Agreement stacking and topic oriented agreement: how to agree with adverbs, gerunds and prepositions

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Abstract

Italo-Romance varieties exhibit a number of phenomena that are quite rare among Romance. Some varieties, for instance, have a dedicated gender marking on the finite verb, unlike any other Romance language. The same varieties also exhibit adverbial and prepositional. Furthermore, whenever a topic is present in the clause it will trigger agreement: finite verbs, non-finite verbs (participles and gerunds), adverbs, as well as prepositions will show agreement with the topic.

Topic-driven agreement, I argue, is due to two co-occurring causes: 1. the presence of an extra item, a φ -probe, in the lexical inventory of the language; 2. A special setup of this probe, which requires agreement with the topic.

1. Agreement in Ripano

1.1. Introduction

In this paper we will be concerned with some agreement patterns that are not very pervasive (to a different extent) in the rest of Romance:

- a. Adverbial agreement
- b. Prepositional agreement
- c. Agreement stacking
- d. Agreement with gerunds
- e. Topic-oriented agreement

These phenomena are all quite rare, both in Romance and in general. I will argue that they are attributable to the same underlying cause: the presence of an extra feature bundle, pretty much along the lines of the one which is present in northern Italian dialects in the form of subject clitics. This feature bundle is topic-oriented, in that it contains an unvalued topic feature, forcing agreement with topics. Here are the data.

1.2. Verbal and adverbial agreement

Ripano, the dialect of Ripatransone¹, in the province of Ascoli Piceno, in central Italy, has long been studied because of the presence of gender inflection on finite verbs, as well as gerunds and adverbs (Egidi 1965; Parrino 1967, Lüdtke 1976, Mancini 1988/1997; 1993; Harder 1998; Jones 2001; Ledgeway 2006; Rossi 2008, Ferrari Bridgers 2010). Finite verbs have a full masculine paradigm and a full feminine paradigm, as exemplified in (1):

¹ Unless otherwise stated, the data from Ripatransone were collected on fieldwork by the author, in 2007. These agreement patterns are largely confirmed by a recent investigation by the Zurich Agreement Database project.

(1) Verbal endings (Rossi 2008: 31)

MASCULINE	FEMININE	
i' ridu	ìa ride	'I laugh'
tu ridu	tu ride	'you laugh'
issu ridu	esse ride	'he laughs/she laughs'
noja ridemi	noja ridema	'we laugh'
voja rideti	voja rideta	'you laugh'
issi ridi	essa ride	'they laugh'

Observe that gender is never marked on finite verbs in Romance. In Ripano, every finite verb is marked for gender, in the present, imperfect, future, past, subjunctive (present and past) and conditional.

Nouns/adjectives are also marked for number and gender, according to the following paradigm:

(2) Noun/adjective endings

	SINGULAR	PLURAL
MASCULINE	-u / -a	-i / -a
FEMININE	-e (-a in modern Ripano)	-a
NEUTER/MISMATCH	-a/ - ə	-a/- ə

Adverbs in Romance are invariable. In Ripano, though, adverbs display agreement with what for now we will call "the most prominent element" in the clause. The adverbs showing agreement are not only the usual quantificational adverbs like *quanto* ('how/as much') and *molto* ('much') in Italian, but also manner adverbs, temporal adverbs; numerals are also inflected for gender and number.

An example of manner adverbial agreement is (3):

(3) Burroni et al. 2016:8

	241101110041112010						
a.	Issu	ha	rispost-u	mal-u			
	he.3sg.m	have.3sg	answer.PTC-SG.M	badly-sg.M			
	'He answered badly'						
b.	Esse	ha	rispost-e	mal-e			
	she.3sg.F	have.3sg	answer.PTC-SG.F	badly-SG.F			
	'She answered badly'						
c.	Issi	ha	rispost-i	mal-i			
	they-3PL.M	have.3PL	answer.PTC-PL.M	badly-PL.M			
'They answered badly'							
d.	Issa	ha	risposta	mal-a			
	they-3PL.F	have.3PL	answer.PTC-PL.F	badly-PL.F			
	'They answered badly'						

As you can see, in (2a) the adverb agrees with the masculine singular subject, while in (2b) it agrees with the feminine singular subject. (2c-d) show agreement in gender and number with the corresponding plural subjects. While these are cases of straightforward agreement with the subject, it will be shown later on that Ripano actually shows agreement with topics. For the moment, it is sufficient to notice that adverbs inflect for number and gender and agree.

The same agreement patterns are usually found with degree adverbs (4), temporal adverbs (5), spatial adverbs (6), quantity adverbs (7):

(4) Ledgeway 2012

a.È qua∬-u muort-u is.3sg almost-sg.м dead-sg.м

'He is almost dead'

b. È quass-e mort-e is.3sg almost-sg.f dead-sg.f

'She is almost dead'

(5) a. Cə vac-u sembr-u there go.1SG-M always-SG.M

'I_M always go there'

b. Cə vach-e sembr-e there go.1sG-F always-sg.F

'I_F always go there'

(6) a. Ne macchene l'-è mist-u sott-u a.SG.F car.SG.F him-is.3SG put-SG.M under-SG.M

'A car ran him over'

b. Ne macchene l'-è mmist-e sott-e

a.SG.F car.SG.F her-is.3SG put-SG.F under-SG.F

'A car ran her over'

(7) Lambertelli (2003:45-46)

a. Esse e magnat-e tand-e she.SG.F is eaten-SG.F much-SG.F

'She ate a lot'

b. Issu e magnat-u tand-u he.SG.M is eaten-SG.M much-SG.M

'He ate a lot'

Observe that while in (3)- (5) and (7) the adverbs agree with the subject, in (6) they agree with the object clitic.

1.3. Prepositional agreement

In Ripano, prepositions and prepositional adverbs can also display ϕ -features; when they do, they usually agree with their complement:

(8) Ledgeway (2012: 309)

a. Sottu lu tavulì

under.SG.M the. SG.M coffee.table. SG.M

'under the coffee table'

b. sotte le sedie under. SG.F the. SG.F chair. SG.F

'under the chair'

(9) Lambertelli (2003:54)

a.è bianghe comm-e ne spos-e be.3 white-SG.F as-SG.F a bride-SG.F

'She is white like a bride'

b. è nir-u comm-u l-u cherv-ò be.3 black-SG.M like-SG.M the-SG.M coal-SG.M

'He is black like the coal'

c. è biang-a comm-a l spos-a be.3 white-PL.F as-PL.F a bride-PL.F

'They are white like brides'

d. è nir-i comm-i l-i cherv-ù be.3 black-PL.M like-PL.M the-PL.M coal-PL.M

'They are black like coals'

While most prepositions are invariable, the presence of this agreement pattern (for those prepositional adverbs that inflect) is widespread.

1.4. Agreement stacking

One interesting phenomenon in Ripano is what I will call here *agreement stacking*, whereby the internal argument's gender and number, which are lexically specified, are overwritten by topic-oriented agreement. I borrow this term from "Case stacking", which is a phenomenon involving DPs in some languages that can accumulate Case, especially when they are embedded (McCreight 1988, Nordlinger 1998, Merchant 2006, Richards 2013, Pesetsky 2013). For Ripano, DPs accumulate ϕ -features.

As an example of agreement stacking, consider (10):

In (10), the gender of the object varies depending on the gender of the subject. *Fame* is lexically feminine. It is listed as feminine in the dictionary, it is feminine when uttered on its own. However, feminine gender is replaced/overwritten by the gender of the most prominent element in the clause (in this case, the subject), in case of agreement stacking.

It needs to be said that this agreement stacking is found in a very limited number of cases, mostly very frequent expressions referring to bodily needs or psychological states like *to be hungry, to be thirsty, to be scared, to be in a hurry* (all of which are expressed by means of transitive/possessive HAVE plus a DP complement). Be as it may, these expressions give us a good insight into the featural setup of Ripano DPs, and on how features interact. We will return to this later on. Let us now continue with the data.

1.5. Agreement with gerunds and infinitives

Gerunds and infinitives do non inflect in Romance. Ripano gerunds do. These are some examples of gerundial and infinitival agreement:

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(11) Lambertelli (2003:43)
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a. stieng-u jenn-u stay.PRES.1SG.M going-SG.M

'I_M am going'

b. stiv-e jenn-e stay.IMPF-SG.F going-SG.F

'you_F were going'

Infinitives are also reported as inflecting by Mancini (2003) and Ledgeway. I could not find any inflected infinitive during my fieldwork, and inflected infinitive is not reported in other grammars. Here's an example:

(12) Ledgeway (2012: 302) Sai scriv-u? can.2SG write.INF-SG.M

'Can you write?'

Non-finite forms thus show gender and number agreement in Ripano. It is plausible that the existence of the inflected infinitive is a matter of intra-speaker variation, or this is perhaps an archaic feature of the language.

1.5. Topic-oriented agreement

Ripano is known for exhibiting agreeement mismatch patterns, whereby the finite transitive verb, as well as the participle in the present perfect, show a dedicated ending in case the external argument and the internal argument display different gender or number (D'Alessandro 2017). One such agreement pattern is in (13):

(13) Ripano (Mancini 1997: 107)

a. Babbu dic-ə l-e vərità. dad.SG.M say-3SG.MM the-SG.F truth.SG.F

'Dad says the truth.'

b. So magnat-ə l-u panì.

be.1sg eaten-mm the-sg.m breadroll.sg.m

 $^{\prime}I_{\scriptscriptstyle F}$ have eaten the breadroll. $^{\prime}$

This system is attested in many old grammars, and has been found also during fieldwork. It is, however, restricted to cases of SVO sentences, in which no obvious information structure is visible.

One interesting feature of Ripano, which is shared by other dialects of the area to a lesser extent, is that elements that are prominent in the clause, more specifically topics, usually trigger agreement. Agreement does not take place with focused elements. In (14), the first clause includes a contrastive focus (*he*), which triggers the selection of a reduced agreement ending (the same as the mismatch marker, MM), while the second clause features agreement with a clitic left-dislocated object (a topic, thus):

(14) Rossi (2008:51)

ISSU e rott-ə l-u vitria he.SG.M is broken-N the-SG.M glass-SG.M

e l-e corb-e l'-e ddussat-e a me

and the-SG.F fault-SG.F it.SG.F-be.3 attributed-SG.F to me

'It was HIM who broke the glass, and now he is saying it's my fault.'

That agreement takes place with topics but not with foci is shown by the following minimal pair:

(15) Paciaroni (2017: 9)

A. Chi ride? 'Who laughs?'

B. Rid-ə <u>Gianni</u> (New Information Focus)

laughs-3SG.MM Gianni-SG.M

'Who is laughing? Gianni'

(16) Paciaroni (2017:9)

A. Che fa Gianni?

'What does Gianni do?'

b. Eh, rid-u Gianni (Topic)
... laughs-SG.M Gianni-SG.M

'Eh, Gianni laughs'

Focused elements trigger the selection of the reduced vowel, also marking mismatch. This might be a default resolution of agreement in the case in which the verb cannot find anything to value it. Topics instead trigger agreement.

The next sentence shows that agreement holds with the topic even if it is an indirect object:

(17) Rossi (2008:23)

A Merie, l-e spos-e me, je so fatt-e l'enelle d'ore to Mary.SG.F the-SG.F bride-SG.F my her.DAT am made-SG.F thering.SG.Mof gold 'To Mary, my fiancée, I gave a golden ring.'

In this example, agreement is with *Merie*, the indirect object, which is topicalized. Observe that although clitic left dislocation triggers agreement with the cliticized element in Italian, indirect objects never agree.

Finally, we have examples of agreement with topics that are in-situ objects:

(18) Rossi (2008:93)

L-u petrò e mannat-a l-e disdett-e a lu cuntedì the-SG.M lord be.3 sent-SG.F the-SG.F cancelation-SG.F to the farmer 'The owner sent the cancelation to the farmer.'

The ending of the past participle is -a, not -e. We will return to the different agreement endings and the contact-induced paradigm shift. In any case, there is no doubt that the past participle agrees with the object in-situ. The choice of -a instead of -e might also be due to the fact that this sentence, in the archaic dialect, was probably uttered with an agreement mismatch marker,

which is a -a. Agreement is no longer with both arguments here, but with the most prominent, which is not the subject.

Another example of topic-oriented agreement with an in-situ object is in (19)

(19) Rossi (2008:140)

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L-u nonna e lasciat-a tutta l-e robb-e the-SG.M grandpa be.3 left-F all-SG.F the-SG.F things-SG.F 'Granpa has left all his belongings.'
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In what follows, we will try to analyze these data as a unified phenomenon. First, a general introduction to the agreement system of upper-southern varieties will be outlined. It will be shown that these varieties feature an extra ϕ -bundle of unvalued features, which dock on different hosts.

I will then outline an analysis that builds on Miyagawa (2017), who shows that discourse features enter agreement relations just like $\,\phi$ -features. Building on Miyagawa (2017), I will argue that in Ripano topics exhibit a δ feature. Furthermore, the finite verb and all other agreeing elements exhibit a feature bundle which includes both unvalued ϕ features and unvalued δ features. These features sets are linked and features cannot probe on each separately.

While the agreement system of Ripano is similar to that found in Chichewa and other Bantu languages (Bresnan & McHombo 1987) and partially recalls Dinka wh-agreement (van Urk 2015), I will show that its Topic-agreement resembles more Concord and feature spreading than Agree under c-command.

2. Agreement in Upper-southern Italian varieties

2.1. A unified analysis

The agreement system of upper-southern Italo-Romance varieties is seemingly quite complex. We can start from the general observation that we see agreement in contexts in which we don't usually see it (i.e. adverbs and pronominal roots). In the case of Ripano, we need to ascertain at least two things. The first one is what makes this agreement possible. This seems like quite a naïve question, the answer of which is 'some phi-features', but if we wish to have a uniform theory of agreement we need to find evidence that these extra features exist.

The second issue is what is agreeing with what. We have already seen, in 1.2., conflicting evidence regarding what the adverbs are agreeing with. They seem to be able to agree both with the internal and with the external argument. This is an indication of the fact that agreement is not structure-driven, but rather information-structure driven.

To analyze the Ripano data I propose is the following:

- Agreement on adverbs, gerunds, etc is possible in Ripano because of an extra set of unvalued ϕ -features, which are visible in most Italian varieties in different forms.
- Agreement, at least in Ripano, is information-driven. Specifically, for Ripano and neighboring varieties, agreement is topic-oriented, i.e. driven by a δ -feature on the Topic.

In what follows, I will first show how the extra feature set which has been proposed by D'Alessandro (2017) can account for these data. Then, I will show that agreement in Ripano is information-driven. Finally, I will propose a tentative unified analysis for argumental agreement as well as adverbial, verbal and prepositional agreement.

2.2. An extra φ-set

In the Minimalist Program (Chomsky 1995) and in much of the subsequent literature, features are considered to be either interpretable or uninterpretable², where interpretability needs to be understood roughly as "legible at the interfaces". The only interface that actually counts for interpretability is LF, and much of the discussion on interpretability concerns *semantic* interpretation (see, for instance, Zeijlstra 2008). According to Zeijlstra (2008 ff.), a formal feature that also has semantic content will be interpretable; a formal feature that does not have semantic content will be uninterpretable, and will therefore need to be eliminated before it reaches the interface with the C-I system.

Interpretability is crucially linked to the feature host: number is for instance interpretable on DPs but not on verbs. A verb carrying uninterpretable features must get rid of them before it reaches the interface, or the derivation will crash.

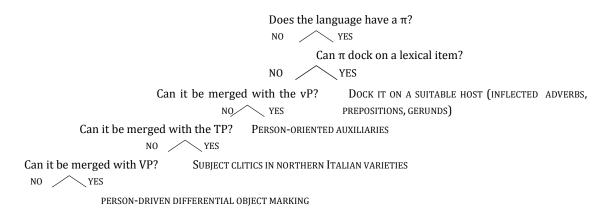
This formulation of interpretability stems from the early Minimalist Program, which had at its core a morphemic view of the Numeration items, inherited from the GB era. Derivations applied to morphemes, elements moved to incorporate morphemes (for example, early MP made use of Belletti's 1990 Generalized Verb Movement as a model). In contemporary views of syntax, uninterpretable features identify phase heads, and join the derivation in bundles, but work individually. Each feature probes by itself (but see Case, which is assigned under full Match/Agree according to Chomsky 1998/2000). The phonological realization of features is a matter which is defined post-syntactically, at PF. Morphemes no longer come in the picture. Nevertheless, the problem of hosting features has remained, and selection and mapping are a stringent problem, more than ever.

One issue which remains unaddressed is what happens to a bundle of unvalued/uninterpretable features without a host. Selection is usually category-driven. For instance, a verb selects a DP as its complement. But what happens if we have a bundle of uninterpretable features, that are a-categorical, and yet need to be merged in the derivation? What is it merged to? At which point does it join the derivation?

In case there is no obvious merging locus for a bundle of features, because they are a-categorical, languages choose by themselves where to locate these elements. What I would like to propose here is that the merging locus of bundle of unvalued features (which I call π following D'Alessandro 2017), is determined parametrically, as illustrated in (20):

 $^{^2}$ I leave aside here the discussion of the relation between interpretability and valuation. For that, see Pesetsky and Torrego (2007), Zeijlstra (2008) and many others.

(20) the locus of merger of π



In a recent article, D'Alessandro (2017) shows that some subject clitics (those that are not pronominal in nature) in northern Italian varieties and person-oriented auxiliaries in uppersouthern ones are two faces of the same coin: an extra uninterpretable ϕ bundle, which is realized as a subject clitic in northern varieties as an auxiliary root in southern ones. We leave aside the cases of π -merger with functional projections in this paper, as well as the multiple occurrence of π , and concentrate on the cases in which π docks on lexical items and on T. This state of things is quite rare in Romance, but it seems to be exactly what is going on in Ripano as suggested by the agreement stacking cases listed in 1.4.

Ripano, as most Italo-Romance varieties, exhibits a ϕ -bundle (π) in its lexical inventory. What makes Ripano so special is that the bundle is not only merged to functional heads as is the case in other varieties, but it is merged at word level. In a view of grammar in which words are built at narrow syntax, this can be rephrased as saying that π in Ripano is merged as the head of a word structure (because it overwrites every other agreement).

The missing tile to complete the puzzle is topic-oriented agreement. The next section will be devoted to introducing this phenomenon which seems to be spreading in the area; thereafter, I will show how adverbial agreement can be accounted for in these terms.

3. Topic-oriented agreement

3.1. Directionality of agreement

Theories of agreement come in many different fashions. In general, one feature which characterizes all theories of agreement regards its structural dependency: what agrees with what depends on the structure in which the elements are. One of the hottest debates of these years regards the directionality of the operation Agree: according to Chomsky's first formulation, Agree can be both probe-oriented and goal-oriented. In the early MP, agreement is linked to movement. The conditions for both to apply are the following:

(21) Chomsky (1995: 257)

α can target K only if:

- a. a feature of α is checked by the operation
- b. a feature of either α or K is checked by the operation
- c. the operation is a necessary step toward some later operation in which a feature of $\boldsymbol{\alpha}$ will be checked

The very beginning of Agree conceived as an operation does not establish a precise direction for it. In (1998/2000) with *MI*, Chomsky dissociates movement from agreement, and establishes that Agree place under c-command (in short, downwards). According to Zeijlstra (2012), Bjorkman & Zeijlstra (in press) and Wurmbrand (2012, 2014, 2017), however, this is wrong; data from negative concord, fake indexicals, and other phenomena show that Agree should take place "upwards": not simply under a Spec-Head relation but simply in a reverse manner with respect to Chomsky's Agree, with a Goal c-commanding a Probe. Agreement under c-command is assumed also by the *feature sharing* model developed by Pesetsky & Torrego (2007) and Preminger (2012, 2013, 2014),

Many other definitions of agreeement have been proposed through the years, from *Cyclic Agree* (Béjar & Rezac 2009), which is substantially agreement à la Chomsky plus a re-projection allowing in practice to probe upstairs, to bidirectional agreement (Boskovic 2007 ff. In general, it is safe to say that, unless we are dealing with a special set of data which require special extra postulations, general theories of agreement select one direction and stick to it.

Directionality has of course everything to do with structural relations between agreeing elements. What matters is, for instance, that the probe and the goal are in a c-command relation. In general, given that the arguments of the verb occupy well-defined position at the moment of Transfer, one can safely link argumental positions to agreement sites.

One systematic exception to this agreement taxonomy is the topic position. While topics have been mentioned with respect to agreement phenomena in different fashions, agreement with topics has rarely been discussed (Bresnan & Mchombo 1987, Lambrecht 1981). Topic agreement is identified as a kind of agreement, for instance, by Miyagawa (2017), according to whom δ -features (discourse features) behave like ϕ -features: they enter agreement, and trigger movement. δ -features are, however, different and distinct from ϕ -features. According to Miyagawa, there are languages in which δ -features and ϕ -features appear/are percolated to the same head (for instance, in Spanish), but there is no causality between topichood and ϕ -agreement.

Miyagawa also discusses cases of ϕ -agreement with topics (most notably, the case of Northern Italian varieties in (22).

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(22) Miyagawa (2017:90)
Gli è venut-o dell-e ragazz-e
SCL is.2SG come.PRT-SG.M some-PL.F girls-PL.F
'Some girls have come'
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He analyses these data as involving movement of the subject to Spec,TP for ϕ -agreement reasons, then resulting in agreement with the DP that has moved to Spec,TP, a topic position. In case the DP subject stays in-situ, the finite verb will fail to show agreement. Agreement is a

consequence of movement, but there is no direct causality, for Miyagawa, between topichood and ϕ -agreement.

Regarding Romance, Jiménez Fernández (2016) convincingly shows that *pro* is licensed in Spanish only if co-referential with a Topic (and aboutness shift topic³). I take this to be also a form of agreement with the topic.

An interesting proposal regarding agreement with wh- or topicalized phrases in Bantu comes from Carstens (2005), who observes the following agreement patterns in Bantu:

(23) Carstens (2005:220)

a.Bábo bíkulu b-á-kás-íl-é mwámí bíkí mu-mwílo? 2that 2woman 2SA-S-give-PERF-FV 1chief 8what 18-3village 'What did those women give the chief in the village?'

b. Bikí bi-á-kás-íl-é bábo bíkulu mwámí mu-mwílo? 8what 8CA-A-give-PERF-FV 2that 2woman 1chief 18-3village 'What did those women give the chief in the village?'

Carstens proposes a correlation between the presence of ϕ -features and the presence of an EPP on C, disentangling wh-agreement from movement. C has $u\phi$ -features, which enter Agree under c-command with a wh-phrase, which is subsequently moved to Spec, C. More precisely, she proposes the following generalization:

(24) Bantu φ_{EPP}: uφ-features have EPP features, in Bantu (Carstens 2005:222)

Similar reasoning is found in van Urk's work on agreement in Dinka. Like Carstens, Van Urk (2015) examines cases of C-agreement, and attributes them to the presence of ϕ -features on C (see also Haegeman & van Koppen 2012). One important ingredient of Van Urk's analysis is the V2 status of Dinka, allowing C to agree with wh- elements and topics. The verb shows agreement with these elements because C is ϕ -rich. This richness allows both for V2 but also for wh- and topic agreement with the verb, which c-commands these elements (at some point in the derivation). The right configuration is required for agreement of this sort.

Much though it would be tempting to apply these analyses for Ripano, by postulating for instance the presence of an unvalued Topic feature on the Topic head, probing for elements under c-command, there are at least two problems. The first is that Ripano does not show any evidence for the fact that the Topic moves to Top; the second is that it is the verb, not C, showing agreement in Ripano, and the verb in Ripano is in T (like in every other Romance language). We Reverse Agree could work for a Topic on a Topic head, but it is not obvious at all that topics all move to a head higher than T; plus, in every other element agrees with the topic, as we have seen, and not all these elements uniformly c-command or are uniformly c-commanded by a Topic.

To come to an analysis, let us briefly summarize what we have so far and what else we know about about Ripano:

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³ I have not made a finer-grained analysis of the kinds of topics involved in agreement, in this paper. I intend to perform some fieldwork looking at intonation, but at the moment I only have written sources and not enough recordings to be able to ascertain the different kinds of topics in the clauses.

- 1. The finite verb, as well as the participle, agrees with the topic, be it preverbal or postverbal (3.2)
- 2. Preverbal and postverbal foci do not trigger agreement (3.3)
- 3. If no topic is identifiable in the clause and the sentence has the canonical SVO order, agreement mismatch emerges (3.4)
- 4. Topic agreement overwrites the featural specification of DPs (3.5)
- 5. In the archaic variety, there used to be wh- agreement with the topic. That is no longer the case (3.6)
- 6. Elements that usually don't inflect in Romance, like adverbs and gerunds, can inflect in Ripano (3.7)

All these facts, I wish to argue, can be explained if we think that the extra ϕ -bundle on agreeing items comes with a Topic feature (a δ feature in Miyagawa's terms) in Ripano. The features of this bundle (saying "I want to agree with the topic") must be valued at once, all together, and overwrite any other agreement. Furthermore, the Topic holds a valued δ -feature. Much like in Carsten's system, agreement with the topic takes place because of this δ -feature; the condition of simultaneous agreement with the whole bundle creates agreement with the Topic as a byproduct.

Let us first return to the data for a closer examination, and then see how they can be accounted for in section 4. In this paper, we will follow the standard assumption that unvalued features are uninterpretable (but see Pesetsky and Torrego 2007 for a different view).

3.2. Agreement with preverbal and postverbal topic

Wherever the topic is located, the verb will agree with it. Consider the sentences

(25) Rossi (2008:71)

So magnat-u l-e mənestr-e də paste e cicia am eaten-SG.M the-SG.F soup-SG.F of pasta and chickpeas ' I_M ate a pasta and chickpea soup'

(26) Harder (1998:394)

a. Io tə ved-u I.M you.2SG see-SG.M 'I see you' a. Io və ved-i I.M you.2PL see-PL.M 'I see you $_{\text{PL}}$ '

(27) Rossi (2008:93)

L-u petrò e mannat-a l-e disdett-e a lu cuntedì the-SG.M lord be.3 sent-SG.F the-SG.F cancelation-SG.F to the farmer 'The owner sent the cancelation to the farmer'

In (25), the subject is a topic, and both the copula and the participle agree with it (notice that in other Romance varieties the past participle does not agree with the subject; Belletti's 1995 generalization, but see D'Alessandro & Roberts 2010).

In (26), the verb agrees in gender and number with the cliticized object. This kind of agreement in only found in participles in the rest of Romance, and never on finite verbs. (27) illustrates instead the case of agreement with an object topic.

3.2. Focus does not trigger agreement

In Ripano, focused elements do not trigger agreement. Consider again this contrast, reported by Paciaroni (2017):

(28) Paciaroni (2017: 9)

A. Chi ride? 'Who laughs?'

B. Rid-ə <u>Gianni</u> (New Information Focus)

laughs-3SG.MM Gianni-SG.M

'Gianni is laughing'

(29) Paciaroni (2017:9)

A. Che fa Gianni?

'What does Gianni do?'

b. Eh, rid-u Gianni (Topic)

laughs-SG.M Gianni-SG.M

'Eh, Gianni laughs'

The contrast between these two sentences is very neat; in both cases the subject is postverbal, but in (28) it is a New Information Focus (Lambrecht 1991, Cruschina 2012, Frascarelli 2007), while in (29) it is a topic. Agreement does not take place simply via Agree, but it has an extra component, linked to information structure.

Further evidence that Focus does not trigger agreement is offered again by Paciaroni (2017):

(30) Manga N-U FRIKÍ a pagat-a/-ə/*-u l-u bijetta not even a.SG.M boy.SG.M has paid-N/MM/SG.M the-SG.M ticket.SG.M 'Not one single boy has paid the ticket'

Neither new information focus nor contrastive focus trigger agreement in Ripano.

3.3. Agreement mismatch

If no topic is identifiable, or no element is salient in the clause, agreement in transitive clauses features a mismatch ending (D'Alessandro 2017). The data are illustrated in (31).

(31) Mancini (1997: 107)

a. Babbu dicə le vərità

dad.SG.M say.3SG.MM the.SG.F truth.SG.F

'Dad says the truth.'

b. So magnatə lu pani'

am eaten.MM the.SG.M breadroll.SG.M

'I_F have eaten the breadroll.'

We won't discuss this specific pattern here, but address the reader to Mancini (1997) and D'Alessandro (2017) for a discussion of the agreement mismatch phenomenon in Ripano.

3.4. Agreement stacking

Topic-oriented agreement overwrites the agreement ending of the noun. In Ripano, like in the rest of Romance, nouns are morphologically marked for number and gender. When agreement with a Topic is involved, it overrides these endings, in what I call agreement stacking.

(32) a. C'-aju fam-u / set-u / furj-u EXPL-have.1SG.M hunger.F-SG.M thirst-SG.M hurry-SG.M ' I_M am hungry/thirsty/in a hurry'

b. C'aje fame / set-e / furj-e EXPL-have.1SG.F hunger.F-SG.F thirst-SG.F hurry-SG.F 'I_F am hungry/thirsty/in a hurry'

Agreement stacking is particularly interesting as it offers an insight into the featural composition of lexical items. As stated above, the words *hunger*, *hurry*, *thirst*, etc are feminine. We can see this when they are uttered in isolation; they are also listed as feminine in the dictionary, and they are feminine in Italo-Romance languages. The fact that they inflect suggests that π agreement with the Topic (in this case, the subject) overwrites the lexical ending. We can think of this process in two ways: the first is to conceive some sort of embedded DP, along the lines of Case-stacking (McCreight 1988, Nordlinger 1998, Merchant 2006, Richards 2013, Pesetsky 2013). The other is to consider that inflection works at head level (or at word level), not at phrase level. This second option correctly accounts for both DP agreement stacking cases, as well as PP and numeral phrases. There, agreement is clearly visible on the head:

(33) Lambertelli (2003:30)

a. Sema ott⁴ femmen-a are-PL.F eight-PL.F woman-PL.F 'We are eight women'

b. Semi ott-i maschia are-PL.M eight-PL.M men-PL.M

'We are eight men'

Given the fact that agreement is visible on every element, I take it that π merges at word level, not at XP level.

3.5. C-agreement in the archaic variety

In the archaic version of the dialects, cases of agreement with wh- elements are attested. Some speakers still use these forms:

 4 The author elides the final vowel, which is probably elided because of phonological clash with the next vowel. The underlying vowel is arguably -a.

(34) Mancini (1993 in Ledgeway 2006:4)

a. Ndov-u va? where-SG.M go 'Where are you_M going?

b. Ndov-i va? where-PL.M go.3 'Where are they_M going?'

(35) a. Komm-u te siend-u? how-SG.M you.ACC feel-SG.M

'How do you_{sg.m} feel?'

b. Komme te siend-e? how-SG.F you.ACC feel-SG.F 'How do you_{SG.F} feel?'

(36) Lambertelli (2003:54)

a. Quand-u cost-u? how.much-SG.M cost-3SG.M 'How much does it_{SG.M} cost?'

b. Quand-i custet-i? how.much-PL.M cost-2PL.M 'How much do you_{PL.M} cost?'

c. Quand-e cuost-e? how.much-SG.F cost-3SG.F 'How much does it_{SG.F} cost?'

d. Quand-a custet-a? how.much-PL.F cost-2PL.F 'How much do you_{PL.F} cost?'

These sentences are recognized as Ripano by most speakers, but are also no longer in use in the modern dialect.

These data are of great value, as they suggest a situation similar to that found in Dinka or in – Bantu, with C featuring a φ -set. For Ripano, this was probably also the case. The Ripano system has now moved towards a more 'standard' Romance system, exhibiting φ -features on T.

These data also show some sort of diachronic proof for feature inheritance. Ripano is not so exceptional (if compared with non-Romance languages). While the presence of extra agreement can be readily found in many other Italo-Romance varieties (as shown in section 2.2.), topic-oriented agreement might be a residue of C-agreement in an earlier stage of the language.

What we know so far is that agreement takes place with topics in Ripano; that there used to be at least some form of C-agreement; that foci do not trigger agreement; that Ripano, like other Italo-Romance languages, features a bundle of extra probes.

Let us now turn to the analysis of the data, in Section 4.

4. Agreeing with topics

4.1. The topic is the external argument

We have seen abundantly that agreement in Ripano is topic-oriented. We have also seen that the verb features an extra φ -bundle π which allows for gender inflection.

Topic agreement and ϕ -agreement are strictly linked. If an argument is not marked as Topic, agreement will follow the structural Agree pattern, with agreement mismatch or agreement of the finite verb with the subject, depending on the verb class. Following Miyagawa, I consider topics as involving a δ -feature (discourse). Miyagawa shows that in group-D languages, like Spanish, δ -features and ϕ -features are both inherited by T. Ripano shows diachronic evidence for this kind of inheritance. In Ripano, π contains both δ - and ϕ - features; δ -feature agreement also forces ϕ -feature agreement. In other words, while δ - and ϕ - feature have different nature, they belong to the same set, and do not probe individually, but together.

Observe that Miyagawa uses the shorthand δ -features to refer to any discourse-related feature. Here, I use δ -feature to refer to topics, but not to foci.

Whenever an element is a topic, it will have a valued δ -feature, which can value all πs entering the derivation. The extra probe π (a bundle of unvalued, uninterpretable features) contains at least number and gender, and can be found on many different heads: it can be found on T (in which case it will be visible on inflectional endings), on Adv (in which case it will be visible as an ending on the adverb), on P (in which case it will be visible as an ending on prepositions), or it can be on v (assuming that that's where non-finite verbs are), in which case it will surface as an ending for gerunds and participles.

It is crucial that π in Ripano also includes an unvalued topic feature u δ , which needs to be valued against a topic. When this probe enters agreement with a topic, he whole bundle will be valued according to the topic features. π in Ripano is hence [u δ , uN, uG].

Let us consider the sentence in (37), where the subject is clearly a topic:

(37) Rossi (2008:86)

Tu nghe mme ti pij-u tropp-e cunfidenz-e you.M with me REFL take-SG.M too.much-SG.F confidence-SG.F 'You take too much liberty with me'

The featural setup of the relevant elements is as follows:

```
(38) tu [δ, N:SG, P:2, G:M]
T [T:pres, M:indicative, uN, uP; uδ, uN, uG]
```

The relevant part of the derivation is illustrated in (39):

```
(39) [TP tu T T:pres, M:indicative, uN, uP; u\delta, uN, uG ... [vP tu \delta, N:sg., P:2, G:M
```

u δ features on T prove u δ features on the subject in spec, v. For the moment, we can assume that T enters Agree with the DP subject, and gets its ϕ -features valued by it. The subject and the topic being coincident, there is intervention nor any problem in this operation. This is not the case, however, when the topic is not the subject in canonical spec, T position. Let us now turn to examine this case.

4.2. The topic is the internal argument

Let us now look at the case in which the topic is an object in-situ. The situation here is more complex, as the subject intervenes between the finite verb (in T) and the internal argument.

Consider the examples in (40) and (41):

(40) Rossi (2008:59)

C'-eviè set-u e mə so fatt-a n-e bbəvut-e ... EXPL-had thirst-SG.M and REFL.1 am made-SG.F a-SG.F drink-SG.F 'I was thirsty and I drank...'

(41) Rossi (2008:87)

L-u preta cunzacr-e ll'-ostia the-SG.M priest.SG.M consecrate-3SG.F the-host.SG.F 'The priest consecrates the Host'

In these examples there is agreement with the object *in situ*, which is a topic. The topic object exhibits a δ -feature, which is c-commanded by everything else. We have analyzed agreement with the subject topic as a case of Agree, but in the case of (40) and (41) the subject intervenes between T and the object (at least in the stage of the derivation in which agreement takes place). Agreement should be blocked, but it isn't.

We know that in the case of agreement with both arguments agreement mismatch is at work, so the verb can see both arguments (D'Alessandro 2017). In the case of a topic, Agree cannot be generalized, nor can reverse Agree (Zeijlstra 2008, Wurmbrand 2012, 2014, 2017). Agree would wrongly predict that the subject should intervene in topic-oriented agreement with the in-situ object; reverse Agree would wrongly predict that the subject would intervene in agreement between a Topic above T and the probe in internal argument position. If the subject were the topic, this would not be an immediate problem, but if the topic were any other element, the object would not be able to probe Top. The issue of directionality is quite problematic for Ripano, in that probes and goals appear in every possible mutual position.

There are two considerations to be made at this point. We said that the features contained in π must probe simultaneously, and that they search for a δ feature. This means that the subject would not be a defective intervener, or if it would, the agreement features with the subject would be overwritten. The second consideration is that agreement in Ripano does not involve just arguments, and looks like an extended version of adjectival agreement. In other words, it looks like the features of the Topic spread on every other element.

The most sensitive way to go is therefore to consider π agreement as a sort of adjectival agreement; agreement in Ripano is in fact obtained under Concord (Baker 2008). According to Baker (2008), adjectival agreement can be both upward and downward. The crucial element that determines the switch and "freezes" the direction is person. Now, in Ripano person is NEVER involved in π agreement: π exhibits number and gender, and topicality. This means that it is safe to assume that π agreement mirrors adjectival agreement and is obtained through Concord.

There is some other morphological evidence for the fact that we are dealing with feature spreading rather than Agree.

In many cases, the contact with Italian has brought the gender marking on some nouns to shift. feminine singular nouns, marked with -e in Ripano, sometimes appear with -a, which is the Italian marker for feminine singular. Furthermore, some masculine nouns end in -a in Ripano. While these nouns always take the masculine singular article lu, the agreement they trigger is they are topicalized sometimes surfaces as -a, as shown in (42):

(42) Rossi (2008:113)

Giggì m'-è data 'ne bbòtte de ommeta Gigi.sg.M me-is given.SG.F a.SG.F blow.SG.F of elbow.SG.M

senze ccorge-s-a

without realizing.REFL.SG.?

'Gigi has given me a blow with his elbow without realizing'

In (42) it is very difficult to understand what is agreeing with what. Data is definitely feminine, but with a "modern"/Italian ending. It is agreeing with the object bbotte. Ommeta is masculine ($lu\ ommeta$) but it has an -a ending (probably a residue of a neuter/dual). The reflexive verb shows an -a ending, as a result of the spreading from ommeta or from botte. In any case, we would expect a masculine there, but we find a feminine or, at best, a neuter/masculine. This piece of data shows, I think, that there is a sort of ending harmony going on in the language. Agreement takes place via Concord, but many words just copy the actual morphological ending within the clause, not the feature value. This phenomena exclude Agree as a possibility, if anything.

For the moment, we propose the following tentative generalization for Ripano π agreement:

(43) Ripano π agreement takes place via Concord, while argumental agreement takes place via Agree

This mixed system involves both arguments and lexical items, and is the result of a rearrangement of the agreement system from argument-driven to information-structure driven. Observe that older stages of the language kept the two systems apart: Topic-oriented agreement was in place for adjectival-like elements (including gerunds, and wh-elements) while argumental agreement was resolved via Agree. Agreement mismatch, widely documented and still found, marginally, in fieldwork in 2007, but disappeared since, is obtained via Agree, cannot be obtained via Concord (there is clear agreement of T with the subject, and v with the object, very much in line with Italian).

Recall that Ripano has agreement stacking: even if T Agrees with the subject, the values of π overwrite this agreement; the internal argument, being a full goal (having both valued ϕ -features and δ -feature) values π ; lexical insertion at PF will insert the features corresponding to the values of π as the verb inflectional ending.

Adjectival agreement/Concord usually takes place within a given domain. In the Italian sentence in (44) the feminine singular of *casa* spreads in all directions but only within the DP; the participle *comprato* is masculine singular, and is not affected by Concord.

(44) Ho comprato [una bella casa nuova]

In the case of Ripano, δ is present on the Topic head by definition, therefore the topic agreement domain includes at least the head marked as Topic. In general, from sentences like (40) here repeated as (45), it seems safe to say that the spreading domain is the clause, although PPs constitute an exception, as will be shown in 4.4.

(45) Rossi (2008:59)
C'-eviè set-u
EXPL-had thirst-SG.M
and REFL.1 am made-SG.F a-SG.F drink-SG.F
'I was thirsty and I drank...'

Recall that in archaic varieties it was possible to find also wh-agreement (and Ripano, like all Italo-Romance varieties with some exceptions, has wh-movement). For that grammar, the agreement domain was the entire clause. For modern Ripano, agreement spans from the VP to at least the TP.

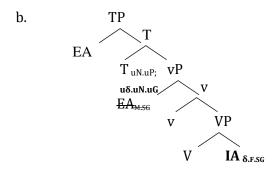
The proposal in (43) can be reformulated as follows:

(47) Ripano π agreement takes place via Concord within the TP, while argumental agreement takes place via Agree

Let us now turn to the derivation of (40) and (41), taking (41) for ease of illustration. (48) shows the derivation.

(48) Rossi (2008:87)

a. L-u preta cunzacr-e ll'-ostia the-SG.M priest.SG.M consecrate-3sG.F the-host.SG.F 'The priest consecrates the Host'



T's ϕ -features get valued by the EA. T's π looks for a perfect Match, i.e. for an element with a δ feature. It finds the IA and the features of the IA get copied within the whole TP via Concord. π 's values overwrite the ϕ -feature values on T. Observe that while this could be done via Agree (ignoring the ϕ -features of the subject, which enter Agree with the original ϕ -features on T but then get deleted), in the case in which more agreeing elements are present in the domain this sort of spreading cannot be easily explained. We will return to this in section 4.3.

The same logic applies in the case of object clitics that are topics, as in the case of examples (26), here repeated as (49):

(49) Harder (1998:394)

a. Io tə ved-u I.M you.2SG see-SG.M 'I see you' a. Io və ved-i I.M you.2PL see-PL.M 'I see you_{PL}'

 π on the finite verb agrees with the object; this agreement overrides agreement with the subject.

Observe that in Romance only the past participle agrees with the promoted object, but not the finite verb (Belletti 2005, Kayne 1989, 2000). In the Italian translations of the Ripano examples the verb agrees with the subject.

4.3. Adverbial agreement

We have seen that the extraordinary agreement patterns of Ripano are not limited to topic agreement. Adverbs can also show agreement, as illustrated in example (3), here repeated as (50).

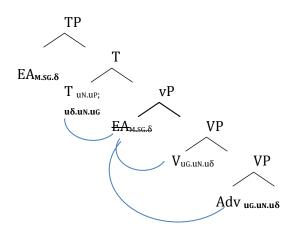
(50)	a.	Issu	ha	rispost-u	mal-u		
		he.3sg.m	have.3sg	answer.PTC-SG.M	badly-SG.M		
		'He answered	'He answered badly'				
	b.	Esse	ha	rispost-e	mal-e		
		she.3sg.F	have.3sg	answer.PTC-SG.F	badly-SG.F		
	'She answered badly'						
	C.	Issi	ha	rispost-i	mal-i		
		they-3PL.M	have.3PL	answer.PTC-PL.M	badly-PL.M		
		'They answered badly'					
	d.	Issa	ha	risposta	mal-a		
		they-3PL.F	have.3PL	answer.PTC-PL.F	badly-PL.F		
		'They answered badly'					

(50) is an impressive example of agreement across-the board. Every element in the clause agrees with the topic.

This tells us two things. First, π is no limited to only one instance, but it can appear on several elements. Second, once again the value of π overwrites the value of the lexical endings.

Let us see how adverbial agreement works. A sentence like (48d), for instance, is derived as follows, considering once again that the feature spreading/Concord takes place within the TopP:

(51) The values of the external argument (topic) get copied onto all π s present in the clause



Once a topic has been identified, its feature values will be copied on all elements in the clause that host a π .

4.4. Agreement within the PP

The same mechanism accounts for agreement on gerunds and wh- elements (in the archaic variety). An interesting exception seems to be offered by prepositions; while it is often the case that PPs are inflected for gender and number, their Concord domain seems to be the PP itself. We have seen examples (8) and (9) (here repeated as 52 and (53) where prepositions agree with their complement. It is not obvious, though from these examples, whether Concord within the clause:

(52) Burroni *et al* (2016)

a. Sottu lu tavulì

under.SG.M the. SG.M coffee.table. SG.M

'under the coffee table'

b. sotte le sedie under. SG.F the. SG.F chair. SG.F

'under the chair'

(53) Lambertelli (2003:54)

a. è bianghe comm-e ne spos-e be.3 white-SG.F as-SG.F a bride-SG.F

'She is white like a bride'

b. è nir-u comm-u l-u cherv-ò be.3 black-SG.M like-SG.M the-SG.M coal-SG.M

'He is black like the coal'

c. è biang-a comm-a l spos-a be.3 white-PL.F as-PL.F a bride-PL.F

'They are white like brides'

d. è nir-i comm-i l-i cherv-ù be.3 black-PL.M like-PL.M the-PL.M coal-PL.M

'They are black like coals'

The examples in (53) are especially unfortunate, as there is no mismatch between the features of the subject and those of the complement of the prepositional adverb. That PPs constitute their own agreement domain is shown, however, by sentences like the following:

(54) Lambertelli (2003:78)

	Comma	sembra, always	er-e be.IMPF-3.F	chepit- unders	-e stood-SG.F	d-e of-SG.F	sol-e alone-SG.F	chə that
sə	vəliev-	u	scallà	n-e	occ-e	də	vì	
REFL	wanted	d.IMPF-3SG.M	warm.INF	a-SG.F	drop-SG.F	of	wine.SG.M	

dop-a magnat-a after-N eating-N

'As usual, she had understood that he wanted to warm up some wine for himself after dinner'

This sentence is a masterpiece of Ripano agreement. The prepositional adverb *comma* ('like' agrees with *sembra* ('always'), which is found here in its basic citation form, although it can inflect (see example (5). The subject is feminine (it is a woman called *Cucumm'le*, in the story), and it triggers agreement on the auxiliary, on the participle, and on the adpositional noun. The finite verb *valievu* agrees with the subject (Giuseppe, a man, in the story). The object is feminine and does not trigger agreement with anything. The prepositional adverb *dopa* agrees with

magnata, an "neuter" form. We know that dopa can inflect from the existence of sentences like (53), mentioned in Ledgeway (2012).

(55) Ledgeway (2012:309)

a. dop-u ddì after-SG.M day.sg.m the-SG.M 'after the day'

b. dop-e l-e nott-e after-sg.F the-SG.F night-SG.F

'after the night'

Prepositions thus probe within their own domain, and tend to agree with their complement.

5. Conclusions

This paper has presented some novel data on an agreement pattern found in Ripano, a dialect spoken in a central Italy. In Ripano, lexical items that are usually invariable in Romance show inflection. These elements tend to agree with the topic, within the clause.

Ripano also shows peculiar argument agreement patterns: the verb does not agree with a fixed argument depending on the verbal class, but it agrees with the topic. If no topic/most prominent element in the clause is identifiable, the verb shows an agreement mismatch ending.

These agreement facts have been accounted for by showing that, like in other Italo-Romance varieties, Ripano exhibits lexical items made up of pure φ -feature bundles, which in the case of this particular language can dock on many elements in the clause (gerunds, prepositions, whelements, finite verbs). The existence of this extra probe, which also contains an unvalued topic feature forcing it to agree with the topic, creates these surprising (for Romance, at least) agreement patterns.

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