Past participle agreement in Abruzzese: split auxiliary selection and the null-subject parameter*

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Abstract
In this paper, we present an analysis of the "person-driven" auxiliary-selection system of one variety of the Upper Southern Italo-Romance dialect Abruzzese, along with an account of the pattern of past-participle agreement in this variety, which differs somewhat from what is found in more familiar Romance languages. Our account relies on the technical mechanisms of agreement as outlined in Chomsky (2001, 2005), in particular a variant of Chomsky's (2005) proposal regarding feature inheritance by non-phase heads of features belonging to phase heads. We also utilise some aspects of Müller's (2004) analysis of ergativity, and propose a typological generalisation regarding the absence of person-driven auxiliary selection in the Germanic languages. To the extent that the analyses proposed successfully apply the mechanisms put forward in the recent versions of the minimalist programme, the postulation of these mechanisms is supported by our analysis with evidence from a new empirical domain.

1.1 Person-driven auxiliary selection

It is well-known that many Southern Italo-Romance varieties show "person-driven" auxiliary selection in compound tenses. That is, in these varieties, the selection of the HAVE or BE auxiliary in compound tenses depends on the person specification of the subject, rather than, or – in some varieties – in addition to, the argument structure of the verb. This phenomenon has been described in traditional dialectological terms by Rohlfs (1969) and Tuttle (1986). In recent years it has attracted a fair amount of attention in generative grammar: see the analyses in Cocchi (1995), Kayne (1993), Ledgeway (2000), Legendre (2006), Loporcaro (2006) and Manzini & Savoia (2005). Here we concentrate on Eastern Abruzzese (EA henceforth), a variety spoken in the eastern part of Abruzzo, mainly in the provinces of Teramo, Pescara and Chieti. Unless otherwise stated, the examples presented here are based on fieldwork carried out by D'Alessandro in and around the village of Arielli (province of Chieti).[1]

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In EA the choice of auxiliary in the present perfect is entirely conditioned by the person of the subject, as the following paradigms show (note that the past participle agrees with the plural subject here; we will analyse this phenomenon in §2). Compare the following Italian/Abruzzese tables:

(1) a. Italian transitive verb:

Italian transitive					
1st sg	Io I	ho have-1st sg	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg
2nd sg	tu you	hai have-2nd sg	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg
3rd sg	lei she	ha has-3rd sg	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg
1st pl	noi we	abbiamo have-1st pl	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg
2nd pl	voi you-pl	avete have-2nd pl	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg
3rd pl	loro they	hanno have-3rd pl	fatto made-pp masc sg	una a-fem sg	torta cake-fem sg

b. Abruzzese transitive verb:

Abruzzese transitive					
1st sg	Ji I	So' am-1st sg	fatte made-pp sg	na a-fem sg	torte cake-fem sg
2nd sg	tu you	Si are-2nd sg	fatte eaten-pp sg	na a-fem sg	torte cake-fem sg
3rd sg	esse she	A has-3rd sg	fatte eaten-pp sg	na a-fem sg	torte cake-fem sg
1st pl	nu we	seme are-1st pl	fitte eaten-pp pl	na a-fem sg	torte cake-fem sg
2nd pl	vu you-pl	sete are-2nd pl	fitte eaten-pp pl	na a-fem sg	torte cake-fem sg
3rd pl	jisse they	A have-3rd pl	fitte eaten-pp pl	na a-fem sg	torte cake-fem sg

c. Italian unergative intransitive verb:

Italian unergative			
1st sg	io I	ho have-1st sg	lavorato worked-pp masc sg
2nd sg	tu you	hai have-2nd sg	lavorato worked-pp masc sg
3rd sg	lei she	ha has-3rd sg	lavorato worked-pp masc sg
1st pl	noi we	abbiamo have-1st pl	lavorato worked-pp masc sg
2nd pl	voi you-pl	avete have-2nd pl	lavorato worked-pp masc sg
3rd pl	loro they	hanno have-3rd pl	lavorato worked-pp masc sg

d. Abruzzese unergative intransitive verb:

Abruzzese unergative			
1st sg	Ji I	so' am-1st sg	fatijate worked-pp sg
2nd sg	tu you	si are-2nd sg	fatijate worked-pp sg
3rd sg	esse she	A has-3rd sg	fatijate worked-pp sg
1st pl	nu we	seme are-1st pl	fatijite worked-pp pl
2nd pl	vu you-pl	sete are-2nd pl	fatijite worked-pp pl
3rd pl	jisse they	A have-3rd pl	fatijite worked-pp pl

e. Italian unaccusative intransitive verb:

Italian unaccusative			
1st sg	io I	sono am-1st sg	caduto/a fallen-{m/f} sg
2nd sg	tu you	sei are-2nd sg	caduto/a fallen-{m/f} sg
3rd sg	lui/lei he/she	È is-3rd sg	caduto/a fallen-{m/f} sg
1st pl	noi we	siamo are-1st pl	caduti/e fallen-{m/f} pl
2nd pl	voi you-pl	siete are-2nd pl	caduti/e fallen-{m/f} pl
3rd pl	loro they	sono are-3rd pl	caduti/e fallen-{m/f}pl

f. Abruzzese unaccusative intransitive verb:

Abruzzese unaccusative			
1st sg	Ji I	so' am-1st sg	cascate fallen-pp sg
2nd sg	tu you	si are-2nd sg	cascate fallen-pp sg
3rd sg	esse she	a has-3rd sg	cascate fallen-pp sg
1st pl	nu we	seme are-1st pl	caschite fallen-pp pl
2nd pl	vu you-pl	sete are-2nd pl	caschite fallen-pp pl
3rd pl	jisse they	a have-3rd pl	caschite fallen-pp pl

The existence of this pattern of auxiliary selection raises several important questions for any theory of comparative syntax. One such question concerns the comparison of Romance and Germanic. In both families, we observe languages in which auxiliary-selection is determined by the argument structure of the main verb; this is the case for Standard Italian among the Romance languages (as well as French, although there are some apparently arbitrary lexical restrictions on the availability of the BE-auxiliary with certain unaccusatives, e.g. *disparaître* "disappear" takes HAVE). In Germanic, German, Dutch and Danish show an argument-structure based pattern of auxiliary selection, broadly similar to what we observe for Standard Italian, as the following German examples illustrate:

(2) a. Ich habe die Apfel gegessen. (transitive)
I have the apple eaten
"I have eaten the apple."

b. Ich habe gearbeitet. (unergative intransitive)
I have worked
"I have worked."

c. Ich bin gefallen. (unaccusative intransitive)
I am fallen
"I have fallen."

Also, in both families there are languages where HAVE is the only auxiliary of the perfect, BE being restricted to the passive. This is true of English (and Swedish) among the Germanic languages, and of Spanish and Portuguese in Romance. Moreover, it appears that the latter kind of system develops diachronically from the former; both English and Spanish clearly display a Standard-Italian kind of auxiliary selection at earlier stages.[2] But no case of person-driven auxiliary selection has come

[2] See McFadden & Alexiadou (2006) on auxiliary selection in the history of English, where it is shown that modality plays a major role in the development of the system; we will see below that auxiliary selection in EA is also sensitive to modality,

to light in Germanic; no such system exists in any standard variety, and according to Anders Holmberg (personal communication) no such system is found in any Scandinavian dialect, while Sjef Barbiers informs us (personal communication) that no such system is found in any Dutch-Flemish dialect. It seems to us that this fact deserves an explanation, and we will suggest a link between person-driven auxiliary selection and the null-subject parameter which, given the general absence of null-subject Germanic languages, explains the absence of person-driven auxiliary selection in this family.

A second typological-comparative question raised by person-driven auxiliary selection concerns split ergativity. It has often been observed (e.g. by Mahajan (1994), Manzini & Savoia (2005)) that person-driven auxiliary selection, in making a morphosyntactic distinction between 1st and 2nd-person on the one hand and 3rd person on the other, shares an important property with split-ergative case-agreement systems. Such systems are quite widely attested, and it is fairly well-established that in these systems 1st and 2nd person pronouns and/or case/agreement marking tend to follow a nominative-accusative pattern, while 3rd-person pronouns, full arguments and case/agreement marking follow an ergative-absolutive pattern. Blake (2001:122) observes that "[i]n languages with ergative case-marking on nouns it is true more often than not that the ergative marking is lacking from first- and second-person pronouns and sometimes from third." The following Dyirbal paradigm, from Comrie (1989:131) illustrates:

(3) a. Balan d'ugumbil baŋgul yaṛanŋgu balgan.
Woman-ABS man-ERG hit
"The man hit the woman."

b. Ŋadʸa ŋinguna balgan.
I-NOM you-ACC hit
"I hot you."

c. Ŋayguna baŋgul yaṛaŋgu balgan.
I-ACC man-ERG hit
"The man hit me."

d. Ŋadʸa bayi yaṛa balgan.
I-NOM man-ABS hit
"I hit the man."

Our analysis captures the connection between auxiliary-selection and split-ergativity by adopting some aspects of Müller's (2004) account of the nature of ergative case/agreement systems as we shall see in detail below.

There are two further questions that we leave aside here. One concerns systems, also quite widely attested in Central and Southern Italo-Romance varieties, which combine person-driven and argument-structure driven auxiliary selection. In these varieties, the

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and the same is noted for the history of Neapolitan by Ledgeway (2003). On Spanish, see Penny (1991:142f.); see also Loporcaro (1998:155), who mentions that both Portuguese and Rumanian have undergone this development.

choice of auxiliary in the 3rd person depends on the argument structure of the verb, while the 1st and 2nd persons consistently choose BE. This pattern is found in Colledimacine, Torricella Peligna, Borgorose-Spedigno, Amandola, Ortezzano and Tufillo (Manzini & Savoia (2005, II: 728); see also Bentley & Eythórsson (1999), Legendre (2006), Loporcaro (2006), Tuttle (1986)). We will confine our attention to EA, where the choice of auxiliary appears to be entirely driven by person (and tense/mood, as we shall see below), speculating only briefly about what might be going on in these systems.[3]

Finally, we will largely put to one side the question of the possible "decomposition" of the HAVE auxiliary into BE combined with some extra element, e.g. an abstract preposition, as influentially proposed by Freeze (1992) and Kayne (1993) (see also Cocchi (1995), Ledgeway (2000)). We do not exclude this as a possible analysis of the relation between the two auxiliaries, but will extrapolate away from it as we proceed.

1.2 Past participle agreement

A further aspect of EA syntax which is of great interest concerns the pattern of past-participle agreement. The past participle (pp) in EA **always** agrees with a plural DP, whether that DP is the subject or the object:

(4) a. Giuwanne a pittate nu mure
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**
'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]

[3] Further variants are attested in Central-Southern Italo-Romance dialects. Manzini & Savoia (2005, II: 728) list varieties in which auxiliary-selection is person driven in all persons except the 1sg and 3sg, where it depends on argument structure (Vastogirardi), and varieties where the situation described in the text holds only in the singular (1sg and 2sg choose BE; 3sg is dependent on argument structure), with HAVE consistently chosen in the plural (Agnone, Ruvo Bitetto, Popoli Montenerodomo, Padula Castelvecchio S.). In many cases, a given person-number combination may also show apparent free variation in the choice of auxiliary. Finally, there are varieties where only BE is found, in all persons with all verbs (Roccasicura, Castelpetroso, Poggio Imperiale, Gallo, Sassinoro), those where only HAVE is found (in Sicily, Salento and the extreme south of Calabria) and those where the forms of HAVE and BE have fallen together in certain tense/person/number combinations (see Manzini & Savoia (2005, III: 1ff.) for illustration and analysis). Of necessity, we leave this wide range of variation aside in our discussion here.

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]

Here the singular vs. plural opposition is reflected in the forms *pittate* (singular) vs. *pittite* (plural) of the past participle; we will say more about the nature of this alternation below. Furthermore, pp-agreement with a plural subject also takes place when a singular object clitic is present:

(5) Giuwanne e Mmarije l'a pittite, (lu mure)
John **and** **Mary-pl** it-sg-have **painted-pp pl**, the wall
'John and Mary have painted it, the wall'

These data contradict the generalisation formulated by Belletti (2005, III:509), as follows: 'A crucial observation concerning the phenomenon of past participle agreement in Romance is that no variety allows the past participle to agree with the subject of intransitive/unergative and transitive verbs […] Any treatment of the computation involved in past participle agreement must account for this fact.' The data in (4) and (5) indicate that pp-agreement with an external argument is possible. One of our goals here is to account for this fact, and to attempt to see why this kind of agreement is not possible in Standard Italian.[4,5]
In short, then, we wish to address the following questions in this paper:

(6) a. What is the connection between person-driven auxiliary selection and split-ergativity?
b. How does EA past-participle agreement work, and why is it an exception to Belletti's generalization?
c. Why is the person-driven pattern absent in Germanic, while both the Italian-style pattern and the Spanish-style pattern are found?

We will now deal with each of these questions in turn. Although our data and analysis are almost entirely confined to EA, their wider relevance both for the analysis of Central-Southern Italo-Romance and for comparative syntax should be clear. Furthermore, as already mentioned, the fact that we make crucial use of certain technical devices recently proposed on independent grounds is of theoretical interest to the extent that our analysis can support those proposals.

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[4] There is also agreement with the indirect object, at least when this is cliticised:
(i) A jisse ji le so riccundite.
To them I it am told-pl
"I told them it."
Again, we will leave this aside here. This is also found in Nuorese Sardinian (Jones (1993: 97), cited in Loporcaro (2006:8)).

[5] Again, EA is by no means unique among Central-Southern varieties in this respect. Neapolitan consistently shows subject agreement with the past participle (Loporcaro (2006)), as do the varieties of Castrovillari (Cosenza), Altamura and Castilgione dei Genovesi (Loporcaro (1998), Ledgeway (2000)). Manzini & Savoia (2005, II: 681) imply that both agreement with the direct object and with the subject of a transitive are widespread.

2. Auxiliary selection and split ergativity

We begin by making certain rather simplistic assumptions regarding aspectual auxiliaries and auxiliary selection. First, we propose, essentially following and updating Ross (1969), that aspectual auxiliaries are merged in *v* and select a *v*P headed by a participle of the relevant kind. For example, the structure of a simple English perfect *v*P would be as follows:

(7) a. John has spoken.
b. [$_{vP}$ [$_{v}$ has] [$_{vP}$ John [$_{v}$ spoken] [$_{VP}$ (speak)]]]

As (7b) shows, the external argument of the main predicate is merged in the lower Spec,*v*P; this amounts to treating aspectual auxiliaries as a kind of raising predicate, again following Ross. Let us refer to the higher occurrence of *v* as v_{Aux}, and the lower one as v_{Prt}. The auxiliary selects a *v* specified as perfect (or whatever more primitive features the properties of perfects may derive from; see the papers in Alexiadou, Rathert & von Stechow (2003), Pancheva & von Stechow (2004)). Movement of the verbal root to the perfect *v*-position results in the root acquiring participial features and the realisation of this feature bundle as a past participle. These three properties of compound tenses (the fact the auxiliary is a raising predicate, first merge of the external argument in the specifier of the lower *v*P, and incorporation of the verbal root V with the participial *v* to form a past participle) we take to be common to all the compound tenses we will discuss here.

The auxiliary can be realised either as HAVE or BE, depending on a range of factors. Here we treat the realisation of the auxiliary as a question of the spell-out of features of the upper *v* in the structure in (7b). We leave aside the possibility that the complement of the auxiliary is more complex than we have indicated and, in particular, whether there is incorporation of an abstract prepositional element into the auxiliary, giving rise to the realisation of the auxiliary as HAVE. A consequence of this is that we are unable to express the relation between auxiliary HAVE and possessive and other occurrences (existential, modal, psychological) of HAVE. Since we limit our attention to the formation of compound tenses here, we feel that this is justified. At the same time, we do not exclude the possibility that a wider ranging analysis of HAVE auxiliaries may imply a more complex analysis of compound tenses of the type put forward in Kayne (1993), Ledgeway (2000), Manzini & Savoia (2005), Pancheva & von Stechow (2004) and others. The natural move is to treat the complement of the higher *v* as something other than *v*P and to key auxiliary selection to the category of this complement; this can be very naturally done if we adopt the decompositional approach to auxiliaries advocated in Kayne (1993).[6]

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[6] In fact, in EA possession is expressed using a distinct verb from the HAVE-auxiliary found in compound tenses, namely *tene'* ("to hold"):

(i) Tenghe na machene.
I-hold a car
"I have a car."

Similarly, certain psychological predicates use *tene'*:

(ii) Tenghe paure.
I-hold fear
"I am afraid."

We take it that the realization of the auxiliary takes place by means of post-syntactic lexical insertion, giving morphophonological realization to the feature bundles created and manipulated by the syntax. In these simplified terms, we can state the realization rules for the v_{Aux} in terms of the nature of the *v* it takes as its complement, as follows (*v** denotes a non-defective *v*, one capable of Agreeing with the direct object's φ-features and assigning an external thematic role to the subject: Chomsky (2001:43)):[7]

(8) a. If v_{Aux} takes v^*_{Perfect} as its complement, v_{Aux} is HAVE; otherwise v_{Aux} is BE
(Standard Italian, German, etc.)

Locative/existentials show *sta'* ("to stand/be"):

(iii) Dendre a la case ci sta ddu pirzone.
In to the house there are two people
"There are two people in the house."

The similarities with Ibero-Romance are obvious. Where Standard Italian, French, English and other languages use forms of HAVE and BE, EA has four distinct verbs/auxiliaries. We leave the question of the analysis of these forms aside here.

[7] HAVE is naturally seen as the marked option. There are several reasons to think this. First, HAVE-auxiliaries are cross-linguistically rather rare; in Indo-European they are not found in Celtic or Slavonic (with the exception of Macedonian (David Willis, personal communication)), or in Hindi (Mahajan (1994)), for example. Second, any context where HAVE is found corresponds to one where BE can be found in some other language, but not vice-versa. For example, HAVE is never, to our knowledge, the basic passive auxiliary (see Keenan (1985:257-261) for a discussion of the varieties of passive auxiliaries attested in the world's languages, which notably does not include HAVE). On the other hand, there are languages, including many Slavonic and all Celtic languages, as well as certain Central-Southern Italo-Romance varieties mentioned in Note 3, where BE appears in the perfect in all tense-person-number combinations and with all verbs. We might therefore consider BE to be the default auxiliary. Accordingly, all we need to do in order to give an account of auxiliary selection is specify the context where HAVE is merged, as in (8). We might restate (8) along the following lines:

(i) a. HAVE cannot select a *v* which cannot license an internal argument (= (8a)).
b. HAVE cannot select a *v* which licenses the external argument (= (8b)).
c. HAVE cannot license the external argument (= (8c)).

(ia) refers to the fact that in these systems HAVE appears in all cases other than those where the main verb (i.e. the participial *v* selected by HAVE) is an unaccusative, passive or raising verb, i.e. where it cannot license an internal argument (unergative intransitives license a cognate object as their internal argument – see Hale & Keyser (1993)). In passives, as in (ib), the external argument is arguably licensed by *v* and therefore HAVE cannot appear (Collins (2005) treats this argument as licensed by Voice; the choice of auxiliary, at least in case (8b/ib) has to make reference to VoiceP if his analysis of passives is adopted). (ic) refers to the case where the φ-features of *v* license the external argument, as we shall see in more detail directly. To the extent that ergative case/agreement marking involves licensing of the external argument by *v*, as Müller (2004) proposes (a proposal we describe in detail below), the generalisation regarding HAVE across its parametrically-determined differing distributions seems to be that it is a morphological realisation of non-ergativity, an "anti-ergative" auxiliary.

b. If v_{Aux} takes $v_{Perfect}$ as its complement, v_{Aux} is HAVE; otherwise v_{Aux} is BE
(Spanish, English, Sicilian dialects, etc.)

c. If $v_{Aux,\ [3pers]}$ takes $v_{Perfect}$ as its complement, v_{Aux} is HAVE; otherwise v_{Aux} is BE
(EA, and other Central-Southern Italo-Romance varieties)

(8a) says that auxiliary *v* is realised as HAVE when the *v** it selects is non-defective, i.e. when *v** Agrees with the direct object, and assigns an external θ-role. So HAVE appears with transitives and, assuming with Hale & Keyser (1993) the general presence of a cognate object, unergative intransitives. BE appears in all other cases where the predicate is perfect.[8] This is the situation in Standard Italian, and, for example, in Dutch and German. (8b) is the simple case where there is no auxiliary selection in active compound tenses: perfect *v* is always realised as HAVE. This is the situation in Spanish and English.

(8c) is the case we want to consider here. We can immediately note that the formulation of (8c) implies that *v* is sensitive to the φ-features of the subject. This creates an analytic connection with the analysis of ergative case/agreement marking.[9]

Before proceeding with the analysis of EA, we briefly summarise Müller's (2004) analysis of ergative case/agreement marking. Müller proposes that the "ergative parameter" arises from the indeterminacy of operations at the *v*-cycle. Consider what happens when the derivation reaches the stage indicated in (9):

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[8] Following Collins (2005), we take passives to involve a VoiceP. Mediopassive, impersonal and reflexive *si* may be treated in this way, or may involve a defective *v* of some kind. BE is obligatory in these cases in Standard Italian:

(i) Si sono mangiati gli spaghetti.
SI are eaten the spaghetti
"The spaghetti has been eaten."

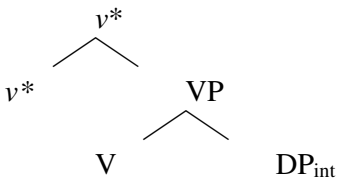
(ii) Si è lavorato molto.
SI is worked much
"One has worked a lot."

(iii) Gianni si è guardato allo specchio.
Gianni SI is looked-at at-the mirror
"Gianni looked at himself in the mirror.

See D'Alessandro (forthcoming) on *si*-constructions.

[9] We can further note that if 3rd person is really the lack of person, as originally proposed by Benveniste (1966) and taken up by a variety of linguists more recently (see for example Déchaîne & Wiltschko (2002), Kayne (2000, 2005), Manzini & Savoia (2005)), then (8c) should be stated in terms of v_{Aux} with a [-Person] feature, rather than a [3Pers] feature. In these terms, systems which combine person-driven auxiliary selection with argument-structure driven selection in the 3rd person, mentioned at the end of §1.2, can be seen as a combination of (8a) and (8c), in that the combined systems allow v_{Aux} [-Person] to have distinct realisation according to whether it selects *v** or not.

(9)



At this point in the derivation, since we have non-defective, transitive *v**, the external argument DP_{ext} is available for merger and the internal argument, DP_{int}, is an active Goal for Agree with *v**, an active Probe. As Müller points out, there is no intrinsic ordering amongst these two operations. As far as UG is concerned, then, two possibilities now arise, as indicated in (10):

(10) (i) Agree(*v*, DP_{int}) > Merge(DP_{ext}, *v*)
(ii) Merge(DP_{ext}, *v*) > Agree(*v*, DP_{int})

Where Agree precedes Merge, as in (10i), *v*'s Case/agreement properties appear on the internal argument DP_{int} and the external argument DP_{ext} must therefore be licensed in a different way, e.g. by T. This gives rise to a nominative-accusative case-agreement pattern of the type found in English and other familiar languages. On the other hand, where Merge precedes Agree, as in (10ii), *v*'s Case/agreement properties are realised on the external argument, DP_{ext},[10] and the internal argument DP_{int} must be licensed in a different way, e.g. by T. This gives rise to an ergative-absolutive case-agreement pattern. The clearest difference between the two systems arises in the case of unergative intransitives. Here there is no (overt) internal argument, and therefore no active goal in VP. In the nominative-accusative system, *v* has no φ-features in this case, and T licenses the external argument exactly as in a transitive clause. In the ergative-absolutive system, *v* is unable to license the single argument because it lacks φ-features, and so T licenses it, with therefore the same case/agreement pattern as appears on the object of a transitive (the absolutive).[11]

The ergative case/agreement pattern, found with transitive verbs in systems of type (10ii) according to Müller, arises in cases where *v* licenses the subject. This, as we shall see, is what is common to ergative case/agreement systems and "person-driven" auxiliary selection. In order to see more precisely how person-driven auxiliary selection works, let us look again at the structure of compound tenses given in (7b) above:

(11) [$_{vAuxP}$ [$_{vAux}$ has] [$_{vPrtP}$ John [$_{vPrt}$ spoken] [$_{VP}$ (speak)]]]

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[10] Müller (2004:4) assumes that Agree takes place under m-command, along with a specific computation of closeness such that the external argument in the specifier of *v* is closer to *v* than the internal argument contained in the complement of *v* (see his Note 8). Neither of these assumptions are necessary here, as we will see below.

[11] Müller's (2004:10-11) presentation of what happens in intransitives is slightly more complex as it aims also to account for the type of split-ergativity known as an "active" system, in which the single argument of an unaccusative intransitive is absolutive while that of an unergative is ergative (as in Basque). We leave this complication aside here.

If v_{Aux} holds unvalued Person features, then Agree between the external argument and the auxiliary can take place and value the external argument's Case feature. This is the core idea in our account of person-driven auxiliary selection, which we will now develop in more detail.

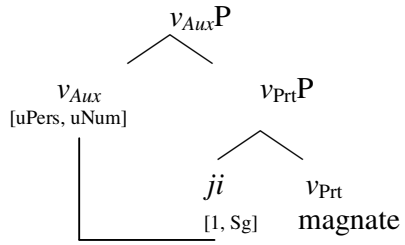
We assume that there are two variants of v_{Aux} in EA, one which has uninterpretable Person and Number features, as well as a V-feature (v_{Aux} [uPers, uNum, V]), while the other only has a V-feature (v_{Aux} [V]); we also assume the same for T (as we shall see below, in the case of T this is connected to tense and mood features). Furthermore, we assume a one-way implicational relation between Person and Number features: if Person, then Number, but not vice-versa. This means that we may find Number features on a given head in the absence of Person features, but not Person features in the absence of Number features. A third assumption is that the values of Person are 1st and 2nd; 3rd person is equivalent to the absence of a Person feature (see the references given in Note 9; we will develop this idea further below).

In the light of these assumptions, let us now consider the various cases of interaction of auxiliary selection and the Person/Number features of the subject. Consider first the case of a 1sg subject, as in (12):

(12) Ji so' magnate
I am eaten-sg
'I have eaten'

The structure of the relevant parts of this example is given in (13):[12]

(13)



Here v_{Aux} Agrees for Person and Number with the external argument, and thereby values the external argument's Case feature. In this situation, following (8c) as reformulated in Note 9, v_{Aux} is realized as BE.

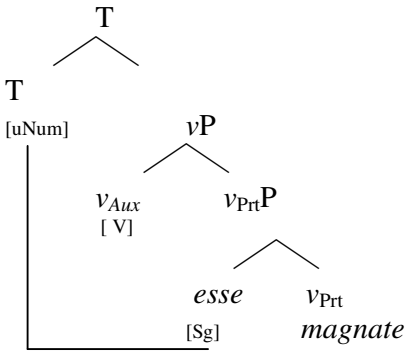
Consider next an example where the external argument is third person:

(14) Esse a magnate
he/she has eaten
'He/she has eaten'

[12] Here we do not consider the role of features of T. This will be discussed below.

Here the relevant parts of the structure are as follows:

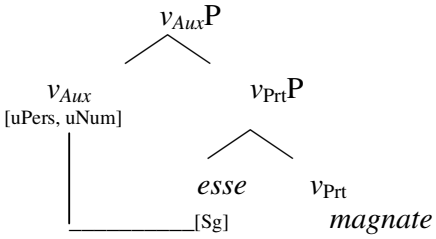
(15)



In this structure, we propose that v_{Aux} lacks Person and therefore Number features, having only the V-feature. T, on the other hand, has an uninterpretable Number feature, which Agrees with the Singular feature of *esse*. As a result of this Agree relation, the Case feature of the external argument is valued as Nominative. Here, again following (8c), the auxiliary is realised as HAVE, owing to the fact that the subject Agrees with T rather than v_{Aux}.

Next, consider an ill-formed case:

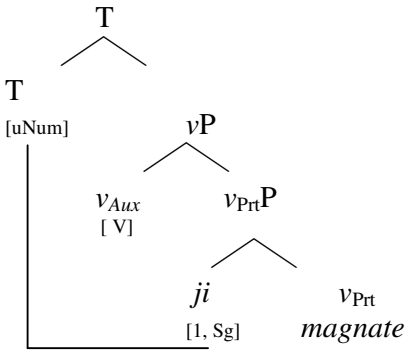
(16)



Here, since the 3rd-person external argument has no Person feature, the Person feature on v_{Aux} cannot be valued, and hence the derivation crashes. This is why it is impossible for BE to appear with a 3rd-person subject.

Finally, let us consider the case where the external argument is 1st or 2nd person, but v_{Aux} is not specified for Person or Number features:

(17)



This structure cannot converge because the external argument's Case feature cannot be valued, since T only has a Number feature and yet full matching of φ-features is required for Case-valuing (see Chomsky (2001:8): defective probes are unable to value the Case feature of a DP goal). It follows from this that if v_{Aux} does not have a Person feature, it cannot license the subject. Hence, what (8c) really says is that if *v*'s Person-features license the external argument, *v* is realised as BE. Given that 3rd person is really the lack of a Person feature, this accounts for the common 1st/2nd- vs. 3rd-person split. Furthermore, our account is in line with Müller's speculative comments on split-ergativity, as the following quotation shows: "I surmise that [person-based split ergativity – RD'A/IGR] can successfully be tackled by invoking language-specific restrictions on CASE feature instantiations on v" (Müller (2004:12)). Since Müller (2004:5) uses the notation "CASE" to mean agreement-marking on the Probe, our account of auxiliary-selection in EA ties in exactly with this conjecture.

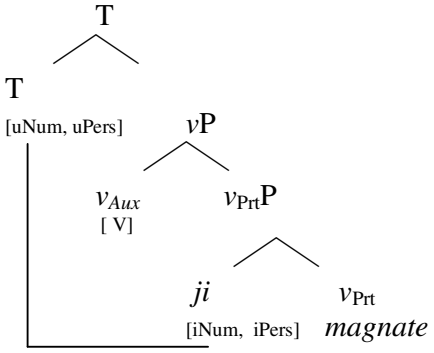
Of course, if T has a full set of φ-features in (17), the subject's Case can be valued and no split-ergativity effect will arise. This is apparently what happens in the subjunctive in EA, as here only HAVE is found as the auxiliary (independently of argument structure):

(18) a. ji avesse fatte ("I would have done", etc.)
tu avisse fatte
esse avesse fatte
nu avesseme fitte
vu avessete fitte
jisse avesse fitte

b. Ji avesse jite ("I would have gone", etc.)
tu avisse jite
esse avesse jite
nu avesseme jite
vu avessete jite
jisse avesse jite

In this tense, which is irrealis, we assume T has sufficient φ-features to license the subject in the usual way. The structure is as in (19):

(19)



Here there is no sensitivity to the person of the subject as the relevant φ-features are associated with T, not with v_{Aux}. If the subject is 3rd person, then T cannot have a

[uPers] feature, because, since 3rd-person pronouns lack the Person feature, the derivation wouldn't converge. Therefore a 3rd person subject in a subjunctive context is licensed by T which only has a Number feature. If T has only a Number feature and the subject is not 1st or 2nd person, the derivation will crash because there is not full matching of φ-features (see the discussion of (17) above).

According to Manzini & Savoia (2005, II;729), the kind of situation just described for EA is quite common: they observe that the majority of dialects which show person-driven auxiliary selection in the present perfect do not show it in the pluperfect or in counterfactual tenses, either HAVE or BE being consistently found here. We interpret the occurrence of HAVE in this context as indicating that the presence of Person/Number specification on T is determined by its tense or mood features.[13] It is worth noting in this context that HAVE appears to have been favoured in irrealis contexts in systems of argument-structure driven auxiliary selection; this is observed by Ledgeway (2003, to appear) for Old Neapolitan and by McFadden & Alexiadou (2006) for Middle English (they also mention Middle Dutch, Middle Low German and Old Swedish; McFadden & Alexiadou (2006:255)).[14] If present-perfect T is really present (see Vikner (1988), Pancheva & von Stechow (2004), among others), and if present tense corresponds to the absence of a temporal feature (Enç (1990)), then it seems that what lies behind this is the propensity for a T node which lacks a tense feature to also be defective in person features (although this only applies in the case where T selects v_{Aux}, i.e. in compound tenses, otherwise the subject would not be able to be licensed at all). This is of course consistent with the general observation that infinitival T (which is presumably further underspecified) tends to be defective in φ-features.

We see that, in terms of our analysis, the fundamental property which gives rise to a person-based auxiliary-selection system is the presence of Person features on v_{Aux}. EA has these features, unlike Standard Italian, English and other languages, where an auxiliary merged in *v* combines with Person features in T. Because of this, and the basic configuration for Agree, v_{Aux} is able, under the right conditions, to Agree with the external argument. This provides the answer to the first question raised in the Introduction: the connection between person-driven auxiliary selection and split ergativity lies in the fact that in both cases *v*, not T, Agrees and Case-licenses the

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[13] EA has two other tenses that are worth mentioning here. The future perfect, which only has an epistemic modal meaning, is restricted to the 3rd person: *esse l'averrà fatte* ("she must have done it"), *jisse l'averrà fitte* ("they must have done it"). The pluperfect shows a combination of BE and HAVE (in that order):

(i) ji so' 've ditte ("I had said", literally "I am had said")
tu sive ditte
esse ave' ditte
nu saveme ditte
vu savete ditte
jisse ave' ditte

See D'Alessandro & Ledgeway (2007) for an analysis of these forms.

[14] Ledgeway (2003:26) points out that ergative-absolutive case/agreement marking is disfavoured in irrealis contexts in various languages, citing Dixon (1994: 97-101). This is in line with our general speculative characterisation of HAVE as the "anti-ergative" auxiliary in Note 7.

external argument. In terms of Chomsky's (2005) proposal that T generally inherits its φ-features from the phase-head, we could speculate that what happens in the relevant compound tenses in EA is that T takes its features from the lower phase, i.e. the *v*-phase, rather than from C; we will return to this point in §4.

3. Past participle agreement in EA

In this section, we will analyse the pattern of participle-agreement in EA illustrated in (4) and (5) above, and repeated here:

(4) a. Giuwanne a pittate nu mure
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**
'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]

(5) Giuwanne e Marije l'a pittite, (lu mure)
John **and** **Mary-pl** it-sg-have **painted-pp pl**, the wall
'John and Mary have painted it, the wall'

Recall that the basic generalisation is that the past participle will agree in number with any plural argument. This contradicts Belletti's (2005) generalisation that external arguments do not trigger participle agreement.

3.1 Two preliminaries regarding EA morphology

Here we clarify two points concerning the nature of the past-participle morphology in EA.

First, past participles in this variety of EA do not show gender inflection, but only number inflection. Other varieties of EA, particularly more conservative ones, do show gender agreement, however, e.g. Guardiagrele. Here we will concentrate on the Arielli variety, where this distinction has been lost.

The second point concerns the way in which participle agreement is realised. This takes place by means of the morphophonological process known as metaphony in traditional dialectological work, a process which is very widespread in Italian dialects (see Maiden (1991) for an overview). In EA, the final vowels of participles and other inflected words are reduced to schwa, but some inflectional distinctions formerly carried by these vowels are carried by height alternations in stem-internal stressed vowels (this is presumably the reflex of an earlier process of vowel harmony triggered by the final vowel before its reduction to schwa; Savoia & Maiden (1997:15)). This

process is pervasive in EA, as in many Central-Southern Italo-Romance varieties. Here we give examples of number marking in nouns, pronouns and adjectives, as well as past participles:

(20)

	SG		PL	
a.	lu the-sg	t**o**ne thunder-sg	Li the-pl	t**u**ne thunders-pl
b.	**e**sse (s)he-sg	jè bb**e**lle is beautiful-sg	**Ji**sse they-pl	jè bb**i**lle are beautiful-pl
c.	ji so' I-sg am	magn**a**te eaten-sg	vu sete you-pl are	magn**i**te eaten-pl

Thus, we see a vowel alternation within the stem (*-a* (sg)/ *-i* (pl), *-e/-i*, *-o/-u*), rather than in the ending, as is the case in Standard Italian.

3.2 Two theoretical preliminaries

Before going on to the analysis, we now need to introduce two theoretical points. First, we adopt the proposal in Chomsky (2005) that formal features may be inherited from a phase-head (e.g. C) by a non-phase-head (e.g. T); this, according to Chomsky, is how T gets the φ-features that make it a Probe (usually for the subject). Chomsky restricts his discussion to the relation between C and T, but he makes the following comment: "transmission of Agree features should be a property of phase heads in general, not just of C. Hence v* should transmit its Agree-feature to V" (Chomsky, 2005:14). We will exploit exactly this possibility in our analysis of EA past-participle agreement below.

Second, we must clarify certain assumptions regarding the nature of features and their values. Following Chomsky (2001:5) we take formal features to be attribute-value pairs, e.g. "plural" is really [Num: Pl]. Here, the attribute "Number" is associated with the value "plural", hence this is a valued feature. Where the value is not specified, e.g. [Num: __], we have an unvalued feature. In these terms, we can think of the Match component of Agree as an operation which copies a value into the feature-matrix. This can be formalised as follows:

(21) In a well-formed Agree relation A of which α and β are the terms, where α's feature matrix contains [Att_i:__] and β's contains [Att_i: val_j], for some feature F = [Att_i: ($val_{\{...j,...\}}$)], copy val_j into __ in α's feature matrix.

Furthermore, we assume that underspecified features also have the form [Att_i:__], i.e. the blank matrix is also a feature value, filled in by general convention at an interface, under specific conditions.

With these preliminaries in mind, we can proceed to the analysis of the past-participle agreement in (4) and (5).

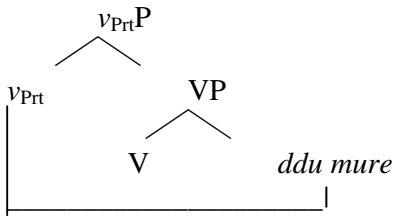
3.3 Analysis

Consider first the case where the subject is singular and the direct object is plural:

(22) Giuwanne a pittite ddu mure
John-sg has-3rd sg painted-**pp pl** **two walls-pl**
'John has painted two walls'

Here the past participle agrees with the direct object. We propose that v_{Prt} bears unvalued number-features and so probes the object inside VP. The relevant parts of the structure are as follows:

(23)



There is an Agree relation between v_{Prt} and the direct object which values the Number feature of v_{Prt} as Plural and the Case feature of the object as Acc.[15]

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[15] Here the question arises as to what prevents this form of agreement between the past participle and the direct object in Standard Italian. This point is dealt with by D'Alessandro & Roberts (2007) in terms of the idea that the participle occupies a higher position in Standard Italian than it does in EA, with the consequence that the participle and the direct object are not in the same Spell-Out domain at PF and hence are unable to realise the Agree relation morphophonologically. Evidence that the participle is in a higher position in Standard Italian than in EA comes from contrasts like the following, where we see the participle following the adverb *poche* ("(a) little") in EA but obligatorily preceding the corresponding adverb *poco* in Standard Italian:

(i) a. Le so **poche** **capite**
it am-1st sg little understood
'I understood it little'

b. ??? L'ho poco capito
it-have-1st sg little understood
'I understood it little'

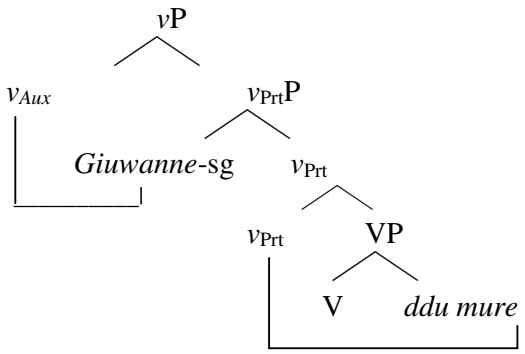
c. L'ho capito poco
it-have-1st.sg understood little
'I understood it little'

Cinque (1999:11) situates *poco* in the same position as *molto* and *bene* in his hierarchy, in the lowest, immediately VP-external, adverb position. However, he notes (Cinque (1999: 173, Note 31)) that there are some reasons to believe that the measure adverbs *molto* and *poco* may be situated higher than *bene*. The Abruzzese data confirm this since the equivalent of *bene* cannot precede the participle while *poche* can.

D'Alessandro & Roberts (2007) propose the following principle governing the overt realisation of Agree relations:

At the next step of the derivation, the subject is merged in Spec,v_{Prt}P. The auxiliary is then merged in a higher *v*, which selects v_{Prt}:

(24)



As we described in the previous section, the auxiliary Agrees with the subject, with the result in this example that Number and Case are valued on the auxiliary and on the subject (Person is not valued in this example, since we are assuming that 3rd person is lack of Person).

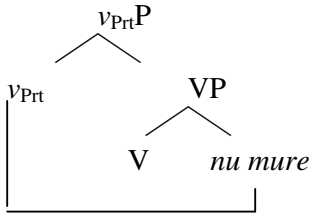
Consider next what happens if we have a plural subject and a singular object. Here, as we saw in (5c), the past participle agrees with the subject.

(ii) Given an Agree relation A between Probe P and Goal G, A has morphophonological realisation as agreement between P and G iff P and G are contained in the complement of the minimal phase-head H.
(iii) XP is the complement of a minimal phase head H iff there is no distinct phase head H' contained in XP whose complement YP contains P and G.
(ii) and (iii) effectively state that morphophonological agreement, like many other phonological processes, takes place within the complement to a phase head, i.e. the substructure which is transferred to PF as a single unit. In Standard Italian, the participle raises to a position outside the substructure containing the direct object and hence the two do not overtly agree (although *v* Agrees with the direct object in the usual way). In EA (and presumably a number of other Central-Southern varieties where general participle-agreement with direct objects is observed), the participle remains in a sufficiently "low" position for overt agreement to be allowed by (ii). It seems that movement to the head immediately above the lowest functional head – the one specified by *bene* according to Cinque (1999) – is enough to take the participle out of the domain in which the Agree relation with the direct object can be morphologically realised according to (ii) and (iii). In other words, give the substructure *W poco X bene Y VP*, X and Y are contained in the same spell-out domain as VP but W is not (and the rest of hierarchy is presumably outside the *v*P phase). This account of participle-agreement makes it independent from person-driven auxiliary selection, which is empirically correct, as observed by Manzini & Savoia (2005, II: 681ff.) and by Legendre (2006).

(25) 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]

The v_{Prt}P in (25) is as follows (cf. (23)):

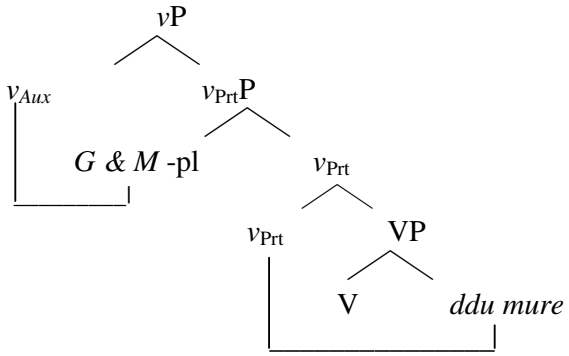
(26)



Here, as in (23), v_{Prt} probes the direct object. However, Singular is plausibly the unmarked value of the Number feature, so the number feature on the object *nu mure* is underspecified. As such, we propose, it is unable to value v_{Prt}'s Number feature in (26).

Now, as we have already mentioned, Chomsky (2005) proposes that feature-copying from a phase-head to the functional head it selects is possible. We can exploit this idea in order to account for the fact that the participle agrees with the subject in (25). Specifically, we propose that the Pl-value of Num is copied from v_{Aux} to v_{Prt} in (25), with the result that the participle shows plural agreement. To see exactly how this takes place, consider the following structure:

(27)



Here, the auxiliary Agrees with the subject, with the result in this example that Person and Number are valued on the auxiliary and Case on the subject. In this way, v_{Aux} has a valued Number feature which it is then able to transmit to v_{Prt}. As a result of this, v_{Prt} shows up as plural.[16] The feature-copying from v_{Aux} to v_{Prt} is not an Agree relation, and hence this relation is not subject to the condition on morphophonological realisation of Agree in (ii) of Note 15 (D'Alessandro & Roberts (2007, n. 7) observe that the same seems to be true of complementiser agreement in Germanic).

[16] We are assuming that v_{Aux} is the phase head. If the lower phase of the clause (i.e. the one which is not CP) is the category corresponding the eventuality expressed by the arguments and the predicate, then this seems justified. It is possible that this is the position immediately above the head whose specifier hosts *poco*, i.e. W in Note 15 (although auxiliaries must be merged higher in Standard Italian, since the participle moves over *poco*, as we`saw above).

Our proposal for the difference between EA and Standard Italian is that in EA, v_{Prt} never has an intrinsic Number feature; this feature is always "inherited" from v_{Aux}. Moreover, it is necessary to assume that feature-valuation takes place before transfer, where the feature in question is specified for a given value. This is what we have just seen in the derivation of (25); here [Num:pl] is passed from v_{Aux} to v_{Prt}. We assume that in (4a,b) the unvalued feature [Num:__] is passed. In (4d), where both the subject and the direct object are plural, [Num:Pl] is passed, and this Agrees with the same value for this feature on the direct object. In (4a), where the unvalued feature is passed and the direct object also has the unvalued feature, we assume that the feature is valued as singular by default. Default valuation of this type is only possible where both the Probe and the Goal bear exactly the same unvalued features. In the case of v_{Prt} in (4a), the unvalued Num feature is present both on v_{Prt} and on the object. Thus, feature-matching takes place, although vacuously (in terms of the formulation of Match given in (21), the "value" copied is the blank feature). In this case, since Match has taken place, the feature is able to be assigned by default at the interfaces (both PF and LF, since morphophonology and semantics must be able to interpret the feature).[17]

So we see that v_{Aux} in EA can have both [Pers] and [Num] features (at least their marked values), and as such is able to be valued by these features of the subject and, in certain cases, of the object. So, whenever v_{Aux} has φ-features we expect to find person-driven auxiliary selection and cases where a marked φ-feature of the subject will trigger agreement on a participle which otherwise agrees with the object. Manzini & Savoia (2005, II: 687f.) observe that both of these phenomena are found in the dialects of Canosa Sannita, Tufillo, Secinaro and Torricella Paligna. Object agreement is overt owing to the fact that the participle does not move out of VP's spell-out domain, given the proposals in D'Alessandro & Roberts (2007) summarised in Note 15. So we now have an answer to question (6b) above: past-participle agreement in EA does not conform to Belletti's (2005) generalisation owing to the combined possibilities of v_{Aux} bearing φ-features and feature inheritance in the lower phase of the type predicted by Chomsky (2005).

As we saw in §2, the central property giving rise to person-driven auxiliary selection is that the subject may value features of v_{Aux}, rather than features of T. This differs from the situation in more familiar languages such as Standard Italian, where it is the features of T that are valued by the subject. This raises the question of how the features of T are valued in EA. This is what we turn to in the next section.

[17] We have connected person-driven auxiliary selection to subject-agreement on the participle, but participle-agreement with the subject is possible in the pluperfect subjunctive, where the auxiliary is always HAVE: cf. *esse avesse fatte, nu avesseme fitte* in (18). According to our assumptions, v_{Aux} does not have φ-features when the auxiliary is HAVE. This implies that feature spreading is not restricted to the features of $v_{Aux.}$ There are two possible solutions to this problem: either we have to allow feature inheritance from T to v_{Prt}, i.e. across a phase boundary, or we have to invoke Gallego's (2006) notion of phase sliding, whereby movement of the auxiliary to T extends the *v* phase and therefore allows feature inheritance from T to v_{Prt}.

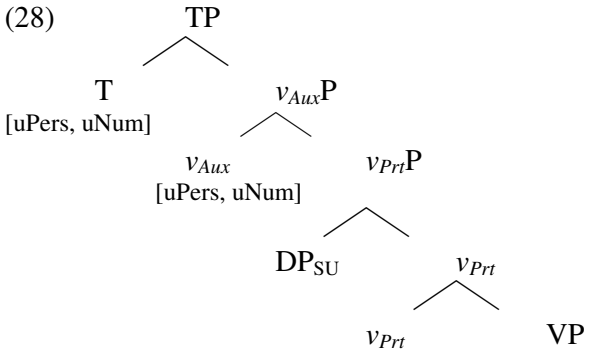
4. The role of T in EA: null subjects and person-driven auxiliary selection

In this section, we want to explore further the exact feature make-up of T in EA in order to develop an account of the relation between person-driven auxiliary selection and null subjects. If we can establish an implicational relation between these properties, then we can explain the lack of person-driven auxiliary selection in Germanic which we observed in the Introduction.

The analysis of person-driven auxiliary-selection given in §2 entails that T's features play a limited role in licensing the external argument. In the present perfect, T lacks φ-features when v_{Aux} has a Person (and therefore a Number) feature, and indeed never has a Person feature; this is why BE appears whenever the subject is 1st or 2nd person. The T of the present perfect is therefore partially defective.

Consider what would happen if both T and v_{Aux} had fully specified φ-features:

(28)



The structure in (28) cannot converge, since T's φ-features cannot be valued as T cannot Agree with DP_{SU} given the presence of the closer Probe v_{Aux} (we are assuming a standard non-intervention clause in the definition of Agree: no potential Probe can Agree with a Goal if there is a closer Probe for that Goal, where closeness is computed in terms of asymmetric c-command). For this reason, either T or v_{Aux} must lack features; as we saw in §2 this is the central idea in our analysis of auxiliary selection and its connection to split-ergativity, given Müller's (2004) analysis of ergativity.

One feature we did not discuss in §2, however, was the EPP feature. It seems unlikely that neither T nor v_{Aux} has an EPP feature, since subjects do not in general surface in situ, in between the auxiliary and the participle:[18]

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[18] As shown in D'Alessandro & Alexiadou (2006), the arbitrary subject pronoun *nome* (roughly "one") must appear between the auxiliary and the participle in the perfect tense:

(i) A nome magnite.
Has NOME eaten-pl
"People have eaten."

(ii) *Nome a magnite.
NOME has eaten-pl.

(29) a. *So ji magnate.
b. *A esse/Giuwanne magnate
has he/John eaten

Now, there is evidence for general V-to-T movement in EA from the position of the finite verb in relation the adverb in examples like the following:

(30) **Magne** **sembre** le sagne
eat(s) always the pasta
'I/he/she/they always eat(s) pasta.'

Auxiliaries, too, consistently raise to T, as shown in (31):

(31) a. **A sembre** magnite le sagne.
Have-3pl always eaten the pasta
"They have always eaten pasta."

b. **Seme sembre** magnite le sagne.
Be-1pl always eaten the pasta
"We have always eaten pasta."

So we can conclude that T has a V-feature. If the finite verb/auxiliary surfaces in T, the ungrammaticality of (29) also tells us that v_{Aux} lacks an EPP feature.

Now, as in all Central and Southern Italo-Romance varieties, SVO is the unmarked order in EA and referential, definite null subjects are always possible. Examples where BE is the auxiliary are no different from those lacking an auxiliary, or with HAVE as the auxiliary, in these respects. What, then, is responsible for the SVO order in an example like (32)?

Interestingly, *nome* precedes BE. We cannot show it precedes BE in the perfect, since it is 3rd-person plural, but we see the order *nome* – BE in predicative contexts and in passives, as in (iii) and (iv):

(iii) Nome jè bille.
NOME are nice-pl.
"People are nice."

(iv) Nome jè trattite male.
NOME are treated-pl badly.
"People are treated badly."

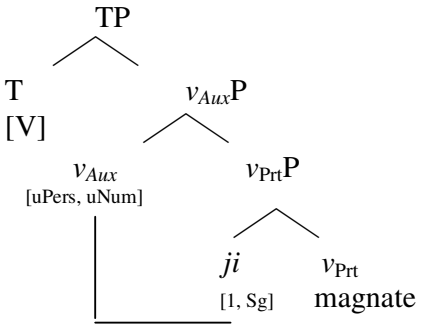
D'Alessandro & Alexiadou (2006) argue that *nome* is a weak pronoun in SpecTP. In (i) *a* cliticises to its left. This order in fact seems to be restricted to the reduced form *a*. Other forms of the HAVE auxiliary follow *nome*, e.g. *avesse* in (v):

(v) Si li nome avesse magnite.
REFL them NOME would-have eaten-pl
"People would have eaten them."

(32) Ji so' magnate le sagne.
I am eaten-sg the pasta
'I have eaten the pasta.'

Recall that the structure of the relevant parts of this example is as follows:

(33)



Here, T cannot have φ-features for the reason we have just seen in the discussion of (28). However, despite being defective, T does appear to have an EPP feature here. In this respect, it is again similar to the infinitival T of languages like English.

Further evidence that T has an EPP feature comes from the fact that its specifier shows properties of an A-position. Preverbal subjects do not obligatorily behave as topics or left-dislocated elements, and hence must be in an A-position which we take to be SpecTP. The question of the nature of the preverbal subject position has been much discussed in the literature on null subjects. Beginning with Borer (1986), it has been suggested by various authors that, since person-number specification of the subject can be exhaustively computed from the verbal inflection, the preverbal subject is effectively optional and when it appears it acts as a clitic left-dislocated (CLLD) element occupying an A'-position with the verbal inflection functioning analogously to a clitic (see Alexiadou & Anagnostopoulou (1998), Barbosa (1995, 2006), Manzini & Savoia (2005), Nash & Rouveret (1997), Ordoñez (1997), Platzack (2004), Pollock (1997), and for an opposing view, Cardinaletti (1997, 2004), Holmberg (2005), Roberts (2007), Sheehan (2006)). If preverbal subjects are really dislocated, then either there is no EPP feature on T, or it is satisfied in some other way. Conversely, then, if we can show that there is evidence for a preverbal A-position for subjects, this implies that there is an EPP feature on T.

Many of the diagnostics employed in the references given above cannot be used in EA for various reasons, but there is at least one reason to think that the subject is in an A-position. This concerns the scope possibilities of indefinite subjects. A-moved subjects retain the possibility of having narrow scope in relation to a predicate-internal quantifier, as in English. CLLD'd elements, however, cannot have narrow scope in relation to another quantifier (see Alexiadou & Anagnostopoulou (1998), Barbosa (1995), Cinque (1990) for discussion and slightly differing accounts of why this is so). In EA, it seems that an indefinite subject can have narrow scope:

(34) a. Nu fiore cresce a ugne vvase.
A flower grows in every vase.

b. N'albere cresce a ugne bosche.
A tree grows in every wood.

In examples like (34), as pointed out by Barbosa (1995) and Alexiadou & Anagnostopoulou (1998) among others, real-world considerations make the wide-scope reading for the preverbal indefinite highly implausible while the narrow-scope reading is quite unremarkable. The examples are readily acceptable, which strongly suggests that the narrow-scope reading for the subject is possible, and therefore that the subject is in an A-position. This position must result from the presence of an EPP feature on T.

A further, indirect argument that T has an EPP feature arises from its behaviour in clauses introduced by the jussive complementizer, *ocche*. This element appears in the lowest position of the left periphery. This is shown by the fact that it can cooccur with the default complementizer *ca*, and appears to its right, as shown in (35):

(35) Ji so ditte **ca** si le vo fa
him-dat am-1st sg said-pp sg that if it wants-3rd sg do

ocche le face.
that-jussive it does
'I told him that if he wants to do that he may do that.'

D'Alessandro & Ledgeway (2007) argue that *ocche* is located in the Fin position of Rizzi (1997). Therefore, if a subject may appear after *ocche*, it must be in SpecTP, given that the finite verb is in T, as we have seen. Strikingly, though, no subject may appear immediately after *ocche*:

(36) a. A ditte ocche *Gianne/ji le facce.
has said that John I it does/do

b. A ditte (Gianne) ocche le facce/ocche le facce (Gianne).
has said John that it does /that it does John

c. A ditte ji ocche le facce / ocche le facce ji.
has said I that it do / that it do I
'He said to let John/me do it.'

(Similar facts are observed with the optative complementiser *mu/mi/ma* in Southern Calabrian and North-Eastern Sicilian dialects (Ledgeway (1998:24)), Salentino *ku* (Calabrese (1993)) and Greek *na* (Roberts & Roussou (2003:74f.), Roussou (to appear)). In terms of Chomsky's (2005) suggestion that T generally inherits its uninterpretable features from C, we can account for the data in (36) by saying that this particular complementiser does not allow the "inheritance" operation to take place, either because it lacks the relevant features or because it blocks inheritance from a higher C-position to T. When this complementiser appears, then, T cannot function as a probe for the subject at all, and hence the subject cannot appear in SpecTP. Here, then, T lacks an EPP feature (*inter alia*), and we observe that its behaviour contrasts sharply with what is observed when *ocche* is not present.

Indirectly, this tells us that, when *ocche* is not present, T has an EPP feature (which it inherits from C).

So we see that there are reasons to think that T bears an EPP feature. We could think that where v_{Aux} bears Person features, i.e. where the auxiliary is BE in the perfect, T lacks an EPP feature, but there is no evidence for this; we do not find that the possible positions occupied by the subject differ in any way according to the choice of auxiliary (the only fact of this type concerns the different positions of the weak, arbitrary subject pronoun *nome* pointed out in Note 18, but, as observed there, the variation in order is restricted to a single, phonologically weak form of HAVE, namely *a*). We follow the standard assumption that the defective T of infinitives has an EPP feature, and so we see no difficulty in attributing such a feature to the slightly less defective T of the perfect. So we conclude that T generally bears an EPP feature, independently of auxiliary selection.

It follows from the above considerations that, in examples with a null subject, *pro* occupies SpecTP. Following Holmberg (2005) and Roberts (2007), we assume that *pro* is a weak pronoun, a DP which is required to appear in certain designated positions (SpecTP in the case of subjects). Furthermore, following a long line of work going back at least to Rizzi (1982), we take it that *pro* is licensed by a D-feature associated with φ-feature-bearing head (Roberts in fact argues that *pro* is a deleted weak pronoun, and derives this from the nature of what he calls "defective goals", but we will leave those details aside here). Holmberg (2005:556) takes this D-feature to be interpretable, and posits an unvalued D-feature on the subject pronoun.[19] The

[19] Roberts assumes T can only have a D-feature if none of its φ-features have undergone impoverishment, following the ideas in Müller (2005). Impoverishment rules "neutralize differences between syntactic contexts in morphology" (Müller (2005:3)), creating "system-defining syncretisms" (distinct from accidental homophony or gaps in a paradigm). In this connection, Müller (2005:10) puts forward the following "*pro* generalisation":

(i) An argumental *pro* DP cannot undergo Agree with a functional head α if α has been subjected (perhaps vacuously) to a φ-feature neutralizing impoverishment in the numeration.

(The reference to the numeration here relates to Müller's arguments that impoverishment must be a pre-syntactic process; see Müller (2005:7-9), Roberts (2007:30-31)). In this way, a connection is established with "rich" agreement, since non-impoverished φ-features can be realised by distinct vocabulary items while impoverished ones cannot (although a certain amount of accidental homophony and null realisation may exist). The prediction is that fully null-subject languages should lack system-defining syncretisms in their verbal agreement morphology. EA in fact appears to be problematic for this prediction, in that there is a general syncretism between 1sg and 3rd-person (both singular and plural), as the following paradigm illustrates:

(ii) (ji) **magne** ("I eat", etc.)
(tu) migne
(esse) **magne**
(nu) magneme
(vu) magnete

presence of this D-feature is the core formal property which gives rise to a positive value of the null-subject parameter.

We are now in a position to account for our observation that person-driven auxiliary selection is not found in Germanic. If *pro* is licensed by the D-feature associated with the head which bears the unvalued φ-features, this means that, where the auxiliary is BE and, according to our analysis in §2 above, the φ-features probing the subject are associated with v_{Aux}, the D-feature must be associated with v_{Aux}. The φ-features of v_{Aux} are unvalued, as we have said (and is standardly assumed for the features probing the subject). Our proposal in §2 essentially equates v_{Aux} with an Agr head of the type assumed in Chomsky (1993, 1995), in that its feature content is exhausted by uninterpretable features. If the D-feature that licenses *pro* is interpretable, we can conclude that v_{Aux} must bear this feature in order to have an interpretable feature. This must in fact be true in general, both when v_{Aux} bears φ-features, i.e. when the auxiliary is BE, and when T does (when the auxiliary is HAVE). Since v_{Aux} always moves to T, the D-feature will be associated with T when the latter bears φ-features, in conformity with standard assumptions regarding *pro*-licensing (and the recent elaborations in Holmberg (2005) and Roberts (2007)). Finally, we must assume that v_{Aux}'s V-feature is uninterpretable; this is unproblematic, we could in fact regard the selection-like relations with v_{Prt} described in (6) as instances of Agree triggered by the active uninterpretable V-feature of v_{Aux}.

We thus derive the following implicational statement:

(37) If a language has person-driven auxiliary selection, that language must be a null-subject language.

Of course, being a language null-subject language does not entail person-driven auxiliary selection; (37) is a one-way implication. (37) predicts the existence of three types of language, as follows:

(38) a. Null-subject, person-driven auxiliary selection: EA, other Central-Southern Italo-Romance varieties.
b. Null-subject, no person-driven auxiliary selection: Standard Italian, Spanish, Greek, etc.
c. Non-null-subject, no person-driven auxiliary selection: English, German, etc.

The fourth logical possibility (non-null-subject, person-driven auxiliary selection) is ruled out by the general ban on functional heads like v_{Aux} bearing only uninterpretable features. We can now see why there are no person-driven auxiliary systems in the

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(jisse) **magne**

If 3rd-person features are not part of the system, it may be that Müller's generalisation could be interpreted so as to refer to 1st and 2nd-person forms only. In that case, EA would not be a problem (although German might be, given Müller's (2005:4-6) discussion and analysis of the verbal agreement system in that language). We will leave the question of the relation between the agreement morphology and the licensing of *pro* open here.

Germanic languages; this is because no Germanic language is a null-subject language. In this way, we derive our typological observation and answer question (6c).

5. Conclusions

In conclusion, let us repeat the questions posed in (6):

(6) a. What is the connection between person-driven auxiliary selection and split-ergativity?
b. How does EA past-participle agreement work, and why is it an exception to Belletti's generalization?
c. Why is the person-driven pattern absent in Germanic, while both the Italian-style pattern and the Spanish-style pattern are found?

We have seen that the answer to (6a) lies in the fact that, given Müller's (2004) account of ergativity, both systems involve probing of the subject's φ-features by *v* under certain conditions. The answer to (6b) crucially involves feature-inheritance inside the lower clausal phase, combined with certain technical assumptions regarding underspecified features, and, again, the possibility of v_{Aux} bearing φ-features. The answer to (6c) again crucially involves v_{Aux}; this element must bear an interpretable D-feature or its content would be exhausted by uninterpretable/unvalued features. The D-feature licenses null subjects, hence the generalisation in (37), from which the absence of person-driven auxiliary selection in Germanic follows as a special case. Given the evidence (mentioned in §2 above) that person-driven auxiliary selection develops diachronically from a system like that found in Standard Italian where auxiliary selection is determined by the argument structure of the main verb, we can speculate that the Germanic languages were not able to develop a split auxiliary system because they were not pro-drop at the relevant point in their history.

To the extent that we can localise all the relevant properties of EA as features of a single functional category, v_{Aux}, our analysis is consistent with the general approach to parametric variation assumed in current syntactic theory. We consider this to be a further positive result of our investigation.

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