

Proper Subset Relation and Concord: Agreement in Abruzzese Possessive Copular Constructions*

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1. Introduction

Agreement between two lexical items is conceived, according to the most recent developments of Chomsky's Minimalist Program (Chomsky 2000ff), as a match relation between a Probe and a Goal followed by an Agree operation. A consequence of Agree is deletion of the Probe's uninterpretable features. According to Chomsky (2000:122ff):

- (1) The ϕ -set we can think of as a probe that seeks a goal, namely "matching" features that establish agreement. [...] Locating this goal, the probe erases under matching. [...] The erasure of uninterpretable features of probe and goal is the operation we called Agree.
[...] Matching is a relation that holds of a probe P and a goal G. Not every matching pair induces Agree. To do so, G must (at least) be in the domain D(P) of P and satisfy locality conditions. More generally, uninterpretable features render the goal active, able to implement an operation. The operations Agree and Move require a goal that is both local and active. '

In this paper, we wish to explore the possibilities that this definition of Agree offers, and show some cases in which it cannot account for specific data. We consider the case of possessive copular constructions (PCC) in two varieties of Abruzzese, a southern Italian dialect spoken in the central region of Abruzzo, and show that the machinery offered by Agree cannot account for agreement in such constructions. We propose an analysis of these data in terms of the operation Agree-concord, which is different from the Agree-check proposed by Chomsky (see Di Sciullo 2003, 2005, Di Sciullo and Isac 2003, 2007) and show that agreement in Abruzzese obtains between a feature set and its subset.

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Before discussing the agreement patterns in Abruzzese PCCs, we point that, contrary to Agree-check, Agree-concord does not relate active elements and it does not lead to the checking/deletion of uninterpretable features. We propose that the feature on the possessive PP are checked via Agree-concord. Specifically, we define Agree-concord as follows:

- (2) a. Agree-check is a matching relation under which feature checking takes place.
 b. Agree-concord is a matching relation under which no feature checking takes place. [from Di Sciullo 2005:189]

The examples in (1)-(2), illustrate multiple Case and ϕ -agreement under Agree-concord.

- (3) a. una bella donna alta [Italian]
 a-f.sg nice-f.sg woman-f.sg tall-f.sg
 'a nice tall woman'
- b. des beaux yeux verts [French]
 of.the-pl beautiful-m.pl eyes-m.pl green-m.pl
 'beautiful green eyes'
- c. aspectul masinii mele vechi [Romanian]
 look.the-m.sg car.the-gen.f.sg my-gen.f.sg old-gen.f.sg
 'the look of my old car' [Di Sciullo and Isac (2003:5)]
- (4) a. Marie_i sera-t- elle_i là? [French]
 Marie-nom.f.sg will.be.she-nom.f.sg there
 'Will Mary be there?'
- b. Pierre_i sera-t- il_i là? [French]
 Pierre-nom.m.sg will.be.he-nom.m.3rd sg there
 'Will Peter be there?'
- c. Vine el_i tata_i [Romanian]
 Comes he-nom.m.3rd.sg father-nom.m.sg
 'The father comes'
- d. *(e_i) pashe Jan-in_i [Albanian, Kalluli 1996]
 *(Ton_i) idha ton Yanni [MG, Kalluli 1996]
 him-acc.3rd.sg saw.I the.Yannis-acc.m.3rd.sg
 'I did see John' [Di Sciullo and Isac (2003:5)]

We will not illustrate further the differences between Agree-check and Agree-concord here, but see Di Sciullo (2005) and Di Sciullo and Isac (2003, 2007) for

examine the proper subset condition. In 3, we address some remaining issues regarding feature ranking. 4 contains our conclusions.

2. Agreement Patterns in Abruzzese Possessive Copular Constructions

As we saw above, in AR the determiner and the possessive adjective agree in number with the possessive phrase, but there is no gender agreement. More specifically, the determiner is always masculine, both when the head noun is feminine and when it is masculine. In FA we see almost the same pattern, in that both the determiner and the possessive agree in gender with the head. Moreover, the determiner also shows number agreement. The complete agreement patterns of possessive copular constructions are presented in (8):

(8)	AR	FA
a.	La case jè (di) lu mé the-fsg house-fsg is of the-msg my-sg 'The house is mine'	La case è la mè the-fsg house-fsg is the-fsg my-f 'The house is mine'
b.	Li case jè (di) li mi the-pl houses-fpl are of the-pl my-pl 'The houses are mine'	Li case è li mè the-pl houses-fsg is the-pl my-f 'The houses are mine'
c.	Lu cane jè (di) lu mé the-msg dog-msg is of the-msg my-sg 'The dog is mine'	Lu cuane è lu mié the-msg dog-msg is the-msg my-m 'The dog is mine'
d.	Li chine jè (di) li mi the-pl dogs-mpl are of the-pl my-pl 'The dogs are mine'	Li chiene è li mié the-pl dogs-mpl are the-pl my-m 'The dogs are mine'

As we can see in (8), AR shows consistent agreement in number but not in gender with the head noun, whereas FA has a richer agreement pattern for the determiner. This given, the questions we wish to address are:

- Why does the DET in AR not inflect for gender? (Remember that in AR there is a feminine singular determiner *la*), and:
- Are the agreement patterns in (8) obtainable through Agree-check (i.e. standard Agree)?

Before trying to provide an answer to these questions, let us consider a plausible objection to our analysis, namely these examples could instances of partitive constructions. We can claim with a good degree of certainty that this is not the case. Both AR and FA have a partitive construction, and its agreement patterns differ radically from those of possessive copulars, as illustrated in (9).

have feature checking as a consequence. In other words, it is pure Match. The conditions in which Agree obtains are defined by Di Sciullo as follows:

- (11) Agree as a proper subset relation:
 Agree (ϕ_1, ϕ_2): Given two sets of features ϕ_1 and ϕ_2 , Agree holds between ϕ_1 and ϕ_2 , iff ϕ_1 properly includes ϕ_2 . [Di Sciullo (2005: 30)]

(11) states that Agree obtains only when a set of features properly includes the set of features that it probes. As we will see, this proper subset condition is vital for the analysis of the agreement patterns in AR and FA possessive copular constructions.¹

Let us now move on to the derivation of (6) and (7). The first step is to determine the feature bundles characterizing the lexical items in the derivation. The following tables illustrate the morphological paradigm of possessive adjectives in AR and FA.

Possessive adjectives in AR vary according to number, whereas in FA they vary according to number and gender.

(12)

	SINGULAR MASC/FEM	PLURAL MASC/FEM
my	mé	mi
your	té	ti
his /her	sé	si
our	nostre	nustre
your	vostre	vustre
their	sé	si

In FA, possessive adjectives vary in gender, but not in number, (13):

(13)

	FEMININE SG/PL	MASCULINE SG/PL
my	mè	mié
your	tè	tié
his /her	sè	sié
our	nostre	nuostre
your	vostre	vuostre
their	sé	sié

¹ Defined as a proper subset relation, Agree is asymmetrical wrt the properties of the sets of features to which it applies. (i) *Proper subset relation*: A is a proper subset of B, or is properly included in B, whenever A is a subset of B but A is not equal to B. (ii) *Subset relation*: Given two sets A and B, if all the members of A are also the members of B, A is a subset of B. Given Agree, defined in terms of the proper subset, the constraints on morphological merger follow. See Di Sciullo (2003, 2005) for discussion. Furthermore, the properties of movement chains, and the constraints on sub-extraction follow as well. See Di Sciullo and Isac (2007) for discussion.

definition of Agree-concord as requiring a subset relation. Recall that Agree-concord in (11) is defined as follows:

(11) Agree as a proper subset relation:

Agree ($\phi 1, \phi 2$): Given two sets of features $\phi 1$ and $\phi 2$, Agree holds between $\phi 1$ and $\phi 2$, iff $\phi 1$ properly includes $\phi 2$.

Consider furthermore the feature setup of the lexical items that enter the derivation in (16). Following to Chomsky (2001), we assume that the ϕ -set on pronouns is {person, number, gender}. As for NPs, it is a quite common assumption to consider them as equivalent to 3rd person pronouns. 3rd person pronouns are however problematic with respect to the real value of the person feature. According to Benveniste (1966) and all the literature descending from that, 3rd person is equivalent to no person. This would mean, in our case, that the head noun would not have a person feature at all. Following D'Alessandro (2004a, 2004b), we assume instead that 3rd person is person, and therefore that the person feature on the head noun is present.² Determiners obviously lack [person]. Hence, we can conclude that the feature bundle of (13) is as follows:

(17)

<i>case</i>	<i>lu</i>	<i>mé</i>
[sg]	[sg]	[sg]
[fem]	[masc]	
[3 rd]		

We can see that Agree-concord only takes place between the number features, disregarding gender. [number] is a subset of [gender][number], and therefore we expect cases of Agree-concord in which only one of the features enter agree. This is the case in AR. The obvious question here is why is the determiner not selected according to gender (since a feminine singular determiner would be available in the lexicon) but for number. We address this issue in section 3. For the plural, we have the same configuration.

(18) Li case jè (di) li mi
the-f.pl houses-f.pl are of the-pl my-pl
‘The houses are mine’

The following features enter into Agree-concord:

(19)

<i>case</i>	<i>li</i>	<i>mi</i>
[pl]	[pl]	[pl]
[fem]	[fem][masc]	
[3 rd]		

² Observe that adjectives also have person (i.e. the feature referring to the possessor), but this person is not syntactically expressed. It is a purely semantic feature.

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(19) graphically exemplifies how only a proper subset of the ϕ -features enter Agree-concord.

Let us now turn to consider the case of FA. In FA, the situation is different from AR, in that gender agreement is present on every element, as shown in (20):

- (20) La case è la mè
 the-f.sg house-f.sg is the-f.sg my-f
 ‘The house is mine’

In (20), the gender features, a subset of [gender][number], enter Agree-concord:

(21)

<i>case</i>	<i>la</i>	<i>mè</i>
[fem]	[fem]	[fem]
[sg]	[sg]	
[3 rd]		

The same holds for the plural, where [gender] is the subset that enters Agree-concord.

- (22) Li case è li mè
 the-f.pl house-f.pl is the-pl my-f.pl
 ‘The houses are mine’

(23)

<i>case</i>	<i>li</i>	<i>mè</i>
[fem]	[fem]	[fem]
	([masc])	
[pl]	[pl]	
[3 rd]		

Finally, observe that Agree-concord is at work also in Italian, where, however, the determiner and the possessive have a fully-fledged ϕ -set. In the case of Italian, the features [gender] and [number] enter Agree-concord.

- (24) Le case sono le mie
 the-f.sg houses-f.pl are the-f.pl my-f.pl
 ‘The houses are mine’

(25)

<i>case</i>	<i>le</i>	<i>mie</i>
[fem]	[fem]	[fem]
[pl]	[pl]	[pl]
[3 rd]		

3. Feature Ranking

Let us now turn to the following question that has been left unaddressed so far: Why is number (and not gender, which would be available) selected for agreement in AR?

In (14), we have seen that the determiner in the possessive phrase is masculine singular. We have shown that agreement obtains via Agree-concord, but the question that was left unanswered concerns the reason why a masculine determiner is selected when a feminine one could be selected from the lexical array. The easy way to go would be to say that there is no feminine determiner in the lexical array of the sentence. However, if we had a lexical array of this sort:

{ *la*, *case*, *jè*, *di*, *la*, *me* }

In principle, the sentence formed with these items (in 26) should converge, but this is not the case.

(26) **La* *case* *jè* (*di*) *la* *mé*
 the-f.sg house-f.sg is of the-**f.sg** my-sg [AR]

The features that would enter Agree-concord in (26) are listed in (27).

(27)

<i>case</i>	<i>la</i>	<i>mé</i>
[sg]	[sg]	[sg]
[fem]	[fem]	
[[3 rd]]		

In (26), we have no principled rule to exclude Agree-concord from taking place. (26) would offer a situation similar to FA, where indeed this derivation converges. Hence, there would be no reason for the same derivation not to converge in AR. In other words: how can we rule out the derivation in (26) in AR, given that this derivation converges in the parallel dialect FA?

The situation for AR and FA is more complex than what we have considered so far. Both AR and FA have a feature ranking (see Harley & Ritter 2002) which is directly relevant for every derivation. In AR, [number] is more prominent than [gender]. In FA, the reverse is true:

(28) AR: NR>GN
 FA: GN>NR

3.1 Evidence for Feature Ranking in AR

According to our proposal in (28), in AR [number] is more prominent than [gender]. Evidence for this is offered in several other grammatical contexts, such as the ones presented in D'Alessandro & Roberts (2007), who show that [number] is the only feature that enters Agree in AR past participle agreement. Consider (29):

- (29) a. Giuwanne a pittate nu mure (AR)
 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]
 [D'Alessandro & Roberts 2007: 7]

The examples in (29) show that the PP always agrees with the argument which is specified as plural, independent of whether it is the subject or the object. This is not the case in FA, which agreement patterns like IT, as shown in (30).

- (30) a. Giuwanne a pittate nu mur(e) [FA]
 Giovanni ha dipinto un muro [IT]
 John-sg has-3rd.sg painted-pp sg/pl a wall
 'John has painted a wall' [sg SUBJ-sg OBJ]
- b. Giuwanne a pittate ddu mur(e) [FA]
 Giovanni ha dipinto due muri [IT]
 John-sg has-3rd.sg painted-pp.sg/pl two walls
 'John has painted two walls' [sgSUBJ-plOBJ]
- c. Giuwanne e Mmarije onne pittate nu mur(e) [FA]
 Giovanni e Maria hanno dipinto un muro [IT]
 John and Mary-pl have-3rd.pl painted-pp.sg/pl a wall
 'John and Mary have painted a wall' [plSUBJ-sgOBJ]
- d. Giuwanne e Mmarije onne pittate ddu mur(e) [FA]
 Giovanni e Maria hanno dipinto due muri [IT]
 John and Mary-pl have-3rd pl painted-pp.sg/pl two walls

'John and Mary have painted two walls'

[plSUBJ-plOBJ]

The data offer independent evidence that AR has a feature hierarchy that differs from FA and IT. We take this to support our analysis of lack of agreement in AR as a result of this feature hierarchy being at work.

4. Conclusions

In this paper, we provide and account for the apparent irregular agreement pattern observed in Abruzzese (AR, FA) possessive copular constructions (PCCs). We have shown that, contrary to what may appear, the properties of agreement in these constructions follow from the properties of Agree defined in terms of the proper subset relation and not in terms of feature identity, as argued for in Di Sciullo (2005) and Di Sciullo and Isac (2007) on independent grounds. This paper also provides further support to differentiate Agree-check from Agree-concord. The agreement pattern in Abruzzese PCCs is a particular case of Agree-concord, that is, a proper subset relation between two sets of features, which does not lead to the elimination of active features. Moreover, the differences in the agreement patterns in AR and FA, are proposed to follow from the independently needed feature ranking, (D'Alessandro and Roberts 2007). Finally, this study provides support to the Minimalist view (Chomsky 1995, 2002 among other works) that language variation can be attributed to the properties of inflectional features.

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