When you have too many features: auxiliaries, agreement and DOM in southern Italian varieties

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Abstract

Syntactic variation can be ascribed to different factors. The so-called Borer-Chomsky conjecture, as dubbed by Mark Baker (2008), states for instance that all parameters of variation are attributable to differences in the features of particular items (e.g. functional heads) in the lexicon. This hypothesis is considered carefully in this paper in relation to a group of Abruzzese dialects, exhibiting three seemingly unrelated syntactic patterns: split auxiliary selection, split differential object marking, and omnivorous participial agreement in number/argumental agreement mismatch marking. It will be proposed that these three patterns are closely interrelated, and attributable to the presence of unvalued bundle of φ-features (π). Depending on which XP this head is merged with, different agreement patterns will emerge. Furthermore, these dialects will be shown to differ from the other macrogroup of northern Italian dialects purely in the locus of Merge of this extra functional head: It will also be shown that the almost perfect areal complementary distribution between languages with subject clitics and languages with person-driven auxiliary selection is not accidental, but is the result of the presence of an extra φ-probe doubling the features of the subject in different parts of the syntactic spine. A microtypology of *v* will be presented, unifying many phenomena that were previously considered unrelated, such as auxiliary selection, participial agreement, differential object marking and subject clitics.

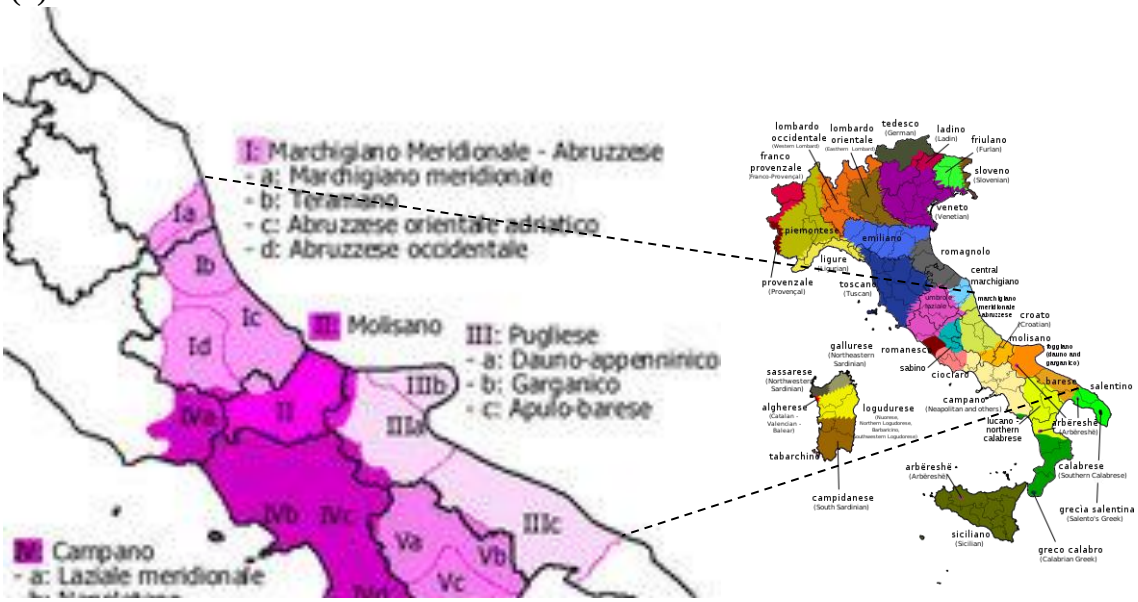
I. Introduction

In traditional dialectological studies, split auxiliary selection, i.e. the selection of HAVE or BE according to the subject person, has always been considered to be a completely separate phenomenon from subject clitics. One of the ways to distinguish between northern and southern Italian dialects is in fact the presence or absence, respectively, of subject clitics, as well as the absence or presence of person-driven auxiliary selection. In what follows it will be proposed that this almost perfect complementary areal distribution between subject clitics and person-driven auxiliary selection is not accidental, but is the result of the fact that these two phenomena are due to one and the same underlying cause: the presence of the same extra φ-probe (π) in different parts of the syntactic spine.

While subject clitic varieties are widely studied and documented, upper southern Italian varieties with split (i.e. person-driven) auxiliary selection are not. This study concentrates on the latter: the phenomena illustrated in detail here are split-person related phenomena found in some upper southern Italian dialects. These varieties distinguish morphologically between 1st/2nd person and 3rd person arguments, attributing different markers to the two sets. One such variety is Abruzzese, which is spoken in Abruzzo, a central Italian region (Fig 1). The phenomena discussed are found in Eastern Abruzzese, which belongs to the Upper Southern Italian group of dialects (and is distinct from the Central Abruzzese/Aquilano).

Abruzzese exhibits three seemingly unrelated syntactic characteristics: split auxiliary selection (I), split differential object marking (II), and omnivorous participial agreement in number/argumental agreement mismatch marking (III). These three characteristics are closely interrelated, I wish to propose, and are attributable to the presence of unvalued π. Three varieties will be taken into account: the variety spoken in Arielli (Ariellese, AR, Ic on the map), the variety spoken in San Valentino in Abruzzo Citeriore (Sanvalentinese, SV, Ic) and the one spoken in Ripatransone (Ripano, RT, Ia). It should be noted that Ripano is spoken in Le Marche, not in Abruzzo: however, this dialect is located on an isogloss separating central from upper southern dialects, and offers an interesting test-bed for our hypotheses. Unless otherwise stated, the data discussed are from Ariellese, given that this dialect presents the richest and most informative agreement and auxiliary selection pattern of the three dialects investigated[1]. The other two varieties will be mostly used to test our hypothesis developed on the basis of Ariellese.

(1) UPPER SOUTHERN ITALIAN DIALECTS /ABRUZZESE[2]



[1] I wish to thank Alfredo Rossi and Antonio Giannetti for their help with the Ripano data, Silvio Pascetta and Diana Di Donato for the San Valentino data, and Antonio Agliaro, Luigi and Nicoletta Cellini, Giovanni Carullo, Carlo Di Carlo, Ivan Di Carlo, Gino Nanni, Eugenia Romeo, Mario Romeo, Maurizio Scioletti and Adina Sterposo for the Ariellese data.

[2] The map of Italy on the left as well as the one on the top right are taken from the Wikipedia project, and reproduce the Carta dei dialetti d'Italia by Pellegrini (1977) (http://it.wikipedia.org/wiki/Progetto:Dialetti_d'Italia). The bottom right map is drawn with Google maps.

The three syntactic phenomena we will be concerned with here, which are the result of merging a π probe in the T-*v*, are:

I. *Split auxiliary selection* – the selection of *BE* or HAVE depends on the person of the external argument (subject). An example of this split can be found in (2) for Ariellese (observe that of the three dialects in Fig. 1 only Ariellese has split auxiliary selection: Ripano has generalized BE[3] while Sanvalentinese has generalized HAVE).

(2)

a. *(ji)So magnatə*	BE	d. *(nu) seme magnitə*	BE
(I) am eaten		we are eaten	
'I have eaten'		'We have eaten'	
b. *(tu) si magnatə*	BE	e. *vu sete magnitə*	BE
you are eaten		you.pl are eaten	
'you have eaten'		'You have eaten'	
c. *(essə) a magnatə*	HAVE	f. *(jissə) a magnitə*	HAVE
(s)he has eaten		they have eaten	
'(s)he has eaten'		'They have eaten'	

In (2), the auxiliary selected in the presence of a 1st or 2nd person subject is BE. HAVE is instead selected for 3rd person subjects. Observe that this paradigm is the same for all verb classes, as will be shown in more detail in section 2. Furthermore, it is worth mentioning that both BE and HAVE also have a fully-fledged paradigm. The present tense of BE is in (3), while the present tense of HAVE is in (4).

(3) *so/ si/ jè/ semə/ setə/ jè*
am/ are/ is/ we-are/you-are/ they-are
'I am, you are, (s)he is, we are, you are, they are'

[3] Dialects with generalized BE have been analyzed by Tuttle (1986) as varieties where BE has progressively extended from 2nd sg through all six persons of the paradigm. This could well be the case for Ripano. If the analysis outlined here is correct, this is exactly what would be expected, given that Ripano also has agreement mismatch phenomena that are linked to the presence of an extra (person-marking) probe. Hence, it must have had a morphological exponent for this head in some earlier stage of its history. This issue will be discussed in 3.2.2.

(4) *ajə/ jì/ a/ avemə/ avetə/ a*
I-have, you-have, (s)he has, we-have, you-have, they-have
'I have, you have, (s)he has, we have, you have, they have'

The 3rd person singular and plural forms of BE, *jè*, are used in predicative constructions (*Marije jè bbellə,* 'Mary is beautiful') or in passives (*jè rrəspəttatə da tuttə quində,* '(S)he is respected by everyone'). As for HAVE, other than as an auxiliary it is used as a possessive in some psych constructions (*Ch'a jì?* 'What's wrong with you?' *lit.* what do you have?). The possessive verb is instead *tene'* ('hold').

II. *'Omnivorous' participial agreement in number* (5); *Agreement mismatch* (6); *Topic-oriented agreement* (8): Abruzzese shows very peculiar argumental agreement patterns. In Ariellese, we find so-called 'omnivorous' number agreement (D'Alessandro & Roberts 2010, Nevins 2011) for past participles, whereby the past participle agrees with whichever argument is plural (see example 5). Ripano instead shows agreement mismatch: whenever the external and the internal argument exhibit conflicting feature specification, a special marker will appear on the verb (Egidi 1965, Parrino 1967, Mancini 1988, 1993, Harder 1998, Jones 2001, Ledgeway 2006, Rossi 2008); finally, Sanvalentinese exhibits what can be defined as topic-oriented agreement, whereby the verb agrees with the most highly referential, or definite, argument.

II.1. *'Omnivorous' participial agreement in NUMBER* (extended agreement domain for the verb)
The participle agrees with whichever argument is marked as plural:

(5) a. *Giuwannə a pittatə nu murə* [Ariellese]
John-sg has-3rd.sg/pl painted-pp.sg a wall-sg
'John has painted a wall' [sg SUBJ-sg OBJ]

b. *Giuwannə a pittitə ddu murə*
John-sg has-3rd.sg painted-pp.pl two walls-pl
'John has painted two walls' [sgSUBJ-plOBJ]

c.*Giuwannə e Mmarijə a pittitə nu murə*
John and Mary-pl have-3rd sg/pl painted-pp.pl a wall-sg
'John and Mary have painted a wall' [pl SUBJ– sg OBJ]

d. *Giuwannə e Mmarijə a pittitə ddu murə*
John and Mary-pl have-3rd.sg/pl painted-pp.pl two walls-pl
'John and Mary have painted two walls' [pl SUBJ-pl OBJ]
[D'Alessandro & Roberts (2010:45)]

In Ariellese participles are inflected for number, but not for gender. Plural marking obtains through *metaphony,* which causes an alternation between a low root vowel for the singular and a high one for the plural (as in *pitt**a**tə*-sg vs *pitt**i**tə*-pl). In (5a) both the external argument and the internal argument are singular, and the past participle shows singular agreement. In (5b) and (5c) only one of the arguments is plural, and the past participle is plural. In (5d) both arguments are plural, and the participle is plural.

II.2. *Agreement mismatch*
The finite verb or the participle carry an agreement mismatch ending (-ə) whenever the external argument and the internal argument have different gender/number specification:

(6) a. *Babbu* *dicə* *le* *vəritȁ* [Ripano] dad-m.sg
says-3rd.sg.n the-f.sg truth-f.sg
'Dad says the truth' [Mancini 1988: 107]

b. *So* *magnatə* *lu* *pani'*
am eaten-n the-m.sg breadroll-m.sg
'I(fem) have eaten the breadroll'

vs

(7) a. *I' ridu* ('I laugh'-masc) b. *ìa ride* ('I laugh'-fem) [Ripano]
tu ridu ('you laugh'-masc) *tu ride* ('you laugh'-fem)
issu ridu ('he laughs'-masc) *esse ride* ('she laughs'- fem)
noja ridemi ('we laugh'-masc) *noja ridema* …
voja rideti *voja rideta*
issi ridi *essa ride*

c. *i'so risu* ('I have laughed-masc) d. *ìa so rise* ('I have laughed-fem)
tu sci risu *tu si rise*
issu e risu *esse e rise*
noja semi risi *noja sema risa*
voja seti risi *voja seta risa*
[Rossi 2008:3]

In (7a) the external argument is masculine and the internal argument feminine, while the verb displays a mismatch marker (-*ə*). In (7b), where external argument is feminine and the internal argument is masculine, the participle shows a mismatch marker (-ə), while the auxiliary agrees with the external argument. (7a)-(7b) show that in Ripano gender is marked on the finite verb (unlike in the rest of Romance), while (7c)-(7d) show the paradigm for complex verb forms involving a participle, which is inflected for both gender and number in Ripano.

II.3. *Topic-oriented agreement*
The participle agrees with the most definite (or known) argument:

(8) a. *Aje* *cciosə* *li* *pellîstrə* [Sanvalentinese]
have-1st.sg killed-sg.masc the-pl.masc chickens-pl.masc
'I have been killing chickens'[4]

b. *Ajə* *ccisə* *li* *pellîstrə*
have-1st.sg killed-pl masc the-pl.masc chickens-pl.masc
'I have killed the chickens'

In (8a) the past participle agrees with the external argument, while in (8b) it agrees with the internal argument. What differs between the two sentences is the context, and the topichood

[4] Apologies for the gruesome examples, which were uttered spontaneously by a dialect speaker.

of the arguments. Specifically, sentence (8a) refers to the action of killing, whereas (8b) refers to specific chickens which were killed ('as for the chickens mentioned, I killed them').

III. *Split differential object marking*: like most southern Italian dialects, Abruzzese exhibits differential object marking (DOM) in the form of a prepositional accusative, by marking the direct object with the preposition *a* if the object is human. In Abruzzese, DOM is mostly restricted to personal pronouns (Manzini & Savoia 2005). In Ariellese, as well as in a number of other southern Italian dialects (Altamura, Colledimacine, Borbona, Cagnano Amiterno) however, there is a further restriction: DOM is only found with 1/2 person pronouns, but is mostly excluded with 3rd person pronouns, and is impossible with full DPs (see examples 9-11).

(9) *So* *vistə a mme/ a tte* [Ariellese]
am-1sg seen to me / to you
'I have seen me/you'

(10) *Semə vistə* *a nnu/ a vvu*
are-1pl seen to us/ to you
'We have seen us/you'

(11) **So* *vistə a Marije/ a jissə / a quillə*
am-1sg seen to Mary /to them/ to them

(9)-(10) show that a 1st/2nd person pronoun requires the preposition *a*. (11) shows that the same preposition is ungrammatical with 3rd person objects.

In the rest of the paper, it will be shown that these data can be accounted for considering the presence of an extra φ-head, a feature bundle, which will be called π. The presence of π is not in fact unique to the *v* field and to southern Italian dialects, but constitutes a microparametric option for Italo-Romance. It can be found in the C-T field, where it is instantiated in the form of a subject clitic (or, possibly, as complementizer agreement[5]); in the T-*v* field, in which case it takes the form of a subject-oriented auxiliary (and we see person-driven auxiliary selection, like in (2); and in the *v*-V field, which is the internal argument field, in which case it emerges as split DOM. In each of these cases, we are dealing with a form of doubling of the argumental φ-features. Observe that there can be cases in which two extra probes co-occur, for instance when we see doubling of both arguments of a transitive verb. This is expected under the assumption that the extra probe doubles the features of the arguments, each of which is usually doubled once. Once again, nothing in principle prevents subject or object tripling. Hence, the co-occurrence of multiple extra probes is not *a priori* excluded.
The difference between Northern Italian Dialects (NIDs) and SIDs, it will be shown, lies simply in the site at which π is merged. In both cases, we are dealing with subject doubling, in different forms.

I and II (split auxiliary selection and agreement mismatches) are intertwined: it will be shown that they are the result of the presence of an extra probing head π in the *v* field (I will refer to this as the T-*v* field, to indicate a position directly above *v*). This head causes both the person split, reflected in split auxiliary selection, and the unusual agreement patterns listed in II. III (DOM) is also correlated with this variation, but π is merged lower, between *v* and V, in the

[5] Some possible cases of complementizer agreement in Italo-Romance can be found in Old Neapolitan (Ledgeway 2011, Formentin 1996), and some north-Western varieties discussed in Parry (2007).

case of person-driven DOM. Most Ariellese data were thoroughly investigated in D'Alessandro & Roberts (2010), who propose an analysis whereby person-driven auxiliary selection is due to the presence of a person feature on *v*. In light of this, they draw a correlation between null-subjecthood of a language and person-driven auxiliary selection. They also conclude that there is no relation whatsoever between person-driven auxiliary selection and participial agreement.
While building on D'Alessandro & Roberts's work, this study shows that the general picture is much broader and much more complex. New data from Ripatransone and San Valentino show that agreement mismatch phenomena are not exceptional in this area. A more thorough analysis of the auxiliary morphology shows that *v* does not encode a person feature, *contra* what D'Alessandro & Roberts propose. We are not dealing with a simple "cartographic" division of labor between T and *v* as proposed by D'Alessandro & Roberts, but we are in the presence of a genuine extra element which triggers the emergence of all these apparently unrelated phenomena. This in turn also means that split auxiliary selection and participial agreement can be attributed to the same factor, π, and are hence not unrelated (*contra* what has been claimed in D'Alessandro & Roberts 2010). Finally, this new analysis brings to light a previously unobserved parallelism between northern Italian dialects, exhibiting subject clitics, and southern Italian dialects, exhibiting person-driven auxiliary selection. These dialect groups, which have always been considered microtypologically distinct (although both Romance, of course), have more in common than meets the eye.

Let us now turn to a detailed examination of the data, starting from split auxiliary selection.

2. Person-driven auxiliary selection, a probe in the T-v field

Split (person-driven) auxiliary selection is the phenomenon whereby the selection of the auxiliary BE or HAVE depends on the person specification of the external argument and is independent of the argument structure of the verb. If the external argument is 1st or 2nd person, the auxiliary selected to form the present perfect will be BE; if the external argument is 3rd person, the auxiliary selected will be HAVE, independently of the verb argument structure class or *Aktionsart*. Most upper southern dialects, with some notable exceptions in Apulia and in sporadic varieties in the whole upper southern area, follow this pattern of auxiliation, although the exact distribution of BE and HAVE can vary: 1/2 vs 3 is the most readily found pattern, but not the only one. Some varieties are attested where BE is selected only when the subject is 2nd person; some other varieties, more rarely attested, display opposition between 1st singular and everything else (Manzini & Savoia 2005: II, 728). Finally, there are some varieties in which argument structure does matter, with BE always found when the verb is unaccusative, and the 1/2-BE vs 3-HAVE split is only found with unergative and transitive verbs. Most varieties however follow the 1/2-BE vs 3-HAVE scheme for all verbs, and this is the pattern that will be discussed here. An example of person-driven split auxiliary selection is in (2), here repeated as (12):

(12) *transitive 'magna''* ('to eat')

a. *(ji)So magnatə*	BE	d.*(nu) seme magnitə*	BE
(I) am eaten.sg		we are eaten.pl	
'I have eaten'		'We have eaten'	
b.*(tu) si magnatə*	BE	e. *vu sete magnitə*	BE
you are eaten.sg		you.pl are eaten.pl	
'You have eaten'		'You have eaten'	

[Ariellese]

c.*(essə) a magnatə* HAVE
(s)he has eaten.sg
'(S)he has eaten'

f.*(jissə)a magnitə* HAVE
they have eaten.pl
'They have eaten'

The same pattern is found in intransitive verbs, both unaccusative and unergative:

(13) *Unaccusative 'cagna''* ('to change')

a.*(ji)So cagnatə* BE
(I) am changed.sg
'I have changed'

d. *(nu) seme cagnitə* BE
we are changed.pl
'We have changed '

b. *(tu) si cagnatə* BE
you are changed.sg
'You have changed'

vu sete cagnitə BE
you.pl are changed.pl
'You have changed '

c. *(essə) a cagnatə* HAVE
(s)he has changed.sg
'(S)he has changed'

(jissə) a cagnitə HAVE
they have changed.pl
'They have changed'

(14) *Unergati ve 'fatija''* ('to work')

a. *(ji)So fatijatə* BE
(I) am worked.sg
'I have worked '

(nu) seme fatijitə BE
we are worked.pl
'We have worked'

b.*(tu) si fatijatə* BE
you are worked.sg
'You have worked'

vu sete fatijitə BE
you.pl are worked.pl
'You have worked'

c.*(essə) a fatijatə* HAVE
(s)he has worked.sg
'(S)he has worked'

(jissə) a fatijitə HAVE
they have worked.pl
'They have worked'

It should be noted that this split obtains in Abruzzese only in the present perfect and in the pluperfect, and is absent in the past subjunctive/conditional (which is also periphrastic), where only HAVE is selected. The past subjunctive paradigm is illustrated in (15) for the verb 'to work'. The same pattern applies to all verbs:

(15)

a. *(ji) avessə fatijatə* HAVE
(I) had-impf.subj worked.sg
'I would have worked '

d.*(nu) avəssemə fatijitə* HAVE
we had-impf.subj.1.pl worked
'We would have worked'

b. *(tu) avissə fatijatə* HAVE
you had-impf.subj.2.sg worked
'You would have worked'

e.*vu avəssetə fatijitə* HAVE
you.pl had-impf.subj.2.pl worked
'You would have worked'

c.*(essə) avessə fatijatə* HAVE
(s)he had-impf.subj worked
'(S)he would have worked'

f.*(jissə) avessə fatijitə* HAVE
they had-impf.subj worked
'They would have worked'

The pluperfect is also an interesting tense in Abruzzese. We will return to it later, in 3.1.

2.1. The setup of auxiliaries

Split auxiliary selection is only found in indicative mood, and not in subjunctive/conditional mood, as we have just seen. In the indicative, auxiliaries appear only in periphrastic tenses, namely the present perfect and the pluperfect. Auxiliaries can be thought of as perfectivity markers with a mood restriction: there is in fact no reason to claim that *irrealis* would not allow for perfectivity. This means that mood and tense have a *portmanteau* exponent in Abruzzese auxiliaries.
These auxiliaries are also person markers (or doublers), in a way in which other Romance auxiliaries are not. Specifically, consider the two examples in (16) and (17), from Italian and Abruzzese respectively. Italian auxiliation is argument-structure driven and represents the prototypical system for Romance languages with auxiliary selection, where the auxiliary is selected depending on the argument structure. Abruzzese auxiliary selection is more complex, as illustrated in the following examples, with a transitive, an unaccusative, and an unergative verb respectively.

(16)	a. *Mattia ha mangiato*	a'.	*Voi avete mangiato*	[Italian]
	M. has eaten		you-pl have eaten	
	b. *Mattia è cresciuto*	b'.	*Voi siete cresciuti*	
	M. is grown		you-pl are grown	
	c. *Mattia ha lavorato*	c'.	*Voi avete lavorato*	
	M. has worked		you have worked	
	'Mattia has eaten/grown/worked'		'You-pl have eaten/grown/worked'	

(17)	a. *Matte' a magnatə*	a'.	*Vu setə magnitə*	[Ariellese]
	M. has eaten		you-pl are eaten	
	b. *Matte' a crisciutə*	b'.	*Vu setə crisciutə*	
	M. has grown		you-pl are grown	
	c. *Matte' a fatijatə*	c.	*Vu setə fatijitə*	
	M. has worked		you are worked	
	'Mattia has eaten/grown/worked'		'You-pl have eaten/grown/worked'	

The information that the Italian auxiliary expresses, morphologically, is the following:

a. transitivity [HAVE]; inergativity [HAVE]; unaccusativity [BE]
b. person and number of the subject of the transitive, unergative or unaccusative verb [*-a* vs *-ete*[6]]
c. present tense (which results in a present perfect when combined with the perfective past participle)

The information that the Abruzzese auxiliary conveys, on the other hand, is the following:

a. the subject is 1/2 person [BE] vs the subject is 3rd person [HAVE]
b. person and number of the subject of the transitive, unergative or unaccusative verb [*-a* vs *-ete*]

[6] Observe that both BE and HAVE are irregular verbs. Here, *–a* indicates a generic 3rd person singular ending; while *–ete* indicates a generic 2nd person plural ending; in this sense, *-a* also represents the 3rd person singular and plural of BE.

c. perfectivity and non-*irrealis* (indicative mood)

As we can see, Abruzzese auxiliaries encode the same piece of information about the person of the subject twice: first through the choice of the root of the auxiliary, and second through the inflectional ending on the same auxiliary, as illustrated in (18a) (see also Loporcaro 2007 for similar considerations). Comparing (18a) to (18b), which exemplifies the present tense of the verb *to do,* the former clearly seems to exhibit subject doubling, while the latter does not.

(18)

a.	**[pers]**	**[pers, nr]**	b.		**[pers, nr]**
So =	*s* (BE=1/2)	+ *-o* (1.sg)	*faccə*	= *f* (‘do’)	+ *accə* (1.sg)
si =	*s* (BE =1/2)	+ - *i* (2.sg)	*fi*	= *f* (‘do’)	+ *-i* (2.sg)
a =	*a* (HAVE =3)	+ *a* (3)	*fa*	= *f* (‘do’)	+ *-a* (3)
semə =	*s* (BE =1/2)	+ *-emə* (1.pl)	*facemə* =	*fac* (‘do’)	+ *-emə* (1.pl)
setə =	*s* (BE =1/2)	+ - *etə* (2.pl)	*facetə* =	*fac* (‘do’)	+ *-etə* (2.pl)
a =	*a* (HAVE =3)	+ *a* (3)	*fa*	= *f* (‘do’)	+ - *a* (3)

We wish to propose that the person-oriented root selection is the result of merging an extra probe, π, in the syntactic spine, between *v* and T. π is a φ-bundle, i.e. a head with no other content than unvalued φ-features.

2.1.1. The licensing of π

According to Chomsky (1995, ch. 4), heads encoding uninterpretable φ-features exclusively have no right to exist: “[…]T, C, D, and Agr. The first three have Interpretable features providing "instructions" at either or both interface levels. Agr does not; it consists of - Interpretable formal features only. We therefore have fairly direct evidence from interface relations about T, C, and D, but not Agr. Unlike the other functional categories, Agr is present only for theory-internal reasons’. Chomsky’s quote refers to the Agr head, a head which was postulated in order to make participial agreement (Kayne 1989, 2000) and then also subject-verb agreement in a spec, head configuration. This head, having no semantic content, could not be maintained in the Minimalist framework, and was hence eliminated from the syntactic inventory, together with Spec-head agreement. While π reminds us of Agr, there is one fundamental difference between the two: Agr was thought of as a purely functional head, which would serve in order for agreement to take place. Its presence did not have any impact on the syntax of the clause other than facilitating (or permitting) agreement between two syntactic items that would move onto it (the verb in the head, the subject or the object in the specifier).

The objection raised by Chomsky is overcome in this article in two ways: first, by providing empirical evidence (though diachronic) of its presence; second, through some considerations. Chomsky’s problem is that a purely-φ head cannot be interpreted at the interface with CI, because of the fact that it does not bring any semantic content. His conclusion is that this head cannot exist. There is, however, another possibility, namely that this head does exist, but in order to be “legible” it must have merged/incorporated into another, semantically non-empty, head, before the interface is reached.

The fact that π recalls a northern Italian inflectional subject clitic will come as no surprise if we think that π is exactly that: a bundle of φ features, just like a northern Italian clitic. The only difference between southern Italian π and northern Italian π is their merging site: between *v* and T in SIDs, and between T and C in NIDs (Poletto 2000, Manzini & Savoia 2005, Roberts 2010, and many others).

For the moment, let us assume that Ariellese (like many southern Italian dialects) features a π head, a bundle of φ-features, between *v* and T. This π will have an effect on the agreement patterns of Ariellese, as will be shown below.

Note that π in Ariellese also encodes number (*contra* D'Alessandro & Roberts 2010). In general, the feature setup of π is language-specific: there can be a π encoding person and number, like in Ariellese, and a π encoding number and gender, like in Ripano. This situation is not unexpected if we consider that π in northern Italian dialects is realized as a clitic in the left periphery: clitics in these varieties encode different sorts of information. Some only express "participant", others only express "person", others only express "singular", and so on. For a detailed overview of the morphological microvariation in subject clitic paradigms please refer to Manzini & Savoia (2005: 117)[7].

2.1.2. PF resolution of π

We have proposed the existence of a π, a head consisting of purely φ-features. This φ-bundle, after agreeing with the subject, as we will see in detail in the next section, will be specified with the same values as the subject. After Spellout (Chomsky (2000), these φ features will be assigned exponents, which will constitute the root of the auxiliary, as we have seen above. Consider again the paradigm in (18):

(18)a. **[pers]** **[pers, nr]**
So = *s* (BE=1/2) + *-o* (1.sg)
si = *s* (BE =1/2) + - *i* (2.sg)
a = *a* (HAVE =3) + *a* (3)
semə = *s* (BE =1/2) + *-emə* (1.pl)
setə = *s* (BE =1/2) + - *etə* (2.pl)
a = *a* (HAVE =3) + *a* (3)

This is the morphological exponent of the T head in narrow syntax, which, according to what I wish to propose, is made up of T's verbal features (TAM, to keep it simple), plus π plus T's φ-features, where the V features are interpretable while the φ features and the π features are not:

[7] The patterns of auxiliary selection in Ariellese are the most common among SIDs. In what follows we will try to show that person-driven auxiliary selection depends on the feature content and value of π as well as on the morphological inventory of the dialect. Attributing auxiliary selection to a π probe whose φ-setup can vary, and whose morphological exponent also varies "lexically" means that virtually all combinations of HAVE/BE auxiliaries can be found. This seems to be the case.

In systems for which person-driven auxiliary selection is not sensitive to argument structure, we can find basically all combinations mentioned by the reviewer as impossible: to name just one, BE in the singular and HAVE in the plural is found in Pompei (among people of the middle class, Cennamo 2001:435:
(i) **so** rimastə, **si** iimastə, **e** rimaste, **aimme** arimaste, **aitə** rimastə, **annə/ennə** rimaste (BE, BE, BE, HAVE, HAVE, HAVE).
The patterns documented by Cennamo 2001 in the Pompeii area are the following

Given this wide microvariation, and given the fact that most southern Italian areas are still undocumented, it is not unreasonable to think that all combinations can be found. This article considers only the patterns in Ariellese though, which are the most common, and focuses on their interaction with participial agreement. The system proposed, as the reviewer states, does not exclude other possibilities, which are instead excluded by more constrained systems such as that proposed by Coon / Preminger (2013).

(19) T [iv, uφ, uπ]

When T Agrees with a 1st singular subject, for instance, at PF it will receive the following exponent. Recall that the tense/aspect/mood features (which are shorthanded as V here) and the φ-features are expressed by means of portmanteau morphemes in Abruzzese, like in most Romance languages:

(20) φ+V = 1.sg.+pres = *-o*
π = 1.sg = BE = *s-*

The rest of the paradigm for the present tense is as follows:

(21)	π	T (V+φ)
1.sg	*s-*	*-o*
2.sg	*s-*	*- i*
3.sg	0	*-a*
1.pl	*s-*	*-emə*
2.pl	*s-*	*-etə*
3.pl	0	*a*

This table shows that for the Ariellese pattern, *s-* is the exponent of both plural and singular π. HAVE is taken to be the absence of π (hence the absence of subject doubling in the root). Observe furthermore that this mapping only holds for Ariellese. Other varieties have other correspondences[8]. Which exponence each dialect assigns to each feature bundle is, ultimately, a lexical issue, and as such largely subject to impredictability.

Microvariation is southern Italian varieties is extreme; this means that virtually all BE/HAVE alternations can be found (Cennamo 2001; Loporcaro (2001, 2007), Manzini & Savoia 2005). The following patterns are listed, by Cennamo (2001), for instance, only for unaccusative verbs for change of state in the Pompeii dialect. The variation involves the class and age of the speakers (1 is for the old middle class, 2 is for the mid-aged middle class, 3 is for the young middle class; 4 is for the old low class, 5 is for the mid-aged low class, 6 is for the young low class).

(22)

	1.sg	2.sg	3.sg	1.pl	2.pl	3.pl
Pompeii 1	A	E	E	A/E	A/E	A/E
Pompeii 2	E	E	E	E	E	E
Pompeii 3	A	E	E	A	A	A
Pompeii4	A	E	A	A	A	A
Pompeii 5[9]	**A**	**A**	**E**	**A**	**A**	**A**
Pompeii 6	A	A	A	A	A	A

[8] A reviewer asks whether it would not be possible to have a theory for the assignment of morphemes to corresponding feature bundles along the lines of Silverstein's hierarchy, where 2 person would be realized as BE only if 1st is too, etc. This idea could work for Ariellese, but it would not explain other auxiliary patterns in southern Italian varieties.

[9] Pompeii 5 is a particularly interesting case, given that the pattern seems to be almost the reverse than that found in Arielli, in the singular.

Auxiliary selection can vary also according to sociolinguistic factors, especially in those areas where the class division is stronger. For further considerations on this issue we refer the reader to Cennamo (2001).

We conclude that each language has a different doubling mechanism, and "decides" whether the subject φ features must be dubbed or not through the selection of a dedicated root. In this sense, one anonymous reviewer is right in saying that this looks like a "lexical" phenomenon. This is something that southern Italian auxiliaries have in common with northern Italian clitics. π corresponds to the BE root (in USIDs) and to a person clitic (in NIDs). Just like the paradigm in NIDs are defective, and do not feature clitics for all person/number combinations, BE is not found for all person/number combinations. The root paradigms of auxiliary selection can be compared to the paradigms of subject clitics in northern Italian varieties, both defective.

2.2. Subject doubling in northern and southern Italian dialects

Subject clitics have been the topic of extensive research, and hence a number of observations and generalizations have been made with regard to their distribution, for instance. Some of these generalizations also seem to hold also for split auxiliation.
To start with, languages with subject clitics do not all exhibit fully fledged paradigms, and many clitic paradigms exhibit gaps of some sort. In some cases, only one subject clitic is present in the lexical inventory of the language. When this is the case, according to Renzi and Vanelli (1983), the clitic will be the 2nd person singular one. Manzini & Savoia (2005, I:118-119) and Loporcaro (2007) show that this generalization is too strong: there are dialects that, for example, have a dedicated clitic for 3rd person only (including the dialects of Stroppo/Macra/Pradleves, S. Pietro Val Grana, Acceglio, Vermiglio-Val di Sole, Livo –Val di Non, Tuenno –Val di Non, S. Maria M., Coimo). In general, however, even if some exceptions to this generalization can be found, we can certainly acknowledge a strong tendency among dialects with subject clitics to prefer the 2nd singular clitic when only one clitic is present in the language. Assuming that subject clitics are the equivalent to auxiliaries in upper southern dialects, the prediction is that if only one form in the auxiliary paradigm is marked in these dialects, it will be the 2nd singular. This prediction is borne out, at least according to the auxiliary selection table in Manzini & Savoia (2005: 728 –79). The table clearly shows that if a dialect has only one BE form, it will be the 2nd person singular. This is expected, given that 1/2 person are realized as BE.

At least one variety is attested which presents both person-driven auxiliary selection and subject clitics: the dialect of Cerano, in Piedmont. Given that we are talking about the same head π merged in different positions, a complementary distribution of subject clitics and auxiliaries would be expected. The dialect of Cerano provides an interesting piece of evidence in this regard: it displays person-driven auxiliary alternation for the 1st person, according to the following paradigm for the present perfect:

(23)	a. *(i)*	*sum*	*gni*	[Cerano]
	SCl	am-1st sg	come	
	t	*ɛ*	*gni*	
	you-2SCl	are-2/3 sg	come	
	l	*ɛ*	*gni*	
	(s)he-3SCl	is 2/3 sg	come	

(i)	*suma/*	*uma*	*gni*
SCl	are-1st pl	have-1st pl	come
si/	*j/*	*i*	*gni*
are-2nd pl	you-SCl	have-2nd pl	come
i	*in*	*gni*	
SCl	are-3rd pl	come	

'I/you/(s)he… have come' [Manzini & Savoia 2005, III:10]

Observe that the 1st and 2nd person plural display what looks like a free alternation between BE and HAVE. As we can see, the subject clitic is either optional or absent with the auxiliary BE, while it is obligatorily expressed in the 2nd plural form of HAVE. Let us look at the paradigm for the unergative verb *to sleep*:

(24)

sum/i	*O*	*drumi*		
am/ SCl	have	slept-sg		
t	*ε*	*drumi*		
you-SCl	are-2/3sg	slept-sg		
l	*ε*	*drumi*		
(s)he-3SCl	is-2/3sg	slept-sg		
(i)	*suma/*	***i***	*uma*	*drumy*
SCl	are-1st pl	SCl	have-1st pl	slept-pl
si/	*i*	*i*	*drumy*	
are-2nd pl	SCl	are- 2nd sg	slept-pl	
i	*in*	*drumy*		
SCl	are-3rd pl	slept-pl		

(24) shows more straightforwardly that whenever a BE-HAVE alternation is possible, the clitic is obligatory with HAVE and not with BE in this dialect.

It should be underlined that these are tendencies, not generalizations, as expected from the fact that the exponents of these feature bundles are ultimately "decided" by the lexical inventory.
It should be noted, furthermore, that "tripling" is also possible in some languages, and is attested in some Italian dialects; in principle, therefore, it should only be unusual, rather than impossible, to find both BE (subject doubling) and a person subject clitic. One example of subject clitic tripling is offered by Manzini & Savoia (2007:37), and here repeated as (25):

(25)

ra	*drwom-ra*	*tu*	*surela*	[Castellazzo Bormida]
she	sleeps-she	your	sister	

'Does your sister sleep?'

In (25), the subject clitic is present twice: as a proclitic, in the usual pre-finite verb position, and in the inverted, enclitic position, which is the usual position for clitics in interrogative sentences. While the proclitic position usually disappears in these contexts, the dialect of Castellazzo Bormida retains both clitics, thus resulting in the information about the person, number and gender of the subject being repeated three times: once on the full DP subject, once on the enclitic subject clitic, and once on the proclitic subject clitic. We can conclude on this basis that having more than one instance of π is rare, but possible.

The obvious question at this point is why we see subject clitics in all tenses and moods, but the same is not observed for split auxiliary selection. If our argument above is correct, auxiliary selection effects should also be found in the present tense or in the subjunctive in upper southern dialects. To arrive at an explanation, the question needs to be divided into two parts: first, why are there no auxiliary selection effects in subjunctive clauses while clitics do occur in northern Italian subjunctive clauses?; and, second, why are there no person split effects at all in the present tense, while subject clitics are attested through the whole verbal paradigm?

A tentative answer to the first question is that *irrealis* is by definition not D-linked. Hence, a direct reference to speaker and addressee is less likely to be found (Jeffrey Khan, p.c.). If there is a part of the paradigm that does not establish a link to speaker and addressee (i.e. to 1/2 person), that will be the *irrealis*. So the reason why we do not find person-driven split auxiliary selection in the past subjunctive or past conditional might be related to the nature of these tense/mood specifications.

The question of why we do not see person-split effects in the present tense in southern varieties while we do find subject clitics in northern southern varieties is more complicated, however. It seems that person split effects disappear in non-periphrastic tenses; or at least, there do not seem to be any clitic-like forms in the T-*v* domain in analytic tenses. The issue is whether we can conclude that π is still present in these tenses. In some cases, we do see morphological oddities which we can attribute to the presence of π even in the absence of split auxiliary selection, like in the case of inflected adverbs in Ripano, which will be discussed in 3.1.2. In general, a possible explanation for this asymmetrical distribution might reside in the fact that, as we claimed above, while clitics in northern Italian dialects are pronominal in nature (or at least more pronominal, having a D-feature and nominal distribution), the π probe in upper southern dialects is hosted by an auxiliary head. When the auxiliary is not there, the π probe cannot be realized, given that the finite verb morphology does not allow for person-sensitive roots (the way that, say, a Slavic paradigm would allow for two roots of the same verb for perfective and imperfective), and nor do these varieties feature real pronominal subject clitics. This means that the fact that these splits only emerge in periphrastic tenses on auxiliaries is due to a morphological, not syntactic, restriction.

3. π in the T-v field

3.1. The complex probe

Morphological variation is reflected on π. One variety can have person and number on π, while another has only person, and another only number and gender. The featural setup on π has repercussions on agreement. As an example, let us consider the distribution and agreement of the pluperfect auxiliary (BE+HAVE) in Ariellese.
The pluperfect in Ariellese involves several heads that together form a complex auxiliary:

(26) a.*(ji) So ‘ve’ magnatə/cagnatə/fatijatə*
(I) am-1.sg had-impf.pst eaten/changed/worked.sg
‘I had eaten/changed/worked’ BE+ HAVE

b.*(tu) Si ‘ ve magnatə/cagnatə/fatijatə*
you are-2.sg-had-impf.pst eaten/changed/worked.sg
‘You had eaten/changed/worked’ BE + HAVE

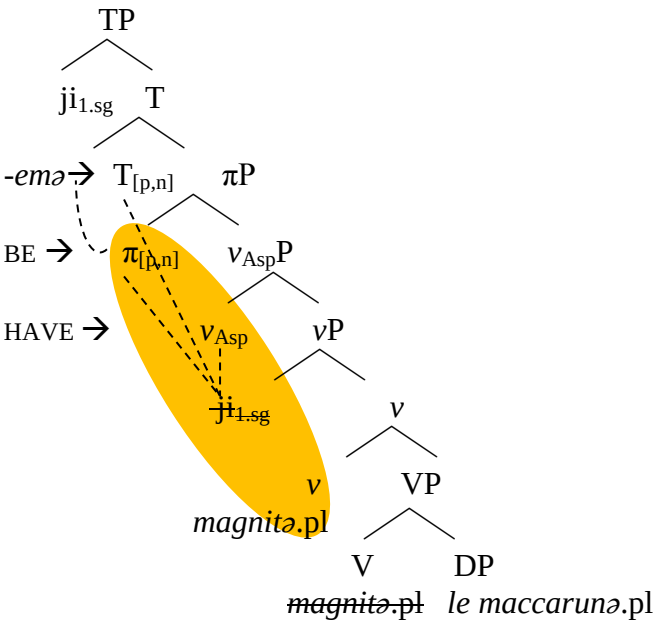
c. *(essə) Ave' magnatə/cagnatə/fatijatə*
(s)he had-impf.pst eaten/changed/worked.sg
'(S)he had eaten/changed/worked' HAVE
d. *(nu) S'avavemə/ s'avemə*
we BE-1/2.had-impf.pst.1.pl/ BE-1/2.have-pres.1.pl
magnitə/cagnitə/fatijitə
eaten/changed/worked.pl
'We had eaten/changed/worked' BE + HAVE
e. *Vu s'avavetə/s'avetə*
you.pl BE-1/2.had-impf.pst.2.pl/ BE-1/2.have-pres.2.pl
magnitə/cagnitə/fatijitə
eaten/changed/worked.pl
'You had eaten/changed/worked' BE + HAVE
f. *(jissə) Ave' magnitə/cagnitə/fatijitə*
they had-impf.subj eaten/changed/worked.pl
'They had eaten/changed/worked' *HAVE*

In (26d), for example *s'* and *'avavemə* are two distinct heads, both being specified as 1st person, while in (26c) there is only one head carrying the person information (*'ave'*). This head encodes the same information as the other heads as far as tense, aspect and person are concerned. In the case of (26d) we have the same person feature SHARED between two heads. In (26c) there is only one instance of person.

The derivation for a sentence with a pluperfect, like the one in (28), is exemplified in (28). (28) shows how π plays a fundamental role in the emergence of person-driven auxiliary selection.

(27) *Nu s'* *avavemə* *magnitə* *lə maccarunə*
we BE-1/2 had-1st.pl.impf.pst eaten-pl the pasta-pl
'We had eaten pasta'

(28)



As we can see from (28), T, π and v_{Asp} all probe the external argument. Two observations should be made at this point: first, the participle raises at least to *v* in Abruzzese, as shown by D'Alessandro & Roberts (2010). Second, v_{Asp} is only morphologically realized as a separate item in the pluperfect. In the rest of the paradigm, it is usually the case that v_{Asp} is found together with T. It is possible that, even in the pluperfect, v_{Asp} and T are on the same head. However, examples like (29), which are quite common in Abruzzese and show one or more clitics intervening between the higher and the lower auxiliary, suggest that in fact the aspectual auxiliary *'ve* is on a separate head.

(29)	*So tte*	*lə*	*ve'*	*dittə*
	am you-dat	it-acc	had-impf.pst	said
	' I had said it to you'			

The *v* head is scattered in (28) between *v* itself, π and $v_{Asp.}$ This fact is not too surprising under the assumption that every auxiliary occupies a different head. On the contrary, when the language morphology has portmanteau forms in its inventory, the functional sequence can be clustered together (Giorgi & Pianesi 1997, Rizzi 1997; see also a recent paper by Svenonius 2012 on feature-sensitive root merge and chunk spell-out, where heads corresponding to one morpheme are spelled out together but are scattered along the spine; finally, Szabolcsi 1994, following Bhatt & Yoon 1992, proposes a 'subordinator conflation' mechanism for complementizers that is strictly linked to the agglutinative vs inflectional morphology of languages). More technically, we can think of a complex head as a head which is in a feature sharing relation with other functional heads. Feature sharing has been proposed by several scholars in different forms (Ouali 2008, Schoorlemmer 2009, D'Alessandro & Roberts 2010, Miyagawa 2010 a.o.), and scattering the features contained on a head into several heads is also at the base of much cartographic reasoning.

A complex head is defined as follows:

(30) Given two heads F_1 and F_2, where F_1 immediately dominates F_2, F_1 and F_2 constitute a complex head if they SHARE their φ-features.

If the heads encode unvalued φ-features, we talk of a complex probe:

(31) COMPLEX PROBE: Given two heads F_1 and F_2, where F_1 immediately dominates F_2, F_1 and F_2 constitute a complex probe if they SHARE their φ-features and these φ-features are unvalued.

The sharing operation has been proposed by several scholars, and consists in the presence of the same feature set on two adjacent functional heads. The mechanism giving rise to this SHARE configuration can be taken to be that proposed by Ouali (2008:169). According to Ouali, when a phase head receives unvalued features and has to pass them to the non-phase head (feature inheritance, Chomsky 2005), some of the features can be copied on the non-phase head and retained from the phase head. The definition of SHARE, adapted from Ouali is in (32):

(32) SHARE
Transfer φ-features from X to Y and keep a copy

Ouali refers to phase heads and feature inheritance mechanisms. While keeping the gist of his proposal, we wish to adopt here a slightly different definition of share, whereby *v* and π are the same functional head, split into two subheads. This extended probe is no different from a scattered verbal head in those languages that show dedicated tense-aspectual morphemes rather than syncretic forms (see Giorgi & Pianesi 1997). If the morphology has a separate morpheme for each bit of inflectional information, then we will see the instantiation of each separate head in the morphology, as in (33). If the morphology only has a syncretic form, it will not be possible to see the different heads (34). They will nevertheless be instantiated as separate heads in the spine, but will constitute a unique, complex head.

(33) *parl-a-va-mo*
speak-class-impf-1stpl
'we spoke' [imperf]
(34) *parl-ò*
speak-perf-3rdsg
'he spoke' [perf]

An issue that needs to be addressed regards the conditions that determine the existence of this complex probe. When can two adjacent heads constitute a complex probe and when can they not? For instance, can we say that C and T constitute a complex probe? What about T and *v*? In principle, any two heads can form a complex probe. We see several instantiations of 'collapsing' heads: in particular, Giorgi & Pianesi show, starting from verbal inflectional morphology, that heads can be 'separated' when the morphological inventory of the language is rich enough, or they can be collapsed into one. In some languages, for instance, mood and tense are expressed by a unique head, while this is impossible in others. When mood and tense are expressed by different heads, however, there is still an intimate link between the two, if they are part of the same inflectional domain.

3.2. Extending the domain: the π probe

The presence of an extra probe in T-*v* creates the split in auxiliary selection, I have proposed, but it also extends the agreement domain of the past participle, resulting in the phenomena that were listed in II: omnivorous participial agreement, agreement mismatch marking and topic-oriented agreement.

If π were valued and the agreement domain consequently split, it would be impossible for the past participle to Agree with the external argument (Chomsky 2001), as we see happening in Abruzzese (group II phenomena, exx. 5-6). Not only does the extra probe not split the agreement domain: its presence also causes omnivorous agreement and agreement mismatch to emerge. To see how this works, let us consider the cases of Ariellese and Ripano.

3.2.1. The complex probe in Ariellese

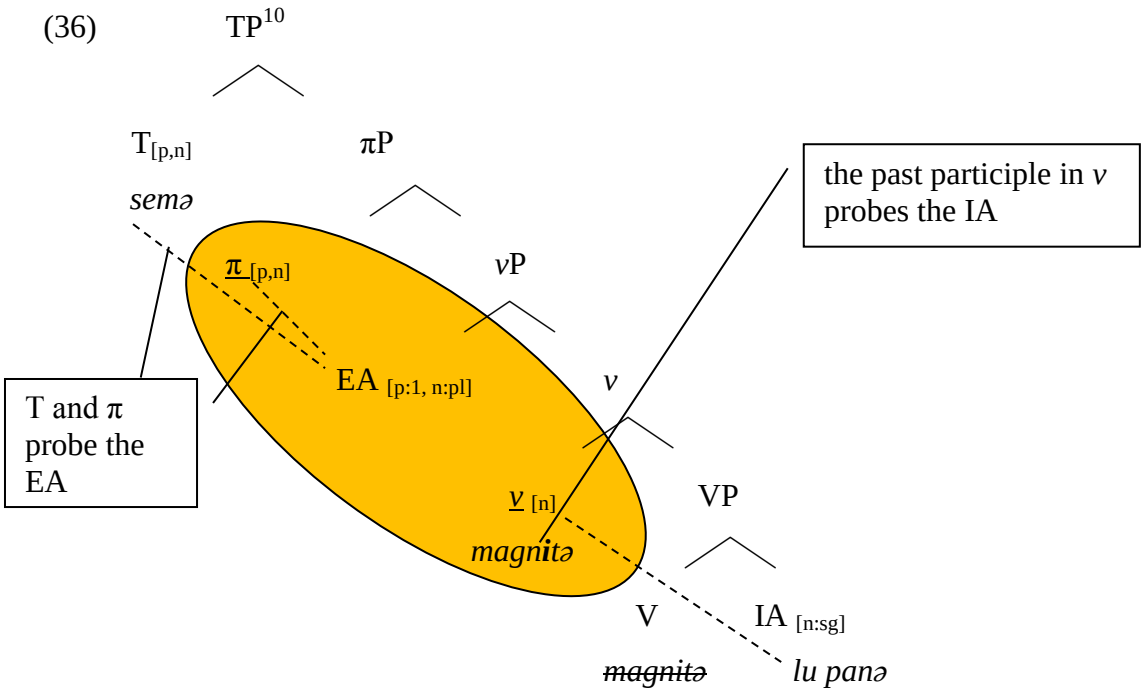
Ariellese displays person-driven auxiliary selection as well as omnivorous number agreement and the double auxiliary construction, while Ripano shows agreement mismatch marking but no auxiliary selection (the only auxiliary is BE) . Let us first consider the sentence in (35), from Ariellese.

(35)	___	*Semə*	*magnitə*	*lu*	*panə*
	pro-1.pl	are-1.pl	eaten-pl	the-sg.m	bread-sg.m

'We have eaten the bread'

In (35), the subject is 1st person plural and the auxiliary is consequently BE. The past participle is plural (*magnitə*) and shows agreement with the external argument, which is the only plural argument. This agreement pattern is unique in Romance: the past participle of a transitive verb never agrees with the external argument (Belletti 2005). Ariellese features a π probe in the T-*v* domain. π is responsible for person-driven auxiliary selection, as we have just seen. It also extends the *v* agreement domain in a way which will become clearer if we look at the derivation of (35) illustrated in (36).
Like for (27)-(28), *v* is scattered on two heads (*v* and π), which constitute a complex probe. *v* probes the internal argument; both T and π probe the external argument (Chomsky 2001 Agree), just like in (28).

(36)



v and π constitute a complex Probe. The definition of complex Probe, in (30), is repeated in (37):

(37) COMPLEX PROBE: Given two heads F_1 and F_2, where F_1 immediately dominates F_2, F_1 and F_2 constitute a complex probe if they SHARE their φ-features and these φ-features are unvalued.

Once the simultaneous probing of T and π on the one hand and *v* on the other hand takes place, π incorporates into T because of Full Interpretability, as it would not be possible for a purely φ-bundle to be interpreted at the LF interface (Chomsky 1995; π is in fact nothing more than a bundle of features in need of a host to be spelled out), and the sentence gets spelled out. π-*v* constitute a complex probe, hence they share the values for their features. This means that the π-*v* head is valued by both the external and the internal argument simultaneously (π and *v* are in a SHARE relation). For (35)-(36), π-*v* will be hence valued as [Person: 1; Number: plural/singular; gender: masculine]. At PF, there is a late insertion of a morphological agreement marker and, as we have seen, there is a mismatch in the value of the Number feature on the complex probe *v*-π. Assuming, with Nevins (2011), that singular is a privative feature, plural morphology will be chosen at PF as an exponent of participial

[10] In (36), the dotted line illustrates agreement, and the circle highlights the *v*-π complex head.

inflection. π, as we have said, has shared its features with *v*, but has incorporated into T because of its clitic-like nature. At spell-out, the T-π complex will have the values [1st person; 1st person; plural; plural]. BE will then then selected to realize π=1st person, and the ending –*emə* will be the exponent of the 1st plural ending, following the scheme proposed in (18).[11]

A similar mechanism is at work, according to Szabolcsi (1994), within the DP. Furthermore, a complex probe analysis for Tense/Aspect driven auxiliary selection in Kutchi Gujarati and Marwari has recently been proposed by Grosz & Patel-Grosz (2013). This complex probe also evokes a big DP concept, where both the clitic and the rest of the DP start out as a complex item sharing the same information, and subsequently one of the two elements moves out of the big DP and cliticizes onto a given functional head.

3.2.2. The complex probe in Ripano

A similar mechanism is at play in Ripano, which shows agreement mismatch that obeys a different lexical insertion rule: when the features of π /v have different values, the reduced ending -ə will be selected as the morphological ending of the past participle. As illustrated in II.2, the agreement mismatch seen in Ripano differs from that observed in Abruzzese. Specifically, when the internal argument and the external argument of a transitive verb show different gender or different number specifications, the ending on the finite verb or of the participle in compound tenses will be -ə. (38) illustrates this pattern:

(38)	___	*So*	*rlavatə*	*le*	*camisce*
	pro-1.sg.m	am	washed-n	the-f.sg	shirt-f.sg
	'I(masc) have washed the shirt'				

In (38), the subject of the utterance is masculine (the sentence was produced by a man), the object is feminine, and the ending on the verb is -*ə*. A masculine ending for the participle is judged as ungrammatical by some speakers, and as very marked but possible by others:

(39)	*/#___	*So rlavat**u***	*le*	*chemisce*
	pro-1.sg.m	am washed-m.sg	the-f.sg	shirt-f.sg
	'I (masc) have washed the shirt'			

Those speakers who consider the sentence in (39), with the participle agreeing with the masculine subject, as marginally acceptable might be moving towards a topic-oriented, or subject-oriented system, of the sort which is found in San Valentino, and which will be briefly addressed below.

In the presence of a finite verb, the agreement pattern for a transitive verb with a masculine EA and a feminine IA will be as in (40):

(40)	*Babbu*	*dicə*	*le*	*vəritá*
	dad-m.sg	says-3rd.sg.n	the-f.sg	truth-f.sg
	'Dad says the truth'			[Mancini 1988: 107]

[11] Observe once again that the root for the present perfect in Ariellese is only selected depending on the person, i.e. the singular and plural specifications are parasitic on the person specification. In other words, 1+sg equals 1+pl (in the auxiliary root selection, BE in this case). We assume that number is present on π because of participial agreement. As for *v*, it only encodes number (not person, *contra* D'Alessandro & Roberts 2010). This is directly reflected in the morphology of the participle, which only alternates between singular and plural, as we have seen.

In (40) the EA is once again masculine singular whereas the IA is feminine singular: this triggers the surfacing of a reduced vowel (ə) as the finite verb ending.
In those cases in which the subject and the object carry the same ending, no mismatch arises, obviously. See for example (41), where both subject and object are masculine singular, or (42), where they are both feminine singular:

(41)	___	*So*	*ngundratu*	*n amigu*
	pro-m.sg	am	met-m.sg	a friend-m.sg
	'I met a friend'			[Mancini 1993: 106-107]

(42)	*So rlavat**e***	*le*	*chemisce*
	am washed-f.sg	the-f.sg	shirt-f.sg
	'I(fem) have washed the shirt'		

More examples of gender agreement mismatch marking involving the past participle are listed here:

(43)	a.	*So*	*magnatə*	*lu*	*pani'*[12]
		am	eaten-n	the-m.sg	breadroll-m.sg
		'I(fem) ate the breadroll'			
	b.	*Mamme*	*e rlavatə*	*lu*	*mendi'*
		mum-f.sg	is washed- n	the-m.sg	tablecloth-m.sg
		'Mum washed the tablecloth'			
	c.	*Si*	*rlavatə*	*le*	*chemisce*
		are-2nd.sg	washed-n	the-f.sg	shirt-f.sg
		'You(m) washed the shirt'			

In all the examples in (39), a different gender specification for the EA and the IA triggers the insertion of the neutralized ending *-ə*.

Number is also involved in agreement mismatch, as (44) shows:

(44)	__	*mazzə*	*li*	*keppu'*
	pro-m.sg	kills-n	the-m.pl	capons-m.pl
	'He kills the capons'			

Animacy seems to also play some role in the classical dialect, as in (45), where the only difference between EA and IA is animacy:

(45)	*Semə*	*magnat**a/ə***	*lə*	*pera*
	we-are	eaten-f pl/n	the-f.pl	pears- f.pl
	'We ate the pears'			

The agreement mismatch marker is produced only by some speakers, according to Mancini.

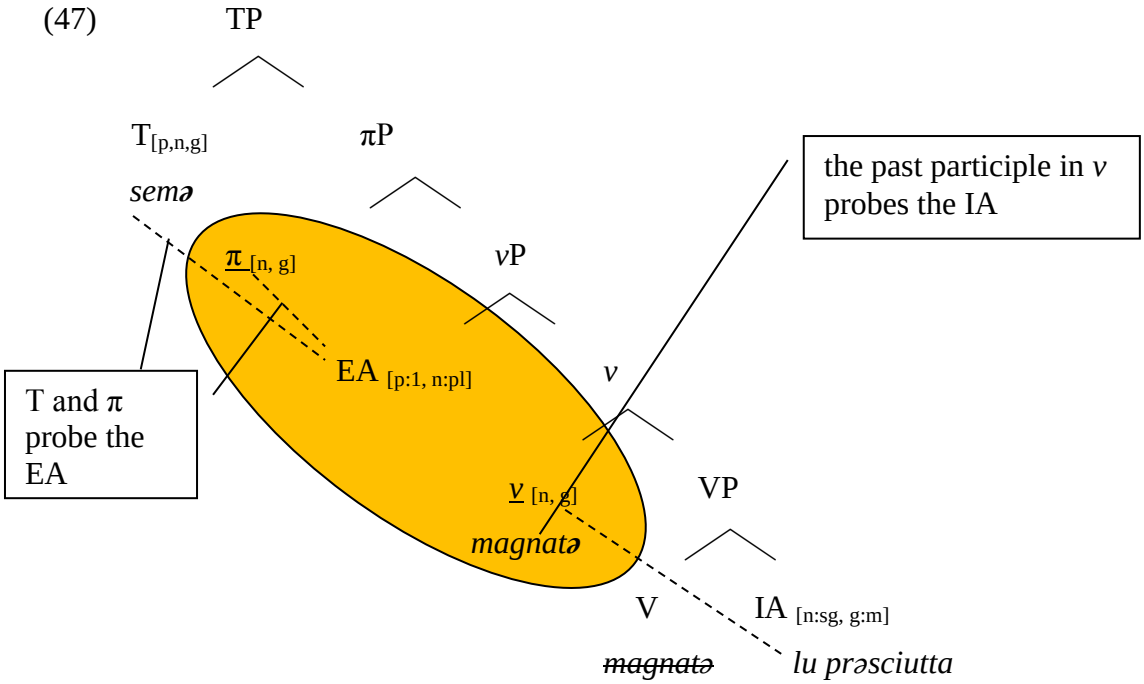
[12] Unless otherwise stated, all examples from Ripano were collected through the author's fieldwork. Four speakers were interviewed, two of whom were from an older generation. In case of different translations or judgments, the version given here is the one provided by the older speakers. During fieldwork, the data from Jones's (2001) MA thesis were also double checked. Those reported here were confirmed by the speakers.

Finally, a difference in the combination of both number and gender on the two arguments also leads to agreement mismatch:

(46)	___	*semə*	*magnatə*	*lu*	*prəsciutta*
	pro- f .pl	are	eaten-n	the- m.sg	ham-m.sg
	'We-fem have eaten the ham'				

It should furthermore be noted that while in all examples above the 1st person singular auxiliary seems to agree exclusively with the EA, in the case of a 1st/2nd plural subject as in (46) a mismatch marker also emerges on the auxiliary. We will return to this fact later on.
The derivation of example (46) is in (47):

(47)



π and *v*, like in Ariellese, form a complex probe. Observe that the φ-features on π in (46) are different from those on π in (35)-(36): as stated above, this variation is lexical, as π can encode different features, just like subject clitics. The features on *v* are also different: in Ripano, gender is also present on *v*. This is reflected in the participial morphology of the variety. At PF, the mismatching values on the π-*v* will be resolved by inserting a -ə ending.

Two observations are in order here: first, agreement mismatch is insensitive to structural restrictions. There does not seem to be one gender which, if in EA or IA position, is preferred over the other for triggering agreement. In this respect, the Ripano agreement pattern looks different from both person restriction and omnivorous number patterns. Second, in (45) and (46) the past participle carries the *-ə* ending. This means that the past participle can somehow gather the information that the EA is of a different gender than the IA. The past participle thus seems to have an extended agreement domain, targeting the EA as well as the IA (thus behaving quite differently from other participial agreement patterns in Romance).

If agreement mismatches are the result of the presence of an extra probe in the T-*v* field, which is in turn reflected in auxiliary selection, why is there no auxiliary selection in Ripano? We have already clarified that it is not necessary for all phenomena to co-occur in all

languages, and that their occurrence is determined by the syntax as well as by the morphology of the language. In many southern Italian dialects, for instance, participial agreement is impoverished, which means that the extra probe causes person-driven auxiliary selection but does not have any repercussions for argumental agreement. Ripano does not have split auxiliary selection, as already stated. Nevertheless, the presence of this extra probe is not without consequences for this variety: Ripano in fact displays "extraordinary" adverbial agreement (Ledgeway 2006, Author et al. *2015*). While it is true that T and π are always realized by one morpheme, we also see agreement endings emerge on adverbs and all kinds of modifiers:

(48) *Magnu* *sembru/* *Magne* *sembre*
eats-3rd.sg.m always-m eats-3rd.sg.f always-f.
'He always eats'/ 'She always eats'

The presence of inflected adverbs is restricted to only some elements, but is still quite widely found in the language. Together with inflected manner, degree and place adverbs, we find inflected wh-elements (49), inflected quantifiers/numerals (50) and gerunds (51), (all data are from Mancini 1993):

(49) *Ndovu* *va?*
where-m goes-3rd.sg
'Where is he going?'

(50) *Ci* *stiè* *centi* *frəkì*
there were hundred-pl.m children-pl.m
'There were a hundred children'

(51) *Chə vva* *fəcennu?*
What goes-3rd.sg doing-m
'What is he up to?'

Fieldwork has shown that examples of this sort are quite readily found in modern Ripano. Observe that all the extraordinarily inflected elements are mostly within the T-*v* domain. In (48) *always* is a low adverb (Cinque 1999); in (50) the numeral is within an IA; in (51) the gerund is arguably in V[13].

The endings attached to these adverbs and modifiers are the realization of the φ-set on the π. Although there is no principled need to have π overtly expressed, in Ripano the extra person and number probe is realized in the form of affixes, attaching to the first available host in the *v* domain. Hence the unusual "spread" of agreement, or pragmatic agreement effect. These effects should not be attributed to pragmatics, but rather to the morphological realization of an extra probe in Ripano.

Finally, the paradigm in II.3, referred to as Topic-oriented agreement in this paper, also shows the same mechanism at play. The participle agrees with both arguments, and the agreement ending is selected on the basis of "topichood". In (52a) 'the chickens' are generic. In (52b) 'the chickens' are specific and known.

(52) a. *Aje* *cciosə* *li* *pellîstrə* [Sanvalentinese]

[13] Observe that inflected adverbs are also reported for Marwari and Kutchi Gujarati (Patel 2007, Grosz & Patel 2013), which are also analyzed as featuring a complex probe.

have-1st.sg killed-sg.masc the-pl.masc chickens-pl.masc
'I have killed chickens'

b. *Ajə ccisə li pellîstrə*
have-1st.sg killed-pl masc the-pl.masc chickens-pl.masc
'I have killed the chickens'

In all three varieties, the presence of an extra probe π creates some disruptions in argumental agreement mechanisms.
If the presence of π has these consequences, there should not be a dialect of the upper southern group that displays agreement mismatch of some sort but not auxiliary selection, and viceversa. This is not the case: it is well known that split auxiliary selection and participial agreement mismatch do not always go hand in hand. Those dialects which feature only one of these two phenomena do not necessarily constitute an exception: as the different morphological resolutions in Ariellese, Ripano and Sanvalentinese show, much depends on the morphological inventory of the language. It could well be that a language that has split auxiliary selection does not have a neutral ending for participles, for instance. In other cases, extended agreement could be covered by a preference for agreement with one argument. Alignment considerations might play a bigger role than expected. All in all, what this paper wishes to show is that having a π Probe in an argumental domain is a necessary condition for agreement mismatches to apply. Whether it is also a sufficient condition remains to be seen, but it seems very unlikely.

3.2.3. A note on pattern variations in Ripano
Examples (45) and (46) show that the auxiliary can agree with both the EA and the IA; it is never the case that it agrees exclusively with the IA.

A distinction needs to be drawn, however, between person, number, and gender. It seems to be the case that the auxiliary always agrees with the EA in person and number. Gender is the only triggering factor for mismatch on the auxiliary. A sentence like (53) where the EA and IA carry different number specification but the same gender specification, is judged as ungrammatical if the auxiliary agrees in number with the object. Number agreement is triggered by the EA.

(53) *I' *semu/*semə/so magnatə li fəscəlitta*
I-1.sg.m are-1.pl.m/1.pl.n /1.sg eaten-pl.m the-pl.m beans-pl.m
'I have eaten beans'

In a sentence featuring a 2nd person IA and a 3rd person EA, with gender and number being equal, the auxiliary must show 3rd person agreement, i.e. person agreement with the EA. A 2nd person agreement ending is ungrammatical:

(54) *Le moja və *səndeta/ sende*
the-f.pl wife-f.pl you-2.sg hear-2.pl.f/hear-3.pl
'The wives hear you'

These examples suggest that the auxiliary agrees in number and person with the EA. With polysyllabic auxiliaries, like *semə* in (45)-(46), agreement mismatch arises only in the case of gender mismatch between the EA and the IA. While in Ariellese auxiliaries only target the EA, and do not see the IA in any case, even in the presence of π, in Ripano the complex probe creates a larger agreement domain both for the past participle and for the auxiliary. This might

be due to a parametric difference, but it might also be due to language change (Ferrari Bridgers 2010). The varieties surrounding Ripano mostly display neutralization of the final endings. Given that the version with full agreement with the EA is more frequent, we can conclude that the agreement mismatch ending on the auxiliary is for now just a phonetic fact, and may not have entered the morpho-phonological system of the language.
Finally, while the older generation is quite consistent in producing agreement mismatches, it is sometimes the case that the finite verb or the past participle agrees exclusively with the external argument, as in (55) and (56):

(55)	*Tu*	*nghə mme*		*tə*	*piju*
	you-2.sg.m	with	me-1.sg.Acc	you-refl	take-2.sg.m

troppe *cunfidenze*
too much-sg.f confidence-sg.
'I think you're taking too much liberty with me'

(56)	*So*	*magnatu*	*li*	*fəscəlitta*	
	am-1.pl	eaten-sg.m	the-pl.m	beans-pl.m	
	'I have eaten beans'				[Rossi 2008: 86]

These exceptions are possibly also due to an ongoing language change that has affected Ripano in recent years: this variety might be moving from an agreement mismatch language to a topic-oriented language. Although the facts in (55) and (56) would suggest a subject-oriented agreement system, this change is rather headed towards topic-oriented agreement. Neighboring languages, such as Sanvalentinese, as we have seen, show some sort of topic-driven agreement. We leave further speculations aside as they would fall outside the scope of the paper.

4. π in the v-V field. Split Differential Object Marking

Most upper southern dialects have a DOM which resembles that of Spanish, i.e. they mark the animate (or human) object with a preposition. This phenomenon is traditionally dubbed the 'prepositional accusative'. Like for Spanish, most of these dialects use the preposition *a*.
DOM has been studied from many different viewpoints, most of which share the postulation of the existence of a special projection (within the verbal field) encoding specificity[14] .

One of the most influential analyses of DOM for Romance is that put forward by Torrego (1998), according to which the prepositional accusative is linked to several features of the object (like the possibility to be doubled by a clitic, the specific interpretation, the sensitivity to the aspectual class to which the verb belongs, animacy, etc.). Not all these features are found in DOM-ed internal arguments in Abruzzese. What interests us here is the proposal that DOM is linked to the presence of an extra head, encoding definiteness and animacy.
Something similar is also proposed by Gallego (2013), according to whom DOM in Spanish is triggered by a prepositional head in the *v* field.
Abruzzese also has DOM, so we can assume with Torrego, Gallego and others that it features a head in the *v* field. This head very likely encodes animacy and definiteness (or alternatively, it features a distinctness marker, as proposed by Torrego for Hindi). The "semantic" contents

[14] DOM was intuitively described by Rohlfs (1969) as a strategy to distinguish between internal and external argument. The same intuition is presented in D'Achille (2003); along the same lines, Torrego (2012) proposes a distinctness marker in Hindi. We will not go into the details of the various DOM analyses here.

of this head are not so relevant here. What matters is that this head also encodes person, i.e. it also hosts π. In some dialects, including Ariellese, in fact, *a* marking appears only on 1st and 2nd person objects. The dialects that have been reported to exhibit split DOM are those of Altamura (Loporcaro 1988), Borbona, Cagnano Amiterno, and Colledimacine (Manzini & Savoia 2005). Observe the difference between (57-58) and (59):

(57) *So* *vistə a tte* [Ariellese]
am-1sg seen to you
'I saw you'

(58) *Semə vistə a vvu*
are-1pl seen to you
'We saw you'

(59) **So vistə a Marijə/ a jissə / a quillə*
am-1sg seen to Mary /to them/ to them

In (57) and (58), the pronominal 1st and 2nd person object is marked with an *a.* Third person objects do not allow DOM, as shown in (59). A 3rd person pronoun would be equally restricted, as we see in (60):

(60) *???Si viste a esse*
you-are seen to him

The reason for the triple question mark (???) marking on (60) is that it is accepted by some speakers, possibly as a result of contact with neighboring varieties that allow 3rd person DOM. The DOM system in Ariellese is somewhere in between that described by Manzini & Savoia (2005:II, 515) for Canosa Sannita, where all pronouns are *a*- marked, and the split-person system discussed here[15].

This prepositional marker is probably an instantiation of the extra person probe in the VP field. Specifically, *a* does not simply mark definiteness but also person (π).

The last option regards the presence of valued φ-features on π in the *v*-V field. According to a recent proposal by Gallego (2013), this might be the origin of Spanish-type DOM, i.e. of DOM which is not person-sensitive.

5. Conclusions

Upper southern Italian dialects display a number of apparently unrelated features, such as split auxiliary selection depending on the subject person feature, as well as split DOM; furthermore, they exhibit unusual agreement patterns, whereby the verb, usually in the form of a past participle, agrees with both arguments in transitive constructions. A case study of

[15] To complete the picture, we need to consider 3rd person pronouns in Abruzzese, which also encode proximity to the speaker or addressee. Abruzzese in fact exhibits a tripartite pronominal system for 3rd person pronouns, whereby a distinction is drawn between a neutral 3rd person pronoun without any deictic referent (*esse*), a 3rd person pronoun referring to someone close to the speaker (*custù*), a 3rd person pronoun referring to someone close to the hearer (*cussù*) and a 3rd person pronoun referring to someone far from both speaker and hearer (*cullù*) (Giammarco 1979). For Ariellese, it seems to be the case that the 'neutral' pronoun *esse* tolerates the preposition *a*, while the three more specified pronouns do not. In general, however, most speakers avoid the *a* marker with all 3rd person objects.

auxiliary selection and participial agreement in Abruzzese was presented, and these features were shown to be
attributable to the presence of an extra head (π) in the T-*v* (argumental) domain. This head can encode valued or unvalued features. When this π is a probe, i.e. it encodes unvalued features, all these phenomena emerge. When this head is valued, case misalignments can emerge, as is the case for split-ergative languages.

The extra probe can be found in several Romance varieties and in different domains. While in upper southern Italian dialects this head is located in the T-*v* field, in northern Italian varieties it is in the C-T field and realized in the form of a subject clitic. In northern Italian varieties, if π is not a probe but simply a bundle of valued features, it can be instantiated in the form of an invariable clitic, i.e. a discourse-related clitic. The extra probe π can also be found in the VP field, in cases of DOM.

Finally, the typological difference between splits in ergativity and splits in person has been attributed to the nature of the extra head: a probe in the case of Italian dialects, and a licenser/intransitivizer in split ergative languages.

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