ *ˈkkutt-ʊ
F\cook.PTP-F.SG / M\cook.PTP-M.SG

‘(The soup) Rose has cooked it.’ DO clitic, strong PtP

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(15a) ˈrɔsa s=a llaˈvat-ʊ/ *llaˈvat-a
Rose REFL=have.3SG wash:PTP-M.SG/ wash:PTP-F.SG

a kamˈmɪs-a
DEF.F.SG shirt(F)-SG

'Rose has washed the shirt.' lexical DO, weak PtP

(15b) (a kamˈmɪs-a) ˈrɔsa s=a
DEF.F.SG shirt(F)-SG Rose REFL=DO3F.SG.have.3SG

llaˈvat-a/ *llaˈvat-ʊ
wash:PTP-F.SG/ wash:PTP-M.SG

'(The shirt) Rose has washed it.' DO clitic, weak PtP

As seen in (14a), agreement occurs with a lexical DO (['kɔtt-a a miˈnɛstr-a]). This was the case in Proto-Romance and, optionally, in the (early) Medieval stages of the Romance languages, but is not anymore the case in any of the modern Romance standard varieties, as exemplified with Italian in (16a).

(16a) Rosa ha cott-o/ lavat-o
Rose have.3SG cook.PTP-M.SG/ wash:PTP-M.SG

l-a mel-a
DEF-F.SG apple(F)-SG

'Rose has cooked/washed the apple.' lexical DO, strong=weak PtP

(16b) (l-a mel-a) Rosa l'=ha
DEF-F.SG apple(F)-SG Rose DO3F.SG=have.3SG

cott-a /lavat-a
cook.PTP-F.SG /wash:PTP-F.SG

'(The apple) Rose has cooked/washed it' DO clitic, strong=weak PtP

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In languages like Italian or French, PtP agreement was lost with lexical DOs (16a), and was preserved only with DO clitics (16b). The same change took place in Castrovillarese as well, as seen in (15a). From comparison of (15) and (14), however, a striking fact emerges: syntactic change, leading to the loss of PtP agreement with lexical DOs (as opposed to clitics, where it was preserved throughout), applied selectively, depending on the morphological class the PtP belongs to. In fact, whereas with DO clitics agreement applies in (14b) like in (15b), irrespective of the morphology of the PtP, with lexical DOs morphology does matter. And since the change that has occurred in (15a) has restricted the application of a syntactic rule, also the resulting synchronic generalization – however stated, depending on the theory adopted – has to mention the morphology of the PtP, as shown informally in (17).

(17) Past participle agreement in Castrovillarese

MORPHOLOGY		SYNTAX
(a) double exponence of gender (strong PtPs, (14))	→	less restrictive syntactic condition
(b) single exponence of gender (weak PtPs, (15))	→	more restrictive syntactic condition

Strong PtPs with double exponence of gender, such as [ˈkutt-ʊ/ˈkɔtt-a] (where metaphony resulted in stem–vowel alternation, co-signalling gender in addition to affixal inflectional morphemes, which also signal number), are subject to a less restrictive syntactic condition than weak PtPs with single exponence of gender, such as [laˈvat-ʊ/laˈvat-a] (where the stressed vowel did not undergo metaphony).

In order to make the argument more convincing, I shall briefly discuss some conceivable alternative analyses. In fact, according to one anonymous referee, given the data in (14)–(15)

> it is very difficult to tell whether this is the correct generalization. Agreement may depend, instead, on the lexical semantics of the verb or on conjugation, among many other possibilities.

While it is hard to judge about the "many other" (unspoken) possibilities, it is easy to show that neither of the alternatives suggested is viable. Lexical semantics does not co-vary with ±agreement, since the contrast in (17a) vs. (17b) cuts across Aktionsart classes: this is shown by the fact that in both (14) and (15),

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which contrast in terms of PtP agreement, the predicate is telic. (The same applies to (18)–(19) – see below.)

Conjugation is not an option either. True, all PtPs displaying metaphonic alternation belong to 2nd conjugation: e.g. [ˈkuttʊ]/[ˈkɔtta] from [ˈkɔʧɪ] 'to cook', [aˈpirtʊ]/[aˈpɛrta] from [ˈgrapɪ] 'to open' etc. (cf. Pace 1993–94: 65–96 for these and the following data). However, PtPs without metaphonic alternation are not confined to other conjugations: alongside weak PtPs – exemplified in (15) with [laˈvatʊ, -a], from 1st conjugation [laˈva] 'to wash' – there are a host of 2nd conjugation strong PtPs whose stressed vowel did not undergo metaphony and which consequently display no alternation: e.g. [ˈvɪstʊ, -a] from [ˈvɪdɪ] 'to see', [ˈdɪttu, -a] from [ˈdɪtʃɪ] 'to say', [ˈrʊttʊ, -a] from [ˈrʊmbɪ] 'to break', etc. Crucially, while all metaphonic PtPs show agreement with the lexical DO, as shown in (14) (one more example is provided in (18)), all 2nd conjugation strong PtPs without metaphonic vowel alternation do not display object agreement in this context ((19)), on a par with 1st conjugation weak PtPs exemplified in (15) (data from Pace 1993–94: 136–138):

(18) ˈrɔsa a ˈʃʃɔt-a/ *ˈʃʃut-ʊ
Rose have.3SG unfasten:PTP-F.SG/ unfasten:PTP-M.SG

a ˈvakk-a
DEF.F.SG cow(F)-SG

'Rose has unfastened the cow.'

(19a) ɪ kwatraˈr-ɪdd-ɪ ˈa-nʊ ˈvɪst-ʊ/ *ˈvɪst-a
DEF.M.PL boy(M)-DIM-PL have-3PL see:PTP-M.SG/ see:PTP-F.SG

n-a ˈstɛll-a
INDEF-F.SG star(F)-SG

'The little boys have seen a star.'

(19b) ˈrɔsa a ˈrrʊtt-ʊ/ *ˈrrʊtt-ɪ ˈdʊjɪ ˈsɛddʒ-ɪ
Rose have.3SG break:PTP-M.SG/ break:PTP-PL two chair(F)-PL

'Rose has broken two chairs.'

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Of course, those strong PtPs (like any other PtP, as seen in (14b), (15b)) do agree with object clitics:

(20a) (a ˈstɛll-a) ɪ kwatraˈr-ɪdd-ɪ
DEF.F.SG star(F)-SG DEF.M.PL boy(M)-DIM-PL

a-nʊ ˈvɪst-a/ *ˈvɪst-ʊ
DO3F.SG.have.3PL see:PTP-F.SG/ see:PTP-M.SG

‘(The star) the little boys have seen it.’

(20b) (ˈdʊjɪ ˈsɛddʒ-ɪ) ˈrɔsa a
(two chair(F)-PL) Rose DO3.PL.have.3SG

ˈrrʊtt-ɪ/ *ˈrrʊtt-ʊ
break:PTP-M.SG/ break:PTP-PL

‘(Two chairs) Rose has broken them.’

Clearly, in the crucial syntactic context (transitive clauses with lexical DO) in which PtP agreement depends on the kind of PtP involved, what matters is not conjugation but the presence vs. absence of metaphonic vowel alternation (and, as a consequence, of double exponence of gender).

This state of affairs makes sense functionally: once it was put under pressure by the diffusing change, as the loss of PtP agreement with lexical DOs (as opposed to DO clitics) was coming in, the system reacted so that participles which were morphologically better equipped to mark object agreement (because of double exponence of gender) resisted the change and preserved agreement.

This however resulted in a violation of a well-established principle constraining the morphology-syntax interplay, viz. the so-called principle of “morphology-free” syntax:

> Syntax can be sensitive to abstract properties realized in morphology, but not to specific inflectional marks for these properties (to dative case, say, but not to a particular dative case marking, or to a declen-

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> sion class for nouns); and it can be sensitive to syntactic subcategories of lexemes, but not to specific derivational marks for these subcategories (to abstract Ns, say, but not to just those abstract Ns with the derivational suffix *-ness* (Zwicky 1996: 301).

As for agreement, specifically, "we do not expect to find genuine morphological conditions on agreement, because of the principle of 'morphology-free' syntax" (Corbett 2006: 184). The Castrovillarese pattern seems to be a genuine exception to this principle.[21]

Consider, however, what consequences would follow, for this exception, if one were to adopt an abstract analysis by which metaphony still is a purely phonological process, as commonly maintained for southern Italian dialects in the literature in Generative Phonology, from the Sixties down to OT (cf. §4). As shown in (21), such an analysis would imply lexical representations in which the stem of the PtP is represented as invariant underlyingly:

(21) Castrovillarese PtPs with metaphonic alternation (Generative Phonology)

(a) |ˈkOtt-u| → [ˈkutt-ʊ] 'cook.PTP-M.SG'
(b) |ˈkOtt-a| → [ˈkɔtt-a] 'cook.PTP-F.SG'

Given (21), the Castrovillarese facts would become even more puzzling: we would be facing an instance of *phonology*- (or even *phonetics*-)dependent syntax. In fact, if metaphony is represented as a synchronic PR, the difference in exponence between weak and strong PtPs, as seen in (21), evaporates from the underlying representation (hence from morphological structure) and becomes a purely phonetic difference which arises at a late derivational stage in the phono-

[21] One anonymous referee disagrees on this, suggesting "that the properties of the two types of PrPs (double vs. single exponence or strength vs. weakness) are abstract properties to which syntax can be sensitive". To be sure, being a strong vs. a weak PtP is an abstract property, but a specifically morphological one, just like belonging in this or that declension (cf. Corbett 2006: 184). As demonstrated by the mention of declension classes in Zwicky's quotation, this is exactly the kind of *morphological* properties syntax is usually not sensitive to. What Zwicky's principle excludes is precisely syntactic rules like "PtPs agree in a given syntactic context, iff they belong to conjugation *x*".

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logical rule component. As already hinted to in §4, this kind of treatment of metaphony carries over unchanged to recent OT analyses, as exemplified with the tableau in (22), from Walker (2005: 960).[22]

(22) Southern Italian metaphony in OT (Walker 2005: 960)

/nɔv-u/	IDENT(high) & IDENT(ATR)	LIC (height)	IDENT (ATR)	IDENT (high)
☞ a. nóvu		*	*	
b. nɔ́vu		**!		
c. núvu	*!		*	*

Metaphony – implemented as raising in the Marchigiano dialect from which the word in (22) ([ˈnov-u] 'M\new-M.SG') is drawn – is not in the input (which is /nɔv-u/, with an unraised vowel) but only applies in the winning candidate output. Consequently, morphological exponence should be computed on the phonetic output of the phonological component.

7. Conclusion

In conclusion, also in the Castrovillarese case discussed in §6, like in the Forlivese one analyzed in §5, morphological complexity (here, the different behaviour of double vs. simple exponence of gender on PtPs with respect to the object agreement rule) provides a rather unexpected argument against an abstract phonological representation like (21), of the kind presupposed by analyses of Italo-Romance metaphony in terms of a synchronic PR, as put forward in all generative treatments of metaphony, or in terms of its OT equivalent (output contrast with unchanged input).

Again, a more realistic view of synchronic phonology *à la* Dressler (1985) protects us from the analytical problems which are caused by an abstract analysis. Italo-Romance metaphony, as Maiden (1989, 1991), Tuttle (1985) and oth-

[22] The reader is referred to Walker (2005) for the illustration of the constraints displayed in (22). Their exact definition is immaterial to our present discussion, which only focuses on the fact that the raising caused by metaphony is not in the input.

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ers have shown convincingly, is morphologized in southern Italian dialects. Therefore, the difference in the stressed vowel in (21a–b) must be underlying, unlike shown there, and we get rid of a potential violation of the phonology-free syntax principle. Note that the two principles, that syntax must be phonology-*and* morphology-free, are lumped together by Zwicky (cf. e.g. Zwicky and Pullum 1983; Zwicky 1996: 301). However, the case of Castrovillari shows that syntax – under very special circumstances – can become sensitive to morphological structure,[23] whereas syntactic rules sensitive to phonological properties of the word forms manipulated by the syntax do not seem to occur at all.

After the present discussion, thus, the burden of proof for proponents of abstract analyses of metaphony (and, consequently, abstract phonological representations) has become heavier: in order to maintain that Castrovillarese metaphony can indeed be analyzed along the lines in (21)–(22), they should be able to point to parallel cases of non-phonology-free syntax.

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[23] As argued in Loporcaro (2008), these special circumstances were determined by a clash of two opposite changes, conflicting in the area: loss of PtP agreement with lexical DOs, spreading northwards from the Calabrian dialects spoken to the south of Castrovillari, and merger of final unstressed vowels (involving loss of contrasts in affixal inflectional morphology) spreading southwards from the dialects spoken further north.

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