Merging Probes.
A typology of person splits and person-driven differential object marking[1]

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October 2012

Abstract

Syntactic variation can be ascribed to different factors. An ongoing debate concerns the possibility of attributing this variation to features in functional projections. The so-called Borer-Chomsky conjecture as formulated by Mark Baker (2008) states that all parameters of variation are attributable to differences in the features of particular items (e.g. functional heads) in the lexicon. This statement is explored in depth here. It is shown that not only macrovariation, but also microvariation can be encoded in the featural setup of a functional head. Specifically, the position in which features appear will be shown to determine a substantial amount of the microvariation that we observe in dialects, while microvariation can be determined by the specification of the feature as valued or unvalued. The case study concerns a group of dialects spoken in Southern Italy that present noticeable microvariation. These dialects will be shown to differ from the other macrogroup of northern Italian dialects purely as a result of the locus of an extra functional head. They also differ minimally from split ergative languages because of the valued/unvalued nature of the features found on this extra head. It will specifically be demonstrated that the almost perfect complementary distribution between languages with subject clitics and languages with person-driven auxiliary selection is not accidental, but is the logical result of the presence of an extra φ-probe doubling the features of the subject in different parts of the syntactic spine.

I. Introduction

In recent years syntactic debate has focused on the possible *loci* of variation, with several schools putting forward conflicting ideas. On the one hand, the original parametric approach, nowadays usually referred to as macroparametric, assumes that there is some kind of big switch in the grammar which creates the first big divide between typologically different languages in one swap. That big switch can lead to ever smaller microparametric divisions can descend (see Baker 1996, 2001, 2008 and Chierchia 1998 a.o. for this type of approach). On the other hand, those who believe that macroparametric variation is obtained by clustering together microparameters claim that the reverse is true, i.e. that syntactic variation occurs from the bottom up. There are different ways to implement this, notably the *Uniformity of the Input* hypothesis, maintained by Roberts & Holmberg (2010), whereby one key value is the value set for a feature on *v*, with the rest of the

[1] I wish to thank the audience of the Cambridge Ergativity Workshop (CamCos), of the Yale Linguistics Colloquium and of the MIT LingLunch for the feedback and most valuable suggestions. All shortcomings are, of course, my own.

functional heads mostly set on the same value (in harmonic languages). Baker (2008) referred to the idea of encoding variation in the form of features on functional heads as the Borer-Chomsky conjecture:

(1) Borer-Chomsky conjecture.
All parameters of variation are attributable to differences in the features of particular items (e.g., the functional heads) in the lexicon.

According to this conjecture, syntactic variation is encoded on functional heads. In what follows, the consequences of this conjecture are explored in detail, with specific focus on the consequences of merging an additional head endowed with φ-features to the syntactic spine. It will be shown that adding a head to syntactic structure can have dramatic consequences in terms of the definition of typologically different languages.
When a functional head endowed with φ-features (which will henceforth be referred to as π) is merged in a syntactic structure, at least three logical possibilities open up:

A. (vacuously), π is not merged at all

B. π is a bundle of valued features

C. π is a bundle of unvalued features

Each of these three options create sub-options, having to do with the merging site of π. Specifically:

A1. π is not merged at all anywhere → no consequences

B1. π is valued and merged in the left periphery (between C and T; henceforth C-T)
B2. π is valued and merged in the *v*-field (between T and *v;* henceforth T-*v*)
B3. π is valued and merged in the V field (between *v* and V; henceforth *v*-V)

C1. π is unvalued and merged in the left periphery (C-T)
C2. π is unvalued and merged in the *v*-field (T-*v*)
C3. π is unvalued and merged in the V field (*v*-V)

If the Borer-Chomsky conjecture is on the right track, different types of languages correspond to each of the seven options in (A1-C3). The presence of an unvalued π (i.e. a φ-probe) in different parts of the syntactic structure does indeed have visible microtypological repercussions: C1 is a language with subject clitics; C2 is a language with person-driven auxiliary selection; C3 is a language with person-driven differential object marking (DOM). The C languages are instantiated in three macrogroups of Italian dialects, which are the focus of the present study. Group C differs from group B in the status of the features, which enter the syntactic derivation valued (B) or unvalued (C). B and C represent two macrotypological groups: B is the group of (person-driven) split ergative languages; C is the group of argument doubling languages.

Observe that introducing an extra φ-probe in the argumental agreement field is expected to cause disruptions in the argumental agreement system. This is exactly

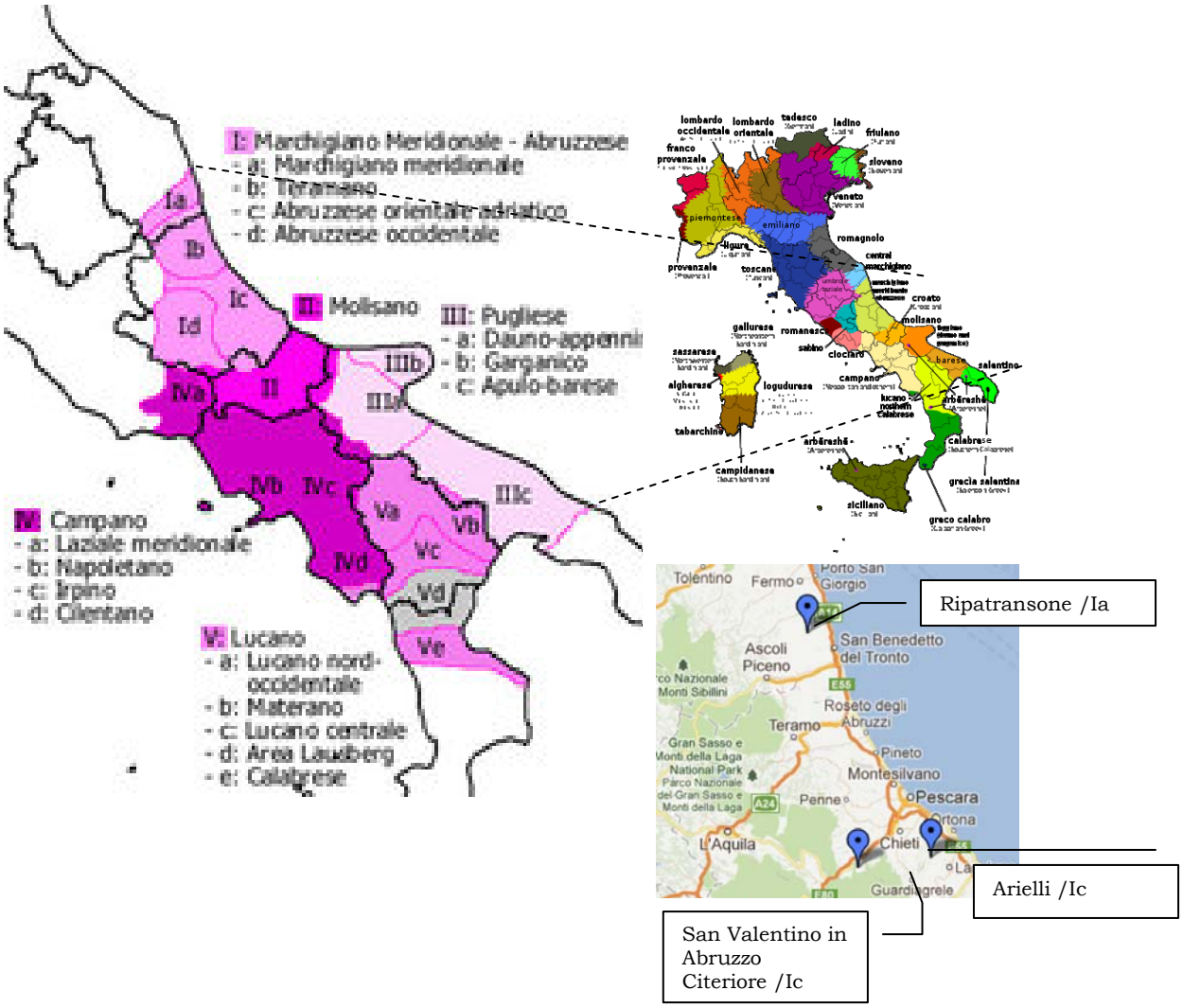
what we see in group C languages. Finally, type A languages, which will not be discussed here, are languages in which the extra head is not present.

Type B languages will be illustrated by some examples of split ergative languages recently analyzed by Coon (2010, 2012) and Coon & Preminger (2012). Type C languages will be examined at length, particularly because they are not usually included in syntactic typological studies. It will be shown that the presence of an additional unvalued π in different positions in the clause can create a whole microtypology of languages, which is instantiated in Italo-Romance macrogroups. Type C1, where π is unvalued and merged in the left periphery (C-T), is represented by a group of northern Italian dialects, where π appears in the form of a subject clitic. Type C2, where π is unvalued and merged in the *v*-field (T-*v*), is represented by a group of upper-southern Italian dialects, where π appears in the form of an auxiliary stem. Finally, type C3, where π is unvalued and merged in the V field (*v*-V), is represented by a group of southern Italian dialects where person-driven differential object marking (henceforth DOM) can be found. The varieties listed here prototypical, mainly showing one of the three possibilities. There is no principled reason why π should not appear more than once and in different positions (some dialects have in fact also been shown to exhibit tripling). These possibilities will be addressed later on and are not excluded by this typology.

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 to 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 shown that this almost perfect complementary distribution between subject clitics and person-driven auxiliary selection is not accidental, but is the logical result of the fact that these two phenomena are due to one and the same underlying cause: the presence of an extra φ-probe (π). 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). Person splits in three Abruzzese dialects are examined: those spoken in Arielli (Ariellese, AR, Ic in the map), San Valentino in Abruzzo Citeriore (Sanvalentinese, SV, Ic) and Ripatransone (Ripano, RT, Ib). 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[2]. The other two varieties will be mostly used to test our hypothesis developed on the basis of Ariellese.

[2] I wish to thank Alfredo Rossi and Antonio Giannetti for their help with the Ripano data, Silvio Pascetta for the San Valentino data, and Luigi and Nicoletta Cellini, Giovanni Carullo, Ivan Di Carlo and Adina Sterposo for the Ariellese data.

FIG.1 UPPER SOUTHERN ITALIAN DIALECTS /ABRUZZESE



This paper introduces three apparently unrelated syntactic phenomena, which are exemplified using data from upper southern Italian dialects. In section 2 the correlation between subject clitics and person-driven auxiliary selection is clarified. An analysis of person splits is put forward in section 3, while section 4 examines the consequences of introducing an extra head in different syntactic domains. Section 5 examines the concepts of extended domains and split domains, while section 6 contains the conclusions.

1.1. Three features of upper southern Italian dialects

Abruzzese, a variety belonging to the C2 group above, 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).

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 (1) for Ariellese (observe that of the three dialects in Fig. 1 only Ariellese has split

auxiliary selection; Ripano has generalized BE[3], Sanvalentinese has generalized HAVE).

(2)

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

II. *Split differential object marking*: like most southern Italian dialects, Abruzzese exhibits differential object marking (DOM) in the form of 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 3-5).

(3) so vistə a tte [Ariellese]
am-1sg seen to you
'I have seen you'

(4) semə vistə a vu
are-1pl seen to you
'We have seen you'

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

III. *'Omnivorous' participial agreement in number* (5); *Agreement mismatch* (6); *Topic-oriented agreement* (7): 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 6). 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

[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.

can be defined as topic-oriented agreement, whereby the verb agrees with the most highly referential, or definite, argument.

III.1. *'Omnivorous' participial agreement in NUMBER* (extended agreement domain for the verb)

(6) 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)]

III.2. *Agreement mismatch*

(7) a. Babbu dicə le vəritá [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

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]

III.3. *Topic-oriented agreement*

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

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

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

The proposal is that these seemingly unrelated phenomena are actually intertwined, as 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 III.
The extra probe π is not unique to the *v* field, 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 argument φ-features. Observe that there can be cases in which two extra probes co-occur, when we see doubling of both arguments of a transitive verb, for instance. This is expected under the assumption that the extra probe is doubling the features of the arguments, each of which is usually doubled once. Once again, nothing prevents, in principle, subject or object tripling. Hence, the co-occurrence of multiple extra probes is not *a priori* excluded.
The difference between C1 and C2 languages lies simply in the site at which π is merged, as proposed in the classification presented in the introduction. In both cases, we are dealing with subject doubling, in different forms.
Let us now turn to a detailed examination of the Abruzzese data, starting from split auxiliary selection.

1.2. Tense-Aspect-Mood (TAM) driven splits

Split 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 (9a):

[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).

(9) a. *transitive 'magna''* ('to eat')

(ji)So magnatə	BE	(nu) seme magnitə	BE	[Ariellese]
(I) am eaten.sg		we are eaten.pl		
'I have eaten'		'We have eaten'		
(tu) si magnatə	BE	vu sete magnitə	BE	
you are eaten.sg		you.pl are eaten.pl		
'You have eaten'		'You have eaten'		
(essə) a magnatə	HAVE	(jissə) a magnitə	HAVE	
(s)he has eaten.sg		they have eaten.pl		
'(S)he has eaten'		'They have eaten'		

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

b. *unaccusative 'cagna''* ('to change')

(ji)So cagnatə	BE	(nu) seme cagnitə	BE
(I) am changed.sg		we are changed.pl	
'I have changed'		'We have changed '	
(tu) si cagnatə	BE	vu sete cagnitə	BE
you are changed.sg		you.pl are changed.pl	
'You have changed'		'You have changed '	
(essə) a cagnatə	HAVE	(jissə) a cagnitə	HAVE
(s)he has changed.sg		they have changed.pl	
'(S)he has changed'		'They have changed '	

c. *unergative 'fatija''* ('to work')

(ji)So fatijatə	BE	(nu) seme fatijitə	BE
(I) am worked.sg		we are worked.pl	
'I have worked '		'We have worked'	
(tu) si fatijatə	BE	vu sete fatijitə	BE
you are worked.sg		you.pl are worked.pl	
'You have worked'		'You have worked'	
(essə) a fatijatə	HAVE	(jissə) a fatijitə	HAVE
(s)he has worked.sg		they have worked.pl	
'(S)he has worked'		'They have worked'	

Finally, 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 (10) for the verb 'to work'. The same pattern applies to all verbs:

(10)

(ji) avessə fatijatə	HAVE	(nu) avəssemə fatijitə	HAVE
(I) had-impf.subj worked.sg		we had-impf.subj.1.pl worked	
'I would have worked '		'We would have worked'	
(tu) avissə fatijatə	HAVE	vu avəssetə fatijitə	HAVE
you had-impf.subj.2.sg worked		you.pl had-impf.subj.2.pl worked	
'You would have worked'		'You would have worked'	

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

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

Auxiliary selection is thus not found in *irrealis* contexts[6]. In the indicative mood, both present perfect and pluperfect show split auxiliation. Pluperfect, however, oscillates between a paradigm with split auxiliary selection (D'Alessandro & Ledgeway 2010) and a paradigm with no auxiliary selection, where only HAVE is selected throughout. While the split auxiliary system is more archaic, the HAVE-only system is mostly used by the younger generations.
Examples (11) and (12) illustrate, respectively, the more traditional, archaic paradigm with the split, and the modern paradigm with HAVE only, for Ariellese.

(11) (ji) so 've'[7] magnatə/cagnatə/fatijatə BE+ HAVE
(I) am-1.sg had-impf.pst eaten/changed/worked.sg
'I had eaten/changed/worked'

(tu) si've magnatə/cagnatə/fatijatə BE + HAVE
you are-2.sg-had-impf.pst eaten/changed/worked.sg
'You had eaten/changed/worked'

(essə) ave' magnatə/cagnatə/fatijatə HAVE
(s)he had-impf.pst eaten/changed/worked.sg
'(S)he had eaten/changed/worked'

(nu) s'avavemə/ s'avemə BE + HAVE
we BE-1/2.HAVE-impf.pst.1.pl/ BE-1/2.have-pres.1.pl
magnitə/cagnitə/fatijitə
eaten/changed/worked.pl
'We had worked'

vu s'avavetə/s'avetə BE + HAVE
you.pl BE-1/2.HAVE-impf.pst.2.pl/ BE-1/2.have-pres.2.pl
magnitə/cagnitə/fatijitə
eaten/changed/worked.pl
'You had worked'

(jissə) ave' magnitə/cagnitə/fatijitə HAVE
they had-impf.subj eaten/changed/worked.pl
'They had worked'

(12) (ji) ave' magnatə/cagnatə/fatijatə HAVE
(I) had-impf.pst eaten/changed/worked.sg
'I had eaten/changed/worked'

[6] See Ledgeway (2003) on the generalization of HAVE with unaccusatives in the historical dialects of southern Italy.
[7] *So' 've'* is sometimes also heard as *sevə*. We choose the form *so' 've'* for ease of illustration, because it is more morphologically transparent than the other form.

(tu) avi’ magnatə/cagnatə/fatijatə HAVE
you had-impf.pst.2.sg eaten/changed/worked.sg
‘You had eaten/changed/worked’

(essə) ave’ magnatə/cagnatə/fatijatə HAVE
(s)he had-impf.pst eaten/changed/worked.sg
‘(S)he had eaten/changed/worked’

(nu) avavemə magnitə/cagnitə/fatijitə HAVE
we had-impf.pst.1.pl eaten/changed/worked.pl
‘We had worked’

vu avavetə magnitə/cagnitə/fatijitə HAVE
you.pl had-impf.pst.2.pl eaten/changed/worked.pl
‘You had worked’

(jissə) ave’ magnitə/cagnitə/fatijitə HAVE
they had-impf.subj eaten/changed/worked.pl
‘They had worked’

The traditional Ariellese pluperfect, (11), is interesting in many ways: first, it exhibits a combination of both auxiliaries (BE and HAVE); secondly, it also offers a clear picture of how auxiliaries are distributed, as well as evidence for the existence of an extra head, doubling the subject features, under the assumption that auxiliaries are located on different functional heads. Regarding the distribution of auxiliaries, it can be observed that the higher auxiliary is BE while the lower auxiliary is HAVE. Given that the two auxiliaries co-occur in (11), these data are a genuine counterexample to Kayne’s analysis of auxiliary selection, whereby HAVE involves the raising of BE, to incorporate itself into a P/D head. It should further be noted that, as can be seen in example (11), particularly in the 1st and 2nd persons, the higher auxiliary is BE, agreeing in person and number with the external argument. The lower auxiliary, HAVE, carries aspectual information (imperfective) and may carry person and number information (in the 1st and 2nd person plural). As expected, the complex auxiliary agrees with the external argument only, but what is interesting here is that the lower auxiliary also partially agrees with the external argument, while the past participle shows omnivorous agreement as usual. This gives us an insight into the question of which head is agreeing with which argument (namely, the higher heads only probe the external argument, while the lower head, on which the participle appears, probes both arguments).

1.2.1. TAM-driven split ergativity and TAM-driven person splits

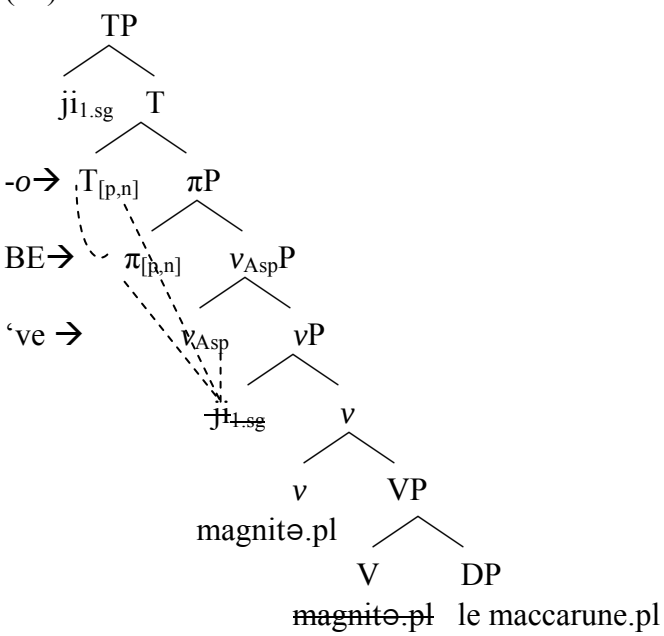
As discussed at length by several scholars (Dixon 1994, vande Visser 2006 a.o.), ergativity is never pure: languages often show some ‘mis-alignment’ given some specific conditions. These cases are referred to as split ergativity. As Coon (2010, 2012) shows very clearly, split ergativity can take several different forms: it can, for example, result in a nominative/accusative alignment under certain conditions (for instance if the verb is in the progressive form), or in an absolutive/neutral

alignment, among other possibilities. TAM-driven split ergativity is quite common among ergative languages. In particular, the following distribution is often found: perfective shows an ergative/absolutive pattern, while imperfective shows a nominative/accusative pattern. In general, ergativity emerges in perfective contexts, and disappears in imperfective or progressive contexts. This has led Laka (2006) to postulate an analysis of Basque *–ari* clauses that takes them to be biclausal. The auxiliary *–ari* is intransitive, introducing a locative clause. Progressive sentences are thus, in Basque, biclausal. This idea is adopted by Torrego (2012) and Coon (2012), who analyze split ergative sentences as having separate argumental domains, exhibiting only one argument per domain. It is the extra aspectual head which divides the domain into two parts. The ergative pattern is thus disrupted because there no longer is a transitive subject (we are left with two intransitive sub-structures, two separate case domains). TAM has therefore, according to this line of reasoning, a direct impact on argument alignment. In the case of Abruzzese, TAM instead has an impact on argumental agreement. Section 3 will outline the extension of this analysis to person-driven ergative splits.

In Abruzzese, the person split is visible in the perfective indicative. The derivation for a sentence with a pluperfect (exemplified in 13) is outlined in (14). The concept of complex probe will be discussed in more detail in 4.1. For the moment, let us concentrate on the distribution and agreement of the pluperfect auxiliary (BE+HAVE).

(13) Ji so ‘ve’ magnitə lə maccarunə
I am-1.sg had-impf.pst eaten-pl the pasta-pl
‘I had eaten pasta’

(14)



As we can see from (14), both T, π and v_{Asp} 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 syncretic with T. It is possible that, even in the pluperfect, v_{Asp} and T are on the same head. However, examples like

(15), quite common in Abruzzese, which show one or more clitics intervening between the higher and the lower auxiliary, seem to indicate that in fact the aspectual auxiliary *'ve* is on a separate head.

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

The fact that the *v* head is scattered into many heads along the structural spine should not be 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 cluster 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).

To sum up, person split in Abruzzese is sensitive to perfectivity but also to mood. Aspect also reflects the split at least in the pluperfect, where we can find person sensitivity in the lower, imperfective head encoding the auxiliary HAVE (see 15).

2. Person splits and split auxiliary selection

TAM-driven split ergativity was discussed in the previous section to underline the fact that the tense-aspectual specification has close links to argumental alignment. Another kind of split ergativity, which parallels that found in Abruzzese varieties, is person-driven split ergativity. Despite their similarities, it will be shown that the two kinds of person-driven phenomena (i.e. ergativity split and auxiliary selection) are not the same. They can, however, be ascribed to similar causes, e.g. the presence of a head in the argumental domain, in a way that will hopefully become clear in subsequent sections. If this head is a probe, a number of syntactic phenomena will follow, including person-driven auxiliary selection and agreement mismatches of various sorts. If it is not a probe, following Coon & Preminger (2012), the argumental domain will be split, and hence split ergativity emerge.

Person splits are found in different forms in several languages of the world. Languages like Halkomelem Salish and Nez Perce, for instance, mark a difference between 1/2 person pronouns and 3rd person pronouns. This difference, though, is not marked by means of the selection of a different auxiliary, but by means of a different Case system. (16) shows the pattern of person split marked through Case in Nez Perce.

(16)

	1st	2nd	3rd
A	Nominative	Nominative	Ergative
S	Nominative	Nominative	unmarked
O	Accusative	Accusative	Accusative

[Van de Visser 2006:275]

(16) illustrates how, in Nez Perce, 1st and 2nd person arguments have a nominative/accusative alignment, while the ergative marking is lost for these persons. Languages like Mayan and Nez Perce are in fact often defined as split

ergative languages, i.e. languages that in some circumstances seem to 'lose' their ergative alignment in favor of an unmarked alignment or nominative/accusative alignment.

2.1. Person-based split ergativity

As is well known, ergative languages differ from nominative-accusative languages in their argument alignment: in ergative languages the object of a transitive verb patterns together with the subject of an intransitive verb in triggering verb agreement, to the exclusion of the subject of a transitive verb. The following table from Patel (2007) illustrates the patterns:

(17)

Nominative/accusative system		*ergative/absolutive system*
triggers agreement on V	A	---- does not trigger agreement on V
	S	triggers agreement on V
does not trigger agreement on V ----	O	
A/S: Nom O: Acc		A:Erg S/O: Abs[from Patel 2007:15]

In (17), A is the agent/subject of transitive verbs, S is the subject of intransitive verbs, and O is the object of transitive verbs. As stated above, ergativity is never completely pure, and several different kinds of split ergativity can be found in the world's languages. What matters here is that the person specification of the arguments (thus not only of the external argument, but also of the internal argument) can trigger split ergativity. In particular, the division between 3rd person arguments, which maintain the ergative pattern, vs 1/2 person arguments, which have nominative-accusative alignment, is one of the most commonly attested ergativity splits.
The 'scale' according to which the splits are determined is known as Silverstein's (1976) animacy scale:

(18) inanimates >>natural>> animates>> humans>> proper names>> 3>> 1/2
[from Silverstein 1976]

Splits tend to occur at the extreme right side of the scale, and in particular the most widely attested splits display an alternation between an ergative alignment for 3rd person and a nominative alignment for 1st and 2nd arguments, as illustrated in (19):

(19) erg-abs----------→ Nom/Acc
inanimates >>natural>> animates>> humans>> proper names>> 3>> 1/2

In general, ergative patterns characterize the lower ranked categories. Splits in the lower part of the scale (between natural and animates, for instance), are quite rare, however, as they mostly emerge between 1/2 and 3 person. With this in mind, we can reconsider Nez Perce in (16), which does in fact show ergative or unmarked case for 3rd person arguments, and nominative/accusative case for 1st and 2nd person arguments.

The person splits we have just discussed are marked by means of Case systems, and do not affect auxiliation. There are also some split-ergative languages that exhibit split auxiliary selection, but this selection is crucially independent of the person specification of the subjects. In these languages, such as Basque for instance, the auxiliary HAVE, or the corresponding light verb, patterns with ergative agreement (Arregi 2004, Mahajan 1994, Cocchi 1995, 1997, 1999). In turn, whenever arguments display ergative alignment and marking, the auxiliary selected will be HAVE (which is hence considered the least marked form). The other auxiliary (be) will co-occur with nominative/accusative alignment.

In light of this different means of instantiating the person split, we might be tempted to conclude that the similarities between the two language groups (ergative and upper southern Italian dialects) are only superficial. A 1/2 vs 3 division is quite commonly found, and there is no relation between auxiliary selection and argument marking. However, the perspective changes once auxiliary selection in Abruzzese is examined more carefully. It has already been shown that split auxiliary selection of the upper southern kind is independent of argument structure. In what follows it will be shown that this kind of auxiliary selection is in fact equivalent to the presence of subject clitics in northern Italian varieties.

2.2. The setup of auxiliaries

Split auxiliary selection is only found in indicative but not in subjunctive/conditional mood. 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 indeed no reason to claim that *irrealis* would not allow for perfectivity. This means that mood and tense have a syncretic exponent in Abruzzese auxiliaries.
These auxiliaries are however not only 'perfectivity/factive markers': they are also person markers, in a way in which the rest of auxiliaries in Romance are not. Specifically, consider the two examples in (20) and (21), 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.

(20)	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'	

(21)	a. Matte' a magnate	a'.	Vu sete magnite	[Ariellese]
	M. has eaten		you-pl have eaten	
	b. Matte' a crisciute	b'.	vu sete crisciute	
	M. has grown		you-pl have grown	
	c. Matte' a fatijate	c.	vu sete fatijite	
	M. has worked		you have 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*[8]]
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*]
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 auxiliary, and second through the inflectional ending on the same auxiliary, as illustrated in (22a). Comparing (22a) to (22b), which exemplifies the present tense of the verb *to do,* the former clearly seems to exhibit subject doubling, while the latter does not.

(22)

a.	**[pers]**	**[pers, nr]**	b.	**[pers, nr]**
So =	*s* (BE=1/2)	+ *-o* (1.sg) *faccə*	= *f* ('do')	+ *acce* (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)

The fact that the information about the subject is repeated twice in the auxiliary immediately calls to mind another phenomenon which is found in northern Italian varieties: subject clitic doubling. In particular, we often find varieties that have two clitic series: one indicating 'person' (i.e. participant clitics, 1/2 person clitics) and one marking 3rd person (or lack of person) (Poletto 2000, Manzini & Savoia 2005, 2007, 2011, Cardinaletti & Repetti 2008). Split auxiliary selection can be considered as a kind of subject doubling, where the lexical item that doubles the subject is the auxiliary itself. Upper southern Italian auxiliaries, hence, are not only perfectivity markers but also subject doublers.
In a recent book, Arregi & Nevins (2012) discuss the nature of auxiliary morphemes cross-referencing absolutive, ergative and dative arguments in Basque. While according to Laka (1993), Fernández and Albizu (2000), and Rezac (2003) they are inflectional morphemes, according to Arregi & Nevins they are instead pronominal clitics. These auxiliaries also host bundles of unvalued features that get valued according to subject features, like pronouns. In this sense, these

[8] Observe that both BE and HAVE are irregular verbs with highly suppletive paradigms. I will take *–a* to indicate a generic 3rd person singular ending; while *–ete* indicates a generic 2nd person plural ending; in this sense, *-a* also represents *è*.

auxiliaries are equivalent to subject clitics in northern Italian varieties. However, they are hosted on auxiliary heads, which are by nature verbal. According to Roberts (2010), in fact, subject clitics are in fact merely feature bundles that get spelled-out on the head hosting them as a result of an agreement operation. They do not need to be pronominal, just like auxiliaries.
Abruzzese auxiliaries are not pronominal, nor are they clitics in the technical sense, given that they also exhibit bisyllabic forms in the paradigm. They are however clitic-like in the sense of being bundles of features that get valued as BE or HAVE according to the values of the subject features.
The difference between northern and southern Italian subject doubling is therefore simply a question of the site of the feature bundle. Specifically, while the upper southern auxiliary is a head hosting unvalued phi-features in the T-*v* field, northern Italian subject clitics are heads hosting unvalued features in the C-T field.

2.3. Subject doubling in northern and southern Italian dialects

If split auxiliary selection has the same underlying mechanism as subject clitic doubling in northern Italian dialects, and what varies between the two is the locus of the feature bundle, then we expect these elements to show similar syntactic behavior: this is indeed what is found. 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.
Subject clitics have been analyzed by several scholars as featuring a head encoding person and number in the C-T field (Poletto 2000, Manzini & Savoia 2005, Roberts 2010). Furthermore, languages with subject clitics do not all exhibit fully fledged paradigms, and hence many paradigms exhibit gaps of some sort. In some cases, only one subject clitic will be present in the lexical inventory. If this is the case, according to Renzi and Vanelli (1983), this clitic will be the 2nd person singular. 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. The tendency is hence the same. In a recent paper, Manzini & Savoia (2011) link person driven auxiliary selection to discourse. This preference for the 2nd person singular exhibited by both subject clitics ('you' is the addressee) and auxiliaries (the 2nd person is the addressee) is not unexpected, in these terms, as the addressee is the most prominent discourse participant.

Finally, there is a very small set of dialects that present both person-driven auxiliary selection and subject clitics. In this case, under the assumption that languages tend to avoid tripling, i.e. repeating the information about the subject both through auxiliary selection and through subject clitics, a complementary

distribution of subject clitics and auxiliaries would be expected. The dialect of Cerano, in Piedmont, 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 ɲi [Cerano]
SCl am-1st sg come
t ɛ ɲi
you-2SCl are-2/3 sg come
l ɛ ɲi
(s)he-3SCl is 2/3 sg come
(i) suma/ uma ɲi
SCl are-1st pl have-1st pl come
si/ j i ɲi
are-2nd pl you-SCl have-2nd pl come
i in ɲi
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 ɔ drumi
am/ SCl have slept-sg
t ɛ drumi
you-SCl are-2/3sg slept-sg
l ɛ 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. Dialects that have both auxiliary split and subject clitics mostly show a complementary distribution between the two, which is what we would expect in light of the claim that they are the realization of the same head in two different domains. It should be noted 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.

The obvious question at this point is why we see subject clitics in all tenses and moods but the same is not observed for 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 split into two parts: first, why are there no auxiliary selection effects in subjunctive clauses when clitics do occur in northern subjunctive clauses?; and, second, why are there no person split effects at all in the present tense, when 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*. The general question, however, is more complicated. 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. A possible explanation 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.

To sum up, what we see in the Abruzzese dialect spoken in Arielli is the following:

- a feature-encoding head, probing the features of the external argument
- an aspect-encoding head, only morphologically realized in the pluperfect, also showing agreement with the external argument
- omnivorous participial agreement (i.e. a participle that agrees with the plural argument).

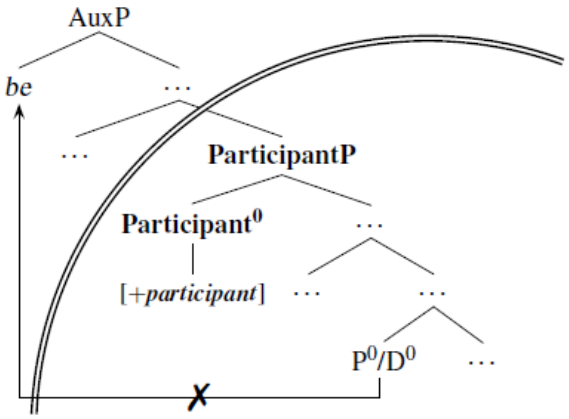
Let us now turn to some recent analyses of person splits and consider whether they can account for the Abruzzese/Ariellese data, and what the Ariellese data can contribute to the general analysis of person-based ergativity splits.

3. Analyses of person splits

In order to analyze person-driven split ergativity Coon & Preminger (2012), as well as Torrego (based on Laka's 2006 biclausal analysis for Basque *ari* sentences) have recently proposed the existence of a head (licensing person in Coon & Preminger's analysis) which splits the T-*v* domain into two separate domains, each containing one argument. According to Coon & Preminger (see also Preminger 2011 and Coon 2010), the *v* field features an extra head, which has the task of licensing the person features of the argument when this argument is a 'participant', i.e. 1/2 person (Baker 2008). The presence of this extra head creates a disruption in the case assignment system, as it constitutes a kind of 'barrier' between two fields, each featuring one argument; transitivity disappears, and with it the necessary conditions for ergative assignment. Given that the two arguments are in different domains, a nominative-accusative (or a nominative-unmarked) alignment arises (see example 22, from Coon & Preminger 2012: section 3.4.).

Coon & Preminger adopt the same mechanism with regard to auxiliary selection: following Freeze (1992) and Kayne (1993), they assume that HAVE is the result of the incorporation of a P/D head into the Auxiliary head hosting BE. The 'barrier' created by the Participant head blocks raising of P/D and hence its incorporation onto Aux, resulting in the impossibility of the auxiliary HAVE for 1st and 2nd person.

(25)



[Coon and Preminger 2012]

Similar ideas have been proposed over the years in previous analyses of split ergativity. The underlying intuition is that when there is only one argument in a domain we are obviously dealing with an intransitive structure in which ergative is by definition not allowed. For those analyses following Marantz's (1984, 1991) original dependent case analysis, the argumentation goes as follows: nominative/accusative are 'assigned' independently, while absolutive can only be assigned after ergative has been assigned (it is dependent), hence it requires both arguments to be in the same domain. In particular, Cocchi (1999) proposes, for Lummi, that 'the verb […] appears in the passive form, which syntactically behaves as an unaccusative. Therefore the patient (1/2 pronoun) being the sole real argument of the sentence, moves to Spec(TP) and checks NOM Case, while the DP-agent, whose presence is no longer obligatory, eventually shows oblique case marking)'.(Cocchi 1999:114).

In summary, for Coon & Preminger (but also for Laka before them, and for Torrego in her analysis of Hindi) the extra head is an intervener, a blocker, something that breaks the domain into two, rather than something that extends the domain.

Returning to the Abruzzese data, however, we see that while this extra head is indeed present, it does not cause a disruption in argument alignment or a division of the agreement domain into two subdomains. Instead, the argumental agreement domain is extended by virtue of the presence of this extra head, which we have called π.

Remember that Abruzzese has the following characteristics:

- a head encoding features, probing the features of the external argument
- a head encoding aspect, only present in the pluperfect, also showing agreement with the external argument

- omnivorous participial agreement (i.e. a participle which agrees with the plural argument).

If π disrupted the agreement domain, it would be impossible for the past participle to Agree with the external argument (Chomsky 2001). However, this does not necessarily mean that one of the two analyses is wrong. While in split ergative languages the extra head is a 'person licenser', which does not encode φ-probes, in Abruzzese this head π is a φ-probe, which extends the agreement domain of *v*. It follows that we may have parametric variation not only in the location of the extra probe but in its nature (valued or unvalued φ-features). Notice that while this seems a fragmentation of the system, it is in fact a simple instantiation of all the logical possibilities that exist with regard to the presence of a φ-head. Features can be valued (and can license arguments), as in the case of the split ergative languages discussed by Coon and Preminger, or unvalued, as in Abruzzese. When this head is able to license an argument by itself, it can clearly define a separate domain. This is however not the case when the head hosts probing features that need to be valued. In this case, the probe is simply a part of a larger agreement domain. The macrodivision between type-B languages and type-C languages presented in the introduction therefore follows directly from the nature of the feature bundle on the extra head.

Let us now turn to an examination of the consequences of the presence of the extra probes in the T-*v* field.

4. The extra probes. Extending the agreement domain

The evidence for the presence of an extra head (a Probe, in the case of Abruzzese), has been discussed at length above. It was shown that while in northern dialects this extra Probe is in the form of a clitic in the C-T domain and usually bears subject doubling, in upper southern dialects this extra Probe is located in the T-*v* domain. An extra head in the T-*v* domain is believed to create a disruption of case alignments in ergative languages precisely because this head is located in the argumental domain. In Abruzzese, which does not have an ergative alignment but does have an extra head π (which hosts unvalued features and is hence a probe), this head in the argumental domain does not split it into two domains. Its presence does, however, have repercussions for the argumental agreement patterns established in the T-*v* domain: specifically, the past participle can access the subject feature specification, and hence agree with it. Omnivorous agreement thus probably emerges because of the presence of π.

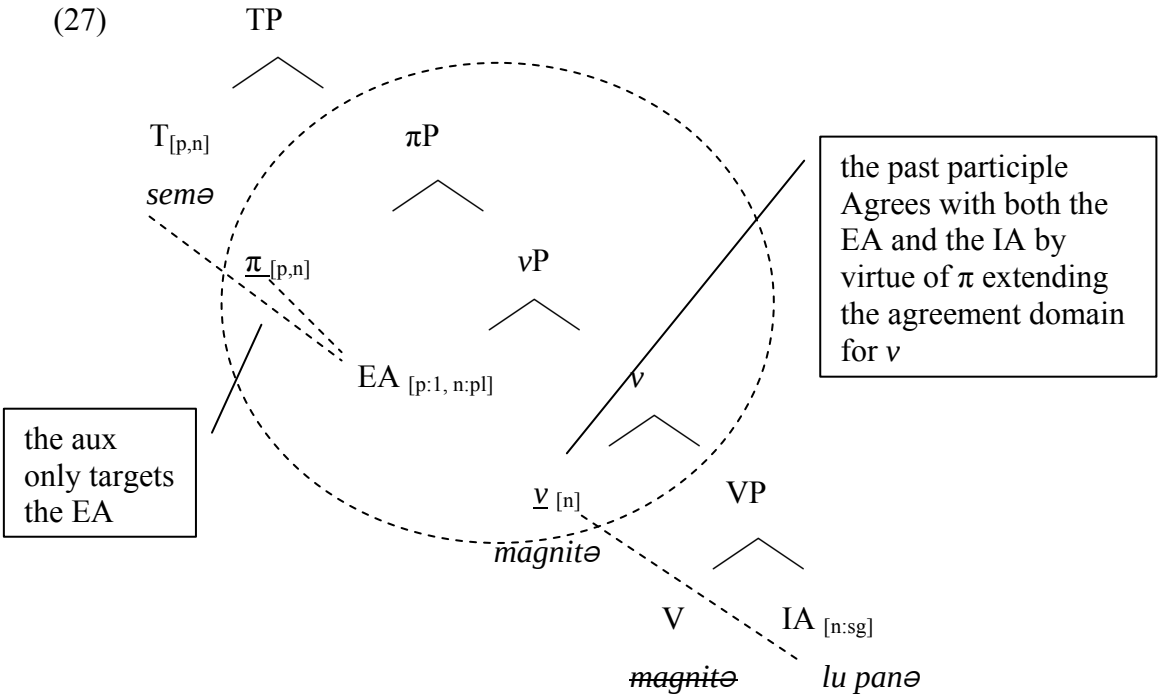
4.1. The complex probe

Ariellese displays omnivorous number agreement as well as person driven auxiliary selection and the double auxiliary construction. Let us consider the sentence in (26), where the past participle agrees with the plural argument (in this case, the external argument).

(26)	Semə	magnitə	lu	panə
	are-1.pl	eaten-pl	the-sg.m	bread-sg.m
	'We have eaten the bread'			

π extends the *v* agreement domain in a way which will become clearer if we look at the derivation of (26) illustrated in (27). Specifically, π (as well as T) probes for the external argument, while *v* probes for the internal argument.

(27)



Once the simultaneous probing of T and π on the one hand and *v* on the other hand takes place, π incorporates into T and the sentence gets spelled out. At PF, there is a late insertion of morphological agreement ending. π-*v* is an extended agreement domain, very similar to the Cyclic Agree model proposed by Bejar & Rezac (2009). However, a true reprojection model is not feasible for these data, as will be shown later on; instead, we need to appeal to an extended probe model. 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 an ending for each bit of inflectional information, then we will see the instantiation of each separate head in the morphology, as in (28). If the morphology only has a syncretic form, it will not be possible to see the different heads (29). They will nevertheless be instantiated as separate heads in the spine, but will constitute a unique, complex head.

(28) romp-e-va-mo
break-class-impf-1stpl
'we broke' [imperf]

(29) rupp-e
broke-3rdsg
'he broke' [perf]

An issue that needs to be addressed regards the conditions that determine the existence of this extended agreement domain. When can two adjacent heads constitute a sort of 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. It was shown in 1.1. that the pluperfect involves several heads that together form a complex auxiliary. Recall example (11), here repeated as (30):

(30) 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 (30d), for example *s'* and *'avavemə* are two distinct heads, both probing the external argument, while in (30c) there is only one head probing the external argument *´ave'*. This head, however, still encodes the same information as the other heads as far as tense, aspect and person are concerned. Hence, we have a complex probe that is collapsed into one head in the 3rd person.

The reason why a purely cyclic Agree model cannot work here is outlined in more detail in 5.2. For the moment, let us assume then that π-*v* is valued by both the external and the internal argument simultaneously, by virtue of being a complex head. For (26), π-*v* will be hence valued as [Person: 1; Number: plural/singular; gender: masculine]. Given that participles do not display person and gender features in Abruzzese, we are left, at PF, with the morphological realization of number, which is both singular (because of the internal argument) and plural

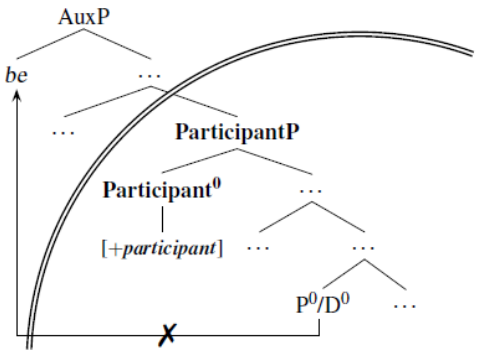
(because of the external argument). Since singular is a privative feature, as Nevins (2011) proposes, at PF plural morphology will be chosen as an exponent of participial inflection. π, as we have said, has shared its features with *v*, but has incorporated into T because of its quasi-clitic nature. At spell-out, the T-π complex will have the values [1st person; 1st person; plural]. BE will be then selected to realize π=1st person, and the ending *-emə* will be the exponent of the 1st plural ending. 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.

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 (see D'Alessandro 2012 for a complete analysis of this agreement pattern).

5. Extended domain vs split domains

We have seen that according to a recent proposal by Coon & Preminger (2012), person split is induced by the presence of a head that licenses the person feature in the *v* domain. This head blocks incorporation of the P/D head into the Auxiliary head (see example 31).

(31)



This analysis, however, does not work very well for the Abruzzese data, for at least two reasons, both empirical in nature.
First, we have seen that in Abruzzese complex auxiliaries, BE is higher than HAVE (example 30). This means that in Abruzzese HAVE cannot possibly be derived by incorporating a lower P/D into a higher BE head. Moreover, in some varieties of Abruzzese spoken in neighboring areas (such as that spoken in Ortona, CH), object clitics can appear in an enclitic position with BE but not with HAVE, suggesting once again that HAVE is lower than BE:

(32)	So-lle ditte	*alle magnate
	am-it said	has-it eaten
	' I said that'	'He has eaten'

Second, the creation of two separate blocks would prevent the participle from seeing both arguments: in particular, it would be impossible for the participle to

show agreement with the external argument. Consider once again the Abruzzese participial agreement patterns:

(33) a. Giuwanne a pittate nu mure [Ariellese]
John-sg has-3rd.sg/pl painted-pp.sg a wall
'John has painted a wall' [sg SUBJ-sg OBJ]

b. Giuwanne a pittite ddu mure
John-sg has-3rd.sg painted-pp.pl two walls-pl
'John has painted two walls' [sgSUBJ-plOBJ]

c.Giuwanne e Mmarije a pittite nu mure
John and Mary-pl have-3rd sg/pl painted-pp.pl a wall
'John and Mary have painted a wall' [pl SUBJ– sg OBJ]

d. Giuwanne e Mmarije a pittite ddu mure
John and Mary-pl have-3rd.sg/pl painted-pp.pl two walls
'John and Mary have painted two walls' [pl SUBJ-pl OBJ]
[D'Alessandro & Roberts (2010:45)]

(34) a. A tilifunite Marije e Giuwanne [Ariellese]
have-3rd.sg/pl telephoned-pl.pp Mary and John
'Mary and John have called'
b. Sete tilifunite vu
are-2rd.pl telephoned-pl.pp you-pl.
'You(pl) have called'

(35) So magnatə lu pani' [Ripano]
am eaten-n the-m.sg breadroll-m.sg
'I(fem) have eaten the breadroll' [Mancini 1988: 107]

(36) a. Aje cciosə li pellîstrə [Sanvalentinese]
have-1st.sg killed-sg.masc the-pl.masc chickens-pl.masc
'I have killed the 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 these cases the participle 'must see' both the external and the internal argument in order to agree with both, or with the most prominent argument. Note that these data do not necessarily contradict Coon & Preminger's hypothesis as they consider the extra head to be a 'licenser' for the person feature and not a probe. Moreover, according to Preminger (2011), licensing does not imply agreement, hence the division into two domains might still allow agreement between the participle and the external argument[9], without causing a disalignment of the arguments, which we in fact do not see, as Abruzzese remains on the nominative-accusative alignment. To sum up, the typological difference between split ergative languages and Abruzzese-type languages lies in the nature of this extra head: if it is a licenser, i.e. if it enters the derivation with valued φ-features,

[9] Thanks to Omer Preminger for pointing this out to me.

it creates a division into two argumental domains, thus resulting in a split ergative system. If it's a probe, i.e. it enters the derivation with unvalued φ-features, all we have is an extended agreement domain, where no alignment disruption is visible but where agreement is radically different from other Romance languages.

5.1. 'Greedy' Probe?

Another possibility is to apply Bobaljik and Branigan's (2006) analysis to the Abruzzese data, whereby ergativity is simply the reflex of the fact that a transitive *v* cannot assign case, hence both arguments are licensed by T, by means of entering a multiple Agree relation with it. I will refer to this model as the 'greedy probe' model: rephrasing Bobaljik and Braningan, T is a Probe targeting two goals, which are the two arguments. While there are some problems with this 'greedy probe' system, such as the postulation of a tucking-in operation and the fact that Case can be multiply assigned, it quite straightforwardly accounts for agreement in Chukchi, an ergative language of Kamchatka discussed at length in Bobaljik &Branigan (2006).

In the previous section, we argued for a complex agreement domain for v, possibly induced by the presence of π. In principle, we could invoke a 'greedy Probe' analysis for Abruzzese, postulating that T (or v) is the head that multiple-probes both arguments, as in (37):

(37) $[T_{[up, un, ug]} \ldots [EA_{[p,n, g]} v [\ldots IA_{[p,n, g]}$

Even if T did multiple-probe both arguments, we could still not get to the agreement configurations in (26-27). In Abruzzese it is the participle that encodes agreement mismatches, not the (higher) auxiliary, which systematically agrees with the external argument. This means that T cannot be responsible for this configuration. Moreover, for T to be able to probe both arguments, we would need to postulate a 'delayed' Agree, whereby *v* would not probe for the internal argument (being somehow defective, if we wish to follow Bobalijk & Braningan's intuition). There is however empirical evidence to the contrary, because Abruzzese displays so-called absolute participial constructions. These constructions are T-defective, and display agreement patterns different from the standard even in languages like Italian, where the past participle does not agree with the internal argument *in situ*. More precisely, absolute participial constructions are used to set the background of an action, and consist of only the past participle and the internal argument. The role of T in these constructions is uncertain, and C is most likely absent altogether (see Belletti 2001, D'Alessandro & Roberts 2010). If we consider one such construction, such as that in (38), we see that the past participle agrees with the internal argument. This means that we do not wait until T is merged to probe for a valued goal; instead, the Earliness Principle (probe early as possible) applies (Pesetsky 1989, Pesetsky & Torrego 2001).

(38) accattite li libbre, Marije se n'a jite
[Ariellese]
book-pl the-pl books-pl Mary self cl-has gone
'After reading the books, Mary went away'

It is more likely that *v* might multiple-probe both arguments. This might correspond to a configuration which is very similar to that proposed by Béjar & Rezac for cyclic Agree. However, cyclic Agree however is also unable to fully account for the Abruzzese facts.

5.2. No cyclic Agree

In a very influential paper, Béjar & Rezac (2009) proposed that several 'mismatch' phenomena can be resolved by means of postulating a cyclic agreement operation. Specifically, in order to account for the resolution of agreement in Basque, they proposed the following assumptions (from Béjar & Rezac 2009: 7-12):

- π-features are articulated into a set of hierarchically organized features, each of which can Agree independently
- any Probe on *v* will first seek match in the object first Merged with *v*, the VP, because of the Earliness Principle (probe as early as possible, Pesetsky & Torrego 2001)
- upon subsequent Merge of the EA and further projection of *v* [Spec, *v*] falls into the domain of any remaining probe on *v* because *v*'is the sister of the new projection under Bare Phrase Structure

In other words, if the π-features (probing features) on *v* are not all valued by the internal argument, the probing space is extended when the external argument is merged with *v*. *v* newly projects itself, and the remaining probing features now get valued by the external argument. In this sense, agreement is cyclic: the probe first targets the internal argument, then the external one, if its features are not all valued. A derivation of a transitive *v*P is described by Béjar & Rezac as follows:

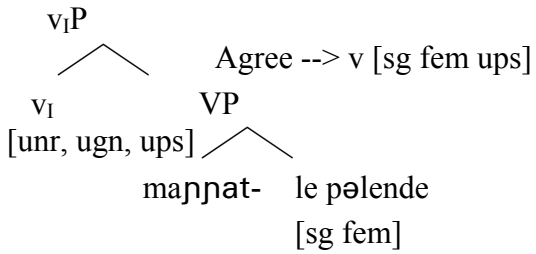
(39) Step 0: VP constructed as {V, {V, IA}}; v becomes locus
Step 1: Merge (v, VP) --> {v_I {v, {V, IA}}}
Step 2: Agree (v_I, IA)
Step 3: Merge (vP, EA) --> {v_{II}, {EA, {v_I, {v{V,{V, IA}}}}}}
Step 4: Agree (v_{II}, EA), if there is still a probe on v_{II}

The cyclic expansion of search space cannot account for the Abruzzese facts because all features on *v* are valued by the internal argument, hence there is no need for expanding the search space and probing again (this time the external argument). Take for instance the sentence in (40) from Ripano, showing agreement mismatch:

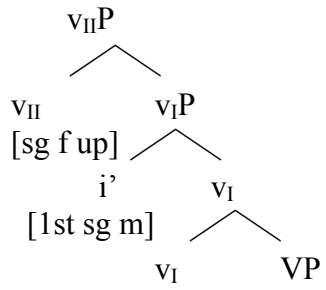
(40) I' so maɲɲatə le pəlende
I-m sg am eaten-n the- f sg polenta- f sg
'I eat the polenta'

The derivation of this sentence is as follows:

- Merge (la pəlende; V)
- Merge (VP; *v*)
- Agree (*v*, la pəlende)



- Merge (v, i')
- Merge (v_{II}, v_IP)[10]
- Agree (v_{II}, i')



At this point, even if we wanted to assume that a 3rd person feature is no person, our main problem lies in gender: the gender feature on *v* is already valued by the internal argument. The feature being valued, it cannot probe the external argument's gender feature again. If it does, the gender value should be the value of the last probed element, i.e. that of the external argument. That is also not the case, as we see from the data.

The same objection holds for omnivorous participial agreement in Ariellese: the past participle does not display the agreement ending of the last element probed, but of one of the two arguments, indicating that a mechanism of resolution must be at work, possibly at PF, to determine the exponent of the feature value. Most importantly for now, it also indicates that *v* must agree with both arguments and be valued by both arguments simultaneously, not cyclically. Cyclic Agree is hence the perfect tool to account for inverse agreement, but not for agreement mismatches.

We can then conclude that agreement between *v*, where the past participle resides, and the arguments of the verb, must take place simultaneously. Specifically, the *v* field contains, as we said, an extra probe which together with *v* forms a complex head, or an extended agreement head.

So far, the discussion has been focusing on subject doubling and split auxiliary selection as subject doubling. The existence of an extra probe in the T-*v* field has been argued for, and it was shown that something similar also exists in the C-T field (namely, subject clitics). It is worth examining a further possibility of the instantiation of a C-T probe, namely complementizer agreement (Bayer 1984, Fuβ2004, van Koppen 2005). Italo-Romance varieties do not usually exhibit complementizer agreement, but in those varieties that do, it might be the result of a probe in the C-T domain (see fn 4).
For all logical possibilities to be exhausted, a similar extra probe should also be found in the VP, i.e. the *v*-V domain. As far as the VP is concerned, there are

[10] I indicate with v_{II} the reprojection of *v* after merging the external argument.

cases of split person due to the existence of an extra probe. In particular, many southern Italian varieties, including Ariellese, display person-driven DOM.

6. Split DOM in Abruzzese

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.* However, it appears that in some dialects, including Ariellese, *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 (41-42) and (43)

(41) so viste a tte [Ariellese]
am-1sg seen to you
'I have seen you'

(42) seme viste a vu
are-1pl to you
'We have seen you'

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

In (41) and (42), the pronominal 1st and 2nd person object is marked with an *a.* Third person objects do not allow DOM, as shown in (42). A 3rd person pronoun would be equally restricted, as we see in (44):

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

The reason for the ??? marking on (44) 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 of (44). To complete the picture, we need to turn to 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. This prepositional marker could be an instantiation of the extra person probe in the VP field. Specifically, *a* would not simply mark definiteness but also person. It would be the counterpart of BE in the VP field.

Returning to the parallelism with split ergative languages, it must be added that languages like Hindi display DOM in the perfective. This time, perfectivity creates a split and licenses the marking of distinctness (see Torrego 2012). As far as DOM is concerned, Hindi is more in line with Abruzzese than with other ergative languages where the split emerges in the imperfective, as we saw above.

(45) Illaa-ne ek bacce-ko uṭ^{h}aayaa
[Hindi]
Ila-erg one child-acc lift/carry-prf
'Ila lifted a child' [Torrego 2012:217]

-ko is a K marker or simply a distinctness marker. According to Torrego, the behavior of *–ko* is very similar to that of Spanish *a* in prepositional accusatives, i.e. in DOM constructions. Once again, there is a parallel between the presence of an imperfective head disrupting ergative alignment and the presence of an extra probe in varieties with split DOM.

6. 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 auxiliary selection and participial agreement in Abruzzese was presented, and these features were shown to be the mirror image of split ergative patterns: while split ergativity mostly emerges in imperfective contexts, these alternations emerge in perfective contexts. However, these splits seem to be due to the same item that creates split ergativity, namely an extra head (π) in the *v* (argumental) domain. While this head is a person licenser in ergative languages, according to analyses of ergativity, it is a probe in these dialects. This has a number of consequences, including the unusual agreement patterns that we have seen.

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. The extra probe 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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