PROSODY, PHI-FEATURES AND DEIXIS IN SOUTHERN ITALIAN:
WHAT VOCATIVES CAN TELL US ON THE ARCHITECTURE OF LANGUAGE

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Abstract

Vocatives are often considered as exceptions to the regularity of language, and therefore often put "outside" of grammar, and pertaining instead to speech.
In this paper, we wish to show that this conceptualization of vocatives in wrong: not only are they perfectly regular, but they give us important insights on the grammatical architecture of language. We will consider a case-study, namely central and southern Italian vocatives, which are obtained by truncation, to show that: 1. Deixis and reference are to be kept separate. 2. Speech-act related information is encoded in syntax, but on a different dimension than core argumental syntax. 3. This dimension is targeted by prosody. 4. There would be no other way that grammar could be built, given the inviolable constraint imposed by prosody because of the fact that it cannot apply without underlying phonological segmental material.

1. Introduction

Phonology and syntax do not match. This has been a problem for years, and it has been tackled in different ways. There have been attempts to define prosodic domains in terms of syntactic domains, both from a syntactic point of view (Ackema and Neeleman 2003, 2012), and from a phonological point of view (Nespor and Vogel 1986). Once agreed that there is no perfect overlapping, the issue has moved towards whether it is still possible to find a mapping algorithm which can somehow identify prosodic domains starting from syntactic domains. According to Cheng and Downing (2012), the answer is yes, taking into account the lower edge of syntactic phases. According to (D'Alessandro and Scheer 2015), the answer is again yes, provided that we take into account the "needs" of PF. In other words, a modular mapping model is necessary: modularity ensures that also the expectations of PF are met, and hence the mapping does not depend on syntax only, but takes into account phonology as well.

In this paper, we wish to explore the language architecture more carefully, and reverse the usual "mapping" issue. The answer we wish to answer is: is phonology really an imperfection? Of course, if we look at it from a narrow-syntactic point of view, phonology will result "imperfect". However, if we

look at the whole architecture of language from a phonology/PF point of view, phonology will result as the perfect, optimal solution to interface problems. More than this, we wish to claim that narrow syntax is like this BECAUSE of the structure of phonology. The phrasal architecture could not be different, because the only way in which phonology can read syntax is by first reading argument structure and only subsequently information structure.

Narrow syntax is a perfect match to phonology and, we wish to claim, it could not be different, because the interface conditions mapping syntactic material to PF would not allow it.

We start from the observation that nominative or accusative case can never be expressed by intonation in any (non-tonal) language and that one can't express nominative or accusative case by means of truncation in any language; on the other hand, intonation is used to express wh- (questions), topics and foci, and imperatives, at least. This indicates that prosody can only target the left periphery, not "core" argumental syntax. Narrow syntax is built is such a way that we first merge a verb with its arguments, and only subsequently we include information about information structure. Likewise, phonological material (and phonological processes) can target arguments, but prosody cannot. We must wait until we have our argumental syntax in place to start giving information structure; we must wait until we have our phonological material in place before we can apply prosody to it.

Prosody "targets" the left periphery because it cannot do otherwise: it must wait until all phonological segments are in place before kicking in. To illustrate this, we take into account one specific phenomenon, namely vocatives in central and southern Italo-Romance. These elements, we maintain, are not at all an exception, but the perfect instantiation of the fact that syntax and PF need to be constructed in this way, and no other.

2. Vocatives

Vocatives are a challenging grammatical category. Levinson (1983:71) defines them as "an interesting grammatical category, yet under-explained". The reason why this category is so interesting is its being in between discourse and syntax: Vocatives offer a window to spy into the syntax-discourse interface, as well as into syntax-PF interface, given their peculiar intonation.
Vocatives are realized in different ways in different languages: some languages have a dedicated vocative marker, some languages use bare intonation, some others use truncation. In this paper, we address this last strategy, and examine in particular central and southern Italian vocatives,

which present an unusual truncation pattern. We also address the general issue of discourse-related features, and take the move from vocatives to examine the syntax/PF interface.

2.1 The phonology and syntax of vocatives

Many languages form vocatives (and/or hypocoristics) by means of truncation (Cabré 1993, Vanrell and Cabré 2011, Thornton 1996). Northern Italian dialects, for instance, usually reduce the name to the first two syllables, i.e. to a foot, as exemplified in (1)-(3):

(1) Gabri [*Gabriella*]
(2) Giova [*Giovanni*]
(3) Magi [*Maria Giovanna*]

German has the same behavior, although the reduced forms need not be vocatives, but can also be diminutives:

(4) Gabi [*Gabriela*]
(5) Miki [*Michaela*]

Central and southern Italian dialects, Sardinian Catalan, Corsican, Sardinian (Alber 2010, Vanrell and Cabré 2011), as well as regional southern Italian, however, make use of a different reduction strategy whereby the noun is truncated right after the stressed vowel. The remaining constituent can vary in length and in number of syllables. Truncation is hence not to a prosodic constituent. Examples (6)-(8), from southern Italian, illustrate the phenomenon.

(6) Mari' [*Maria*]
(7) Mariacarme' [*Mariacarmela*]
(8) Marcodalpo' [*Marco Dal Pozzo*]

Interestingly, the truncation targets a phonological word, which means that it can target an element which is longer than one word. For instance, in (9a), the truncation happens after the stressed vowel of the last name. For (9c), however, the truncated version is not quite acceptable. We will return to this later on.

(9) a. A Mariacarmela Dell'Arcipre', vi' qqua!
part Mariacarmela Dell'Arciprete come here

b. Tu, Mariacarmela Dell'Arcipre', vi' qqua!
you, Mariacarmela Dell'Arciprete come here

c. Tu, surellə də Marijə (*surellə də Mari'), vi' qqua!
you, sister of Mary come here

Like for (9c), when we wish to express the vocative of a full DP, truncation does not usually take place. In (9e), the DP 'girl with the white t-shirt' does not undergo truncation. The adjective *bianca* 'white' can however undergo truncation, and it does, when it is used as a name (9d):

d. A **Bia'**
part Bianca
'Bianca!'-voc

e. Tu nghə la majetta b**bianghə**! [Abruzzese]
you with the white t-shirt!
'You girl with the white t-shirt'!-VOC

Truncation is not only found in Romance. Vocative is expressed by truncation in several other languages of the world.

1.1 More vocatives by truncation

Truncation is a common strategy for vocatives, and it is not only used in Italo-Romance. Many examples of vocatives by truncation are collected in McCarthy and Prince (1986). We list them hereafter, in order to give a larger overview of the phenomenon we wish to address. McCarthy & Prince observe that vocatives are often truncations to a foot or a minimal word. The following examples are taken from Yapese and Central Alaskan Yup'ik Eskimo.

(10)

name	*vocative*	[Yapese]
lu.ʔag	luʔ	
ba.jaad	baj	
ma.ŋɛɛ.fɛɛl	maŋ	

(Jensen 1977: 101, 114 in McCarthy & Prince 1986:45)

(11)

name	*proximal vocative*	[Yup'ik]
Aŋukaɣnaq	Aŋ ~ Aŋuk	
Nupiɣak	Nup ~ Nupix/Nupik	
Cupəl:aq	Cup ~ Cupəl	
Aŋivɣan	Aŋif	
Kalixtuq	Kal ~ Kalik	
Qətunɣaq	Qət ~ Qətun	
Maɣ^{w}luq	MaX^{w}	

Aɣnaɣayaq	Aɣən
NəŋqəXalɣia	Nəŋəq
Qakfaɣalɣia	Qak ~ Qakəf
Akiuɣalɣia	Akiuk

(Woodbury 1985 in McCarthy&Prince 1986:46)

Another language using some form of truncation for vocatives is Indonesian, as shown in (12):

(12)

name	*address form*	
papa	pap	'father'
ibu	buʔ	'mother'
bibi	biʔ	'aunt'

[Indonesian]

(Cohn 2004:178)

Last, we find vocatives by truncation in other Romance varieties, like Algherese Catalan:

(13)

name	*vocative*
Pàuru	Pa
Òsa	Rò!
Barbarína	Barbarí!
Tarésa	Taré!
Antòni	Antò!
Ríta	Arrí!
Fabio	(o) Fà!
Juàn	(o) Juà!

[Algherese Catalan]

(Kuen 1932, Cabré and Vanrell 2008, Vanrell and Cabré 2011)

Vocatives by truncation seem to be quite widespread. In what follows, it will be shown that this truncation is not too different from the usage of a dedicated morphological marker, as truncation is also a kind of morphological exponent for a deictic feature. In section 3, the background assumptions on vocatives are presented, and an analysis for the syntax of vocatives is outlined. Section 4 deals with the syntax-prosody interaction. Section 5 contains our conclusions.

3. The syntax of vocatives

Several studies have considered vocatives, both typologically and analytically. The first question we need to address is whether vocatives are argumental, and hence whether there is a vocative (structural) case. The

answer to this is rather straightforward: no. In 3.1, we show that a vocative is not an argument of the verb, and that vocative is therefore no structural case.

3.1 The vocative "case"

In the European grammatical tradition vocative is taken to be a case form. Schaden (2010) lists the properties that characterize vocatives, and outlines several classes of vocatives. Regarding case, despite vocative is considered to be a case mostly because of the Latin tradition, he agrees with Zwicky (1974:777) on the fact that vocatives actually do not serve as arguments of the verb. Furthermore, they are set off from the rest of the sentence by some special intonation.

In his syntactic analysis of the vocative, Moro (2003) draws his conclusions along the same lines: there is too little evidence for the existence of a vocative case, and vocative phrases behave quite differently from argumental noun phrases. Specifically, Moro shows that the Vocative phrase (VocP) does not belong to the thematic grid of the main predicate of the clause. In a sentence like (14), for instance, *Maria* is not the argument of the verb: *pro* is. *Maria* is instead separated from the clause, and can, but must not be, co-referential with the subject of the main clause, as (15) shows:

(14) Maria$_i$, ____$_i$ compra il giornale! [Italian]
Maria-VOC pro-2.SG buy-IMP the newspaper
'Maria, buy the newspaper!'

(15) Maria, che lui compri il giornale!
Maria-VOC that he-3.SG buy-3.SG.SUBJ the newspaper
'Maria, let him buy the newspaper!'.

In (15), the subject of the clause is *lui* ('he'), which is also an argument of the verb 'to buy', but the vocative is *Maria*. This shows that vocatives are not arguments, and therefore that vocative "case" is not structural case. According to Moro, this also means that they are not first-merged in the VP, and that they are in every respect pure left-peripheral elements.

3.2 True and fake vocatives

So far, we have been assuming that vocatives constitute a uniform class. In fact, that is not the case, as pointed out by many scholars. According to Zwicky (1974), vocatives can be used as *calls* or as *addresses*. Calls are those uses of the vocatives employed to catch the attention of an addressee, while addresses are some sort of strategy to keep the attention of the addressee alive. Furthermore, Schaden (2010) sets off vocatives from the rest

of NPs that are used somehow to call the attention of the addressee (see also Anderson 2007 and Göksel and Pöchtrager 2013). According to Schaden, only NPs identifying or describing the addressee are true vocatives. Other NPs used, for instance, for invocation, are not to be considered vocatives. For an extensive overview of all possible classifications of vocatives, we refer the reader to Sonnenhauser and Noel Aziz Hanna (2013)

In this paper, and for our purposes, we follow Espinal (2013) in assuming that vocatives come in at least two fashions: *true* and *fake.* True vocatives are deictic, while fake ones are full DPs, associated with a predicational meaning. We will return to the definition of true and fake vocatives in detail below.

We also assume, again following Espinal (2013), the existence of a Voc(ative) head in the left periphery, endowed with a deictic feature [+DX] referring to the addressee. It is this feature, we wish to claim, that has a special prosodic representation, and that allows the occurrence of vocative forms such as those presented in the introduction.

True vocatives are always deictic. This means that they will have to move to the Voc head to 'check' the [+DX] feature. It follows that they must be heads. The obvious example of a true vocative is *you*, which is deictic. Observe once again that vocative *you*, as used in examples like (16), is not the pronominal argument, which in this case is a *pro*[1].

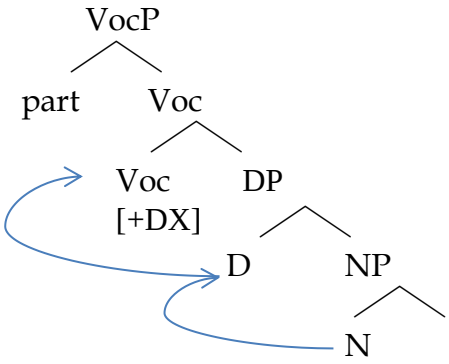
(16) Hey **you$_i$**, *pro*$_i$ buy me a drink!

The syntax of (16) is the same as that of (14), where *Maria* is the vocative, but the argument is a 2nd person *you*.

According to Espinal, true vocatives move to the Voc head to check the deictic feature. We follow her in assuming that true vocatives are Ns, so they are heads, which move cyclically onto D, to get their definiteness and subsequently to Voc, to acquire the deictic value, as illustrated in (17). Full DPs cannot be true vocatives, as they cannot head-move (or remerge) in Voc.

[1] We will not go into the discussion of whether *you* is first-merged as an argument and then moves, or it is first-merged in a DP which is a complement to the VocP. What matters for this discussion is that it occupies the Voc head at the time of Spellout.

(17)



(17) also shows that VocP can host a particle in its specifier (like *hey* in (16).

Fake vocatives are instead full DPs; they are, as such, associated with a referential or a predicational meaning. Fake vocatives are in the DP complement of the Voc head, and get linked to it, not being able to move onto it given their XP nature. The [+DX] feature still identifies the addressee, but fake vocatives get related to the addressee only indirectly.

This division into true and fake vocatives overlaps quite well with the truncation mechanism of central and southern Italian varieties. The generalization we come to is that true vocatives get truncated, while fake vocatives do not. (19) is an illustration of the distribution of the vocatives from sentences (9), here repeated as (18):

(18) a. A Mariacarmela Dell'Arcipre', vi' qqua!
part Mariacarmela Dell'Arciprete come here

b. Tu, Mariacarmela Dell'Arcipre', vi' qqua!
you, Mariacarmela Dell'Arciprete come here

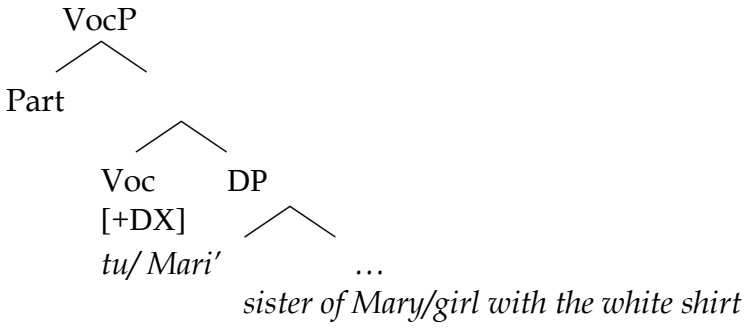
c. Tu, surellə də Marijə, vi' qqua!
you, sister of Mary come here

d. A **Bia'**
part Bianca
'Bianca!'-voc

e. Tu nghə la majetta b**bianghə**! [Abruzzese]
you with the white t-shirt!
'You girl with the white t-shirt'!- voc

We find true vocatives in sentences (18), while (18) are fake vocatives, as they predicate something of the addressee; observe that, in (18), the vocative is mixed: while *tu* is a true vocative, *surellə də Marijə* is a fake vocative. Recall that *tu* ('you') is always a true vocative.

(19)



3.3 The nature of [+DX]. Referents and addressees.

It has been noticed in the literature, particularly by Portner (2007), Zanuttini (2008), and a combination of Portner & Zanuttini's papers, that (true) vocatives and imperatives have a lot in common. Specifically, they both need an addressee, or to be more precise they are both inherently deictic. It is impossible to give a direct order to someone who is not present (also in this case, we are talking about true imperatives, which usually have their dedicated 2nd person morphology, and not about reported orders); it is impossible to call someone who is not present.

Both vocatives and imperatives have been conceptualized as being connected to a head encoding the Addressee, which is situated in the left periphery, but below Force (Sigurðsson 2000, 2004a, b, Speas 2004, 2000, Bianchi 2006, 2003, Poletto 2000). An example of an imperative in Italian is the following:

(20) Maria, vieni! [Italian]
Mary-VOC come-2.SG.IMP
'Mary, come here!'

Vocatives and imperatives both refer to the addressee, but vocatives usually *precede* imperatives, as in (20). Vocatives can be used parenthetically, while imperatives have a more restricted distribution. Yet, both of them are supposed to have a speech-linking function, connecting the N or the V to the addressee, deictically.

Here, we wish to make a distinction between a referent and an addressee. An addressee is the participant in a Speech Act, which is defined strictly deictically, and is identified through the [+DX] head. A referent is instead encoded via φ-feature specification, and is not necessarily linked to the speech act. Addressee and referent can overlap, but they are two different concepts. To make this clear, we wish to consider the case of a 3rd person deictic pronoun in Abruzzese (D'Alessandro 2013), illustrated in 0:

Chissè / chistè/ chillè/ jessə
She-3.SG.ADDR. she-3.SG.SP she-3.SG.-SP/-ADDR she-3.SG
'She (close to addressee), she (close to speaker), she (far from both), she (no specification)'

3rd person pronouns in Abruzzese have a referent, which is a 3rd person, i.e. someone who is neither the speaker nor the addressee, as well as a deictic specification on the position of the person with respect to the speaker and addressee, which must be specified when selecting the pronoun. The neutral form *(j)essə* is only used in reported speech, as expected. Abruzzese pronouns demonstrate that deixis and reference are to be kept separated, at least conceptually.

We wish to propose for the moment that deixis is encoded on a feature hosted in a head located above Force. Vocatives are also located above Force (Moro 2003), and in fact the [+DX] feature is on the Voc head. What is commonly referred to "Speech Act" is instead a head which encodes information about the referent of the argumental pronouns, and which is also located in the left periphery, but lower than Force, between C and I (Sigurðsson 2000, 2004a, b, Speas 2004, 2000, Bianchi 2006, 2003, Poletto 2000). Referents are encoded via φ-specification (on pronouns, person, number, gender)[2]. Deixis is instead specified through linking the N (or the V) to the speech act, through checking the [+DX] feature.

Deixis and reference are two different things, thus. [+DX] takes place "outside" narrow syntax, while φ-valuation for the definition of reference takes place at narrow syntax, through linking of the argument/pronoun to the Speech Act projection. As an example of this φ-valuation, consider the mechanism for establishing the referent of impersonal *si* in Italian (D'Alessandro 2002, 2004b, a, 2007, 2008). Impersonal *si* has an [arb] feature (Cinque 1988) which needs to be valued in order for *si* to receive its referent. Observe the different referential interpretations in (21) and (22). In (21), *si* has an existential interpretation ('there was someone who'); in (22), *si* means "we". This φ-valuation takes place in the syntax, and we see its effects on agreement patterns:

(21) In quel ristorante si è sempre mangiato bene
In that restaurant si is always eaten well

[2] We are aware of the fact that naming *Speech Act* something which refers to referents and as deictic something which refers to the speech act is confusing. Unfortunately, the term Speech Act is being used in the literature to identify the referents of pronouns, so we will need to stick to that definition, making the reader aware of the fact that confusion might arise from that.

'In Italy, one always eats well'

(D'Alessandro, 2007:157)

(22) Ieri si è arrivati tardi
Yesterday si is arrived late
'We have arrived late yesterday'

(D'Alessandro 2007:148)

According to D'Alessandro (2004, 2007), *si* acquires its reference by being linked to the Speech Act head. In this way, *si* can receive a generic interpretation, like in (21), or an inclusive ('we') interpretation, like in (22). We leave aside the details of the φ-valuation of *si*[3]. What matters here is that reference and deixis are separate, and can be conceptualized as being expressed by two different heads: deictic linking is obtained through a [+DX] head located above Force (in our case, the Voc head); referentiality on a Speech Act head in the left periphery.
True imperatives are also connected to the [+DX] feature, although they do not necessarily appear above Force.

The fine-grained definition of the position of [+DX] is not so relevant for the rest of the paper; we wished to be as precise as possible, however, on the fact that we are not talking about φ-features when we talk about [+DX].

The issue we wish to address now is why we can express deixis via truncation. We do this in the next section.

4. Syntax-Prosody: division of labor

Recall the general observation from which we started: one cannot express structural case by means of pure prosody, in non-tonal languages. It is impossible to have a Nominative-Accusative alternation based on truncation or on stress, for instance. This suggests that core argumental functions can only be expressed by means of morphological and phonological tools, while prosody is reserved to the speech act. One can in fact express questions by means of pure intonation; pure intonation can be used to express so-called information structure, like topics and foci; finally, vocative and imperatives can be expressed by means of intonation.

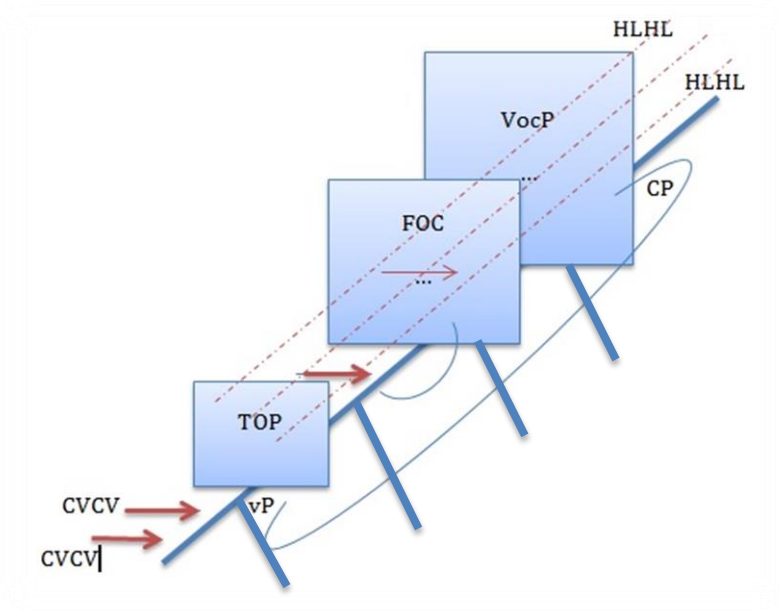
While phonological rules (and obviously lexical insertion rules) can target the whole syntactic spine, prosody can only target the left periphery. We wish to propose that prosody targets what in early Minimalism were called

[3] For details on φ-valuation of *si* by the Speech Act head the reader is referred to D'Alessandro (2004, 2007); the different environments conditioning this interpretation are discussed at length *ibidem.*

"edge features" (Chomsky 2000, 2001, 2008), i.e. features that trigger movement to the left periphery for interpretational/discourse reasons and are encoded on functional heads in the extended left periphery. Among these features are, for example, wh- features or features encoding the illocutionary force of the sentence, as well as features like [+DX], referring to the speech act participants.

Just like prosody needs to be built on phonological segments, syntactic left periphery is built on argument structure. This means that, using a tree diagram, we should probably rethink the syntactic tree as a tri-dimensional object, with information structure being "perpendicular" to the argumental field. The speech act plane is on a different "dimension" than narrow syntax, as illustrated in (23):

(23)



The vP-CP "dimension" line in the drawing is our usual syntactic tree, while vocatives, imperatives, topics, foci, are connected to the spine in some nodes, pretty much like adjuncts. They are, however, on a different "dimension", which is directly targeted by prosody.

Phonology targets narrow syntax at many points; prosody targets the "speech-discourse" plane. Wh-, topic, focus, [DX] features, are on this plane, and prosody targets them, while phonology targets φ-features.

Going back to what we discussed in the previous section, regarding deixis and reference: reference features (φ-features) are encoded at narrow syntax,

i.e. in the "horizontal" plane, while deictic features are encoded at speech-discourse level (i.e., not after narrow syntax, but concurrent to it), on the "vertical plane". What we tentatively put, in section 3.3., above Force, is in fact on another plane.

Getting back to our original problem: true vocatives in central and southern Italian varieties are obtained by truncation, i.e. through the application of a prosodic tool. At this point, it should be clear how this is possible: we have shown that vocatives are not argumental, and that they are in fact encoded somewhere above Force. This means that they can (and perhaps must) be expressed prosodically, while argumental information cannot. They are, syntactically, on the perpendicular, different plane, not on the argumental, v-C plane. We have located the position of vocatives in the clause. What is left now is an analysis of their phonological/prosodic structure.

4.1 The phonology of vocatives

The observation that vocatives in central and southern dialects of Italy are obtained by truncation is not new. An analysis of the very same phenomenon has been proposed by Alber and Arndt-Lappe (2012) and Alber (2010) in an OT fashion.

Based on a large cross-linguistic sample, Alber and Arndt-Lappe propose that vocatives in central and southern Italian are subject to two constraints: ANCHOR-LEFT and ANCHOR-STRESS. ANCHOR-LEFT makes sure that the word beginning is preserved, and therefore that vocatives are not null strings; ANCHOR-STRESS ensures that the stressed vowel is at the end of the word. These two constraints alone are not sufficient to describe vocatives, as it could be the case that all material between the word-initial position and the stressed vowel is deleted. To avoid this, Alber and Arndt-Lappe propose a third constraint, which they call COINCIDE-σ, requiring all segments to be in the first syllable. Given that this is not always possible, this constraint ensures the preservation of all segments between the first syllable and the stressed syllable. An illustration of this analysis is given in (24)

(24) Double Anchoring in Southern Italian Vocatives

/Bárbara/	ANCHOR-LEFT	ANCHOR-STRESS	COINCIDE-σ_1
☞ a. Bá			
b. Bár.ba			ba!
/Francésca/			
a. Frá		*!	
☞ b. Fran.cé			sca
c. Fran.cés.ca			cesca!
/Salvatóre/			
a. Sá		*!	
b. Sál.va		*!	va
☞ c. Sal.va.tó			vato
d. Sal.va.tó.re			vatore!

(Alber and Arndt-Lappe 2012:308)

This analysis presents at least one main problem, in our view. A constraint aligning a stressed vowel with the edge of a phrase is somewhat suspicious for a template: neither the truncated form, nor the object which is deleted, is a prosodic constituent. Furthermore, this analysis does not capture the observation that vocatives and imperatives are among the very few elements that can be expressed by truncation, i.e. prosodically, and that this is not possible for verbal arguments.

An interesting observation, which we wish to exploit in our analysis, comes from Göksel and Pöchtrager (2013), who carried out a comparative analysis of vocatives in Turkish and Austrian German. First, they show that word stress is quite different in Turkish and Austrian German, the first being located usually on the penultimate syllable, while the second being lexical. For both languages, stress is marked through a high pitch, which will be crucial for our analysis. Despite these basic differences, the intonation patterns of vocatives is the same in the two languages, as illustrated in the following figure.
Observe that Göksel and Pöchtrager (2013) consider calling addresses as separate from true vocatives. We will not go into this difference here. In any case, also for calling addresses, despite the differences between the two languages, the intonational patterns are the same.

(25)

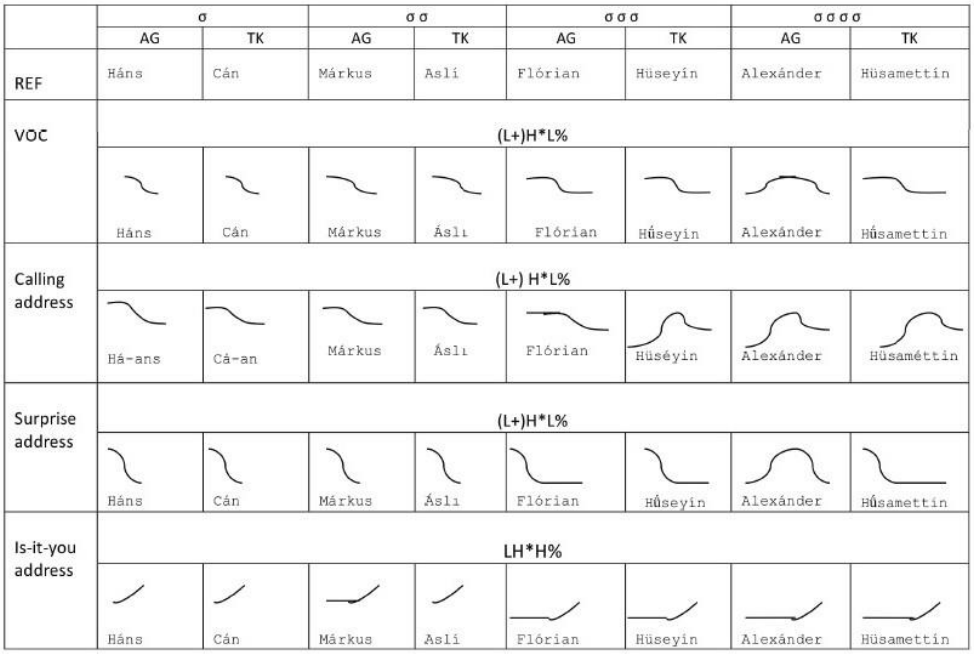


Figure 2. Intonational patterns

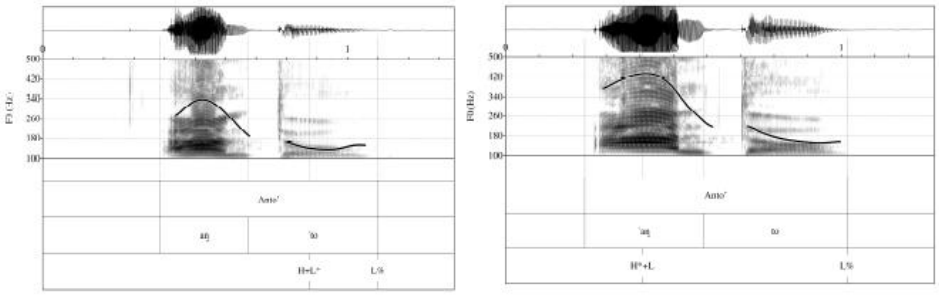
(Göksel and Pöchtrager 2013: 96)

While the authors do not want to commit to a claim of universality for these patterns, they do notice that many languages have similar strategies. This suggests that these intonational patterns are part of a language system, and not just accidental realizations of some communication needs. We take Göksel & Pöchtrager's study to indicate that vocatives are not grammar-external, but they are realized in a deterministic fashion between syntax and PF.

Similar results are found in a study on vocatives in many Romance varieties carried out by Vanrell and Cabré (2011). As we mentioned above, truncation does not take place only in central and southern Italian varieties. Vanrell and Cabré analyze a number of Romance languages which display vocative by truncation, namely Algherese Catalan, Central Salentino, Northern Salentino, and Logudorese Sardinian. They observe that, in addition to truncation, these languages all show similar intonational patterns for vocatives, which they name the *chanted tune*. The *chanted tune* is realized as L+H* !H%. The tonal accent that they identify as characterizing the vocative in all varieties is H*+L.

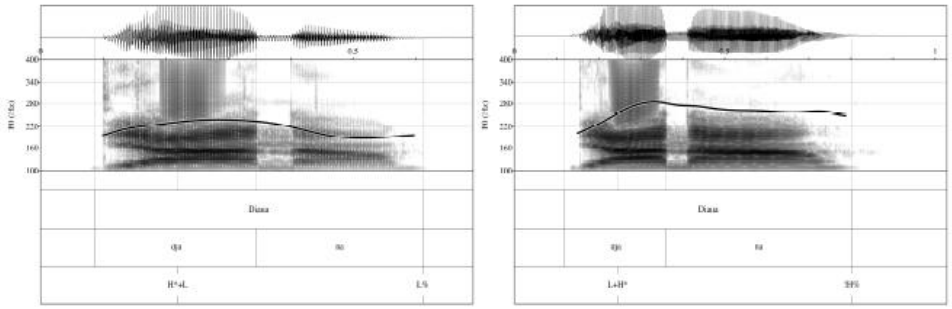
In (26) and (27) we report the ortographic, phonetic, and spectrographic transcription of the vocative of the names Antonio and Diana, in Algherese Catalan and Central Salentino, respectively:

(26)



(Vanrell and Cabré 2011: 9)

(27)



(Vanrell and Cabré 2011: 10)

Vanrell and Cabré observe that while the contour is the same in all varieties, the prosodic structure in not. The vocative by truncation is not the result of mapping the prosodic contour on a prosodic template: It is the contour which is constant, not its mapping on the prosodic structure. In this sense, vocative truncation is different from hypocoristic truncation, also found in many Romance varieties, where the prosodic contour is invariably mapped onto a prosodic template (like a metrical foot, as shown by Cabré 1993 for Catalan and Thornton 1996 for Italian). The prosodic contour of the vocative is always the same, but the mapping varies. For instance, only in Algherese and Logudorese Sardinian the H*+L can be mapped onto the first syllable. Unsurprisingly, the intonational patterns found by Vanrell & Cabré (2011) are also very similar to those found by Göksel & Pöchtrager (2013).

In general, vocatives have a well-defined prosodic realization, which corresponds to a specific syntactic feature, which we have identified in [+DX].

4.2 Vocatives in central and southern Italian

True vocatives in central and southern Italian varieties are obtained by means of truncation of anything that follows the stressed vowel. For instance, for the name *Mariagiovànna,* the vocative will be as in (28):

(28) Mariagiova'

We propose a prosodic analysis of the vocative along the following lines: The exponent of the vocative is (at least) a pitch accent (as shown also in Göksel and Pöchtrager), which is specified for being at the same time a boundary tone (i.e. T*%).
The pitch accent, identified by Göksel and Pöchtrager (2013) and by Vanrell and Cabré (2011) as the characteristic of vocatives, needs a stressed vowel in order to be realized. High pitch is impossible to realize on an unstressed or reduced vowel. At the same time, the boundary tone forces this high pitch to be realized at the edge of the constituent.

These two requirements are conflicting, as it is rarely the case that the stressed syllable is word-final. The paradox is resolved by forcing the stressed vowel to appear exactly at the edge of the constituent, i.e. by eliminating everything following it (truncation).

As an aside, observe that truncation of this sort is also found in tonal languages. One notable examples is Limburgian dialects of Dutch, where we find the following singular-plural alternation:

(29) hɔŋɛ (‘dog’-SG) hʏŋ (‘dog’-PL)

(29) looks as morphological truncation, where the plural is expressed by deleting the stem-final plosive. It is well known, however, that Limburgian dialects are tonal, and that in reality plural is expressed by a falling tone (Hermans 1994). It can also be shown that falling tones are incompatible with a nasal+(voiceless) plosive clusters; for instance there are no mono-morphemic words which have that shape (Van Oostendorp 2006). If we thus combine a falling tone (expressing plurality) with a stem with such a cluster, a phonological problem arises. It is this incompatibility that is responsible for phonological deletion of the plosive, and not the plural itself.

4.2 The syntax-prosody interface and the architecture of grammar

If vocatives are part of the grammar and display a regular, universal realization pattern, we are forced to conclude that their realization is also univocally encoded in the grammar.

One way of looking at this is considering prosody as something that targets speech-act related information, as we saw. We have illustrated this by representing speech-act related information on a different dimension, and claiming that this dimension is targeted by prosody.
Prosody cannot be realized without the presence of underlying phonological material. This mirrors the fact that speech-related information cannot be realized without an underlying argumental structure in place. We wish to claim that this state of affairs is not accidental: syntax is built the way it is because of the prosody requirements. There would be no other way for prosody to convey information structure than by having it happen parasitically on phonology.

5. Conclusions

Vocatives are a very peculiar category in grammar. They are often considered as different from other elements, and perhaps not pertaining to grammar.
In this paper, we have shown that vocatives are part of the grammar, and that their apparent idiosyncratic behavior is the result of an orderly mapping of a deictic feature onto a prosodic contour.
One of the important observations we made here is that intonation always only targets left peripheral, speech-related elements. This suggests that prosody has only access to a limited number of syntactic projections. We have proposed a syntactic model whereby speech-related projections are hosted on a different "dimension" than argumental ones. This dimension is targeted by prosody, which has instead no access to the syntactic argumental spine. Vocatives are hence in the syntactic tree, they are perfectly regular, as their universal intonational pattern suggests. While speech act-related information can only be encoded after argument structure has been defined, in the same way prosodic information can only work on a segmental, phonological basis. This strongly suggests that syntax is built the way it is because of phonology/prosodic requirement. It would be impossible for prosody to target argument structure, because there would be no phonological material in place to build a prosodic contour on. Vocatives illustrate this quite neatly, and are therefore not to be considered as misbehaving exceptions, but as a very well-behaved part of grammar.

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