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Questa è la Versione finale referata (Post print/Accepted manuscript) della seguente pubblicazione:

Original Citation:

N morphology and its interpretation. Romance feminine singular/plural -a / M. Rita Manzini, Leonardo M. Savoia. - STAMPA. - (2019), pp. 257-293.

Availability:

This version is available at: 2158/1169319 since: 2019-12-18T17:34:55Z

Publisher:

John Benjamins

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N morphology and its interpretation: Romance feminine singular/plural *-a*.

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Abstract. This contribution deals with the *-a* inflection in Italian varieties, which realizes plural as well as feminine singular. Thus the *-a* inflection externalizes apparently irreducible contents (singular/plural). We try to answer the question whether it is possible to unify these two readings. Feminine plural *-a* alternating with masculine singular characterize Standard Italian and many South-Italian dialects (sections 1-3). On the contrary, in North-Lombard, Romansh and North-Tuscany varieties *-a* characterizes feminine singular and plural, while the specialized *(-i)* plural morphology occurs on determiners (sections 4-7). We argue that in both types of languages, the *-a* plural externalizes a nominal class property [aggregate]. We propose that [aggregate] is at the basis of the superficial syncretism between plural and singular/feminine in the occurrence of the *-a* inflection. Indeed [aggregate] introduces a notion of plurality as aggregate of individuals compatible at least with mass singulars (aggregates of parts). In general, the inflectional vowels of Romance languages, or in any event Italian *-a*, are not mere byproducts of paradigmatic organization, but are lexical items, endowed with interpretive content.

Keywords: agreement, gender, number, feminine, plural, nominal class.

1. *-a* plurals in Standard Italian and Central Calabrian

In this section we briefly present the Romance *-a* plurals that are the object of our discussion. In Standard Italian, *-a* appears to be feminine and singular by default; however (apart from occurrences as masculine singular, not relevant here), it also introduces the plural of a set of nouns characterized by a distinctive semantics, denoting “a plurality of weakly differentiated parts” (Acquaviva 2008), as illustrated in (1b) (note that *-a* is simply indicated as A in the glosses). The singular of these nouns is masculine, as in (1a) and it sometimes displays a regular masculine plural with a pure count interpretation such as (1c), referring to artifacts. Romance languages have only two target genders, namely masculine and feminine – and the *-a* plural agrees in the feminine with determiners and adjectives in (1b). A comparison can usefully be made with other language families that have genders, for instance the Semitic languages (Fassi Fehri 2016, Kramer 2015), which display the same syncretism between feminine singular and plural (non-gender specific), despite the fact that they involve morphology unrelated to Italian.

- | | | | | | |
|-----|----|-------------------------------------|----------|-----------|--------------------------|
| (1) | a. | il | bracci-o | lung-o | |
| | | the.M.SG | arm-M.SG | long-M.SG | |
| | | ‘the long arm’ | | | |
| | b. | l-e | bracci-a | lungh-e | |
| | | the-F.PL | arm-A | long-F.PL | |
| | | ‘the long arms’ | | | |
| | c. | i | bracc-i | più | lungh-i (del fiume) |
| | | the.M.PL | arm-M.PL | more | long-M.PL (of the river) |
| | | ‘the longest branches of the river’ | | | |

The potential theoretical interest of taking up the classical topic of the feminine/plural syncretism is that recent formal syntax and semantics studies revise traditional notions of singular and plural, gender and number – yielding potential insights into their syncretism.

In the dialects spoken in Italy, the distribution of *-a* as plural of masculine nouns displays

micro-variation, which only partially repeats the Italian paradigm. A case in point is provided by the Central Calabrian varieties which in the singular distinguish two genders [fem] and [masc] and three inflectional classes *-a*, *-u*, *-ε*, as illustrated in (2)-(4) for the variety of Iacurso. At least *-ε* can combine with feminine or masculine bases, as in (4). The plural has the gender-neutral realization *-i* on nouns, on adjectives and on functional categories of the noun.¹

(2)	[masc, sg]	l-u puerk-u 'the pig'	[plural]	l-i puertʃ-i 'the pigs'	
(3)	[fem, sg]	l-a buffett-a 'the table'	[plural]	l-i buffiətt-i 'the tables'	
(4)	[masc, sg]	l-u mɛlun-ε 'the melon'	[plural]	l-i mɛlun-i 'the melons'	
	[fem, sg]	l-a cav-ε 'the key'	[plural]	l-i cav-i 'the keys'	<i>Iacurso</i>

Iacurso also has *-a* plurals, illustrated in (5), for *-u* masculine singular bases. The set of nouns to which *a* plurals apply in this variety suggests that they are semantically characterized like their Italian counterparts.² Recall that Italian *-a* plurals in (1) switch the gender to the feminine. In Iacurso, in the absence of gender distinctions on adjectives and on functional categories of the noun, no such switch is visible. In Iacurso, as in Italian, some Ns can further be seen to alternate between the *-a* plural and the *-i* plural.

(5)	[masc, sg]	[plural]	
a.	l-u jiðit-u 'the finger'	a' l-i jiðit-a 'the fingers'	
b.	l uɛv-u 'the egg'	b' l ɔv-a 'the eggs'	
c.	l-u liəttu 'the bed'	c' l-i lətt-a 'the beds'	
d.	l-u kurtiɛɾ-u 'the knife'	d' l-i kurteɾ-a/l-i kurtiɛɾ-i 'the knives'	<i>Iacurso</i>

As already mentioned, plural agreement on determiners and adjectives is systematically *-i*, independently of whether the singular is masculine or feminine, and whether the plural inflection is *-i* or *-a*, as further illustrated in (6). This allows the differentiation of *-i* from *-a* plural to emerge as independent of the alternation between masculine and feminine.

(6)	a.	kir-i ɔman-i yruəss-i that-PL man-PL big-PL 'those big men'
	b.	st-i buf'fiətt-i sunu luəŋg-i this-PL table-PL are long-PL 'These tables are long.'
	c.	l-i kurteɾ-a sunu lavat-i

¹ Here and throughout, where non-standardized languages are concerned, we report original fieldwork data, collected by one of the authors, Leonardo Savoia. Data are elicited orally, without the help of a precompiled questionnaire, and are transcribed in IPA notation directly by the fieldworker. Manzini and Savoia (2005, III: 574-658) present a survey of the major nominal inflection types in Italian and Romansh varieties, which provides an (areal, dialectological) frame of reference for the data discussed here.

² Thus where the two plurals alternate, as in (5), we may think of the *-a* plural as designating 'knives' in the same sense in which English speaks of 'a knife set'.

	the-PL	knife-A	are	washed-PL	
	‘The knives are washed’				
d.	l-i	jiðit-a/ diənt-i		luəŋg-i	
	the-PL	finger-A/tooth-PL		long-PL	
	‘the long fingers/teeth’				

Iacurso

Applying tests devised by Acquaviva (2008) we find that in partitive constructions with a singular head of the type ‘one of...’, the gender of the noun on the numeral is determined by its singular form – regardless of whether an *-a* plural is involved, as in (7).

- (7) un-u dɛ kir-i ɔv-a
 one-M.SG of that-M.PL egg-A
 ‘one of those eggs’

We conclude that there is no evidence in Central Calabrian for the switch of gender, in other words for a *genus alternans*, and we simply see the alternation of two plurals, in *-i* and *-a*. Thus across the Romance languages, the *-a* plural is not necessarily feminine, though it is in the better known examples of Italian.

2. The internal structure of the Noun

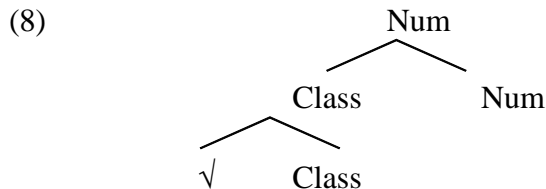
In this section we briefly lay out the model of the internal structure of the Noun on which we base our discussion. We adopt a morpheme-based analysis of inflectional phenomena and we assume that the same basic computational mechanisms, i.e. Merge, underlie syntax and morphology (Halle and Marantz 1993). We do not assume a separate Morphological Structure component (Halle and Marantz 1993:114) capable of rearranging the syntax prior to Vocabulary Insertion; in other words, we do not assume any morphological operations (for instance Impoverishment, Halle and Marantz 1993) taking place between the output of the syntax and lexical insertion. Rather we posit that the syntax projects structures from actual lexical items – and we propose to treat the so-called inflectional morphology of the noun directly within the syntax.³

In the morphemic analysis of Indo-European nouns (Halle and Vaux 1998, Calabrese 1998, 2008), the leftmost component is the root; following Marantz (1997), the root $\sqrt{}$ is category-less. Proceeding from left to right, next to the root a vocalic morpheme encodes properties that (depending on the language) include gender and/or number and/or declension class. A third slot may be available, specialized for number (e.g. Spanish *-s*) or for number and case (e.g. Latin *-s*, *-m*, *-(r)um* etc.). In the

³ From our perspective, the weakness of Distributed Morphology (DM, Halle and Marantz 1993) comes from its general conceptual structure, that assigns a complete pre-established set of interpretive categories to each syntactic node, which, later, morphology takes care of obscuring. This is an effect, that we think of as inconsistent with the requirements of evolvability and learnability of the units and mechanisms of language design (in the sense of Chomsky et al to appear). Indeed it is not clear how such opacity would have evolved – or how the rules that derive it could (efficiently) be learned. Our idea is that in many instances the traditional characterization of functional categories (case, inflectional classes, etc.) is misleading, and tends to introduce too many morphosyntactic specifications with respect to the real syntactic material externalized.

We adopt a model that presupposes that each morpheme is associated with a content able to predict its distribution. As a consequence, the different occurrences, say, of *-a* are not an instance of syncretism in the sense of DM, but an instance of ambiguity, in the sense that the interpretive category the morpheme is associated to, is sufficient to explain its ability to express plurality and feminine. In other words, what for us is the ability of a lexical item to externalize superficially different interpretations (ambiguity, cf. Kayne 2010), is downgraded by DM to a deficiency or opaqueness of the lexicon (syncretism); the possibility of a deeper characterization of lexical content is not entertained. The reader is referred to the discussion of Romance (and Albanian) mesoclitisis by Harris and Halle (2005), Kayne (2010b), Manzini and Savoia (2007, 2011d) for a comparison between DM and what Arregi and Nevins (2017) call the “Occam’s syntactic razor” approach, i.e. effectively the theoretical position endorsed here.

syntactic literature, this morphemic sequence is translated into two functional projections corresponding roughly to gender and number (Picallo 2008, cf. Déchaine et al. 2014 on Bantu nominal classes, Fassi Fehri 2016 on Arabic). In keeping with the cross-linguistic comparison with Bantu languages (and possibly with Chinese classifiers, Crisma et al. 2011), the lower category is often labelled Class, the higher category is Num, as in (8).⁴ We do not pursue the identification between Class in (8) and Marantz's (1997) nominalizing category *n* proposed by other scholars (Kihm 2005, Ferrari Bridgers 2008, Kramer 2014, 2015).



Following standard generative assumptions, even non-eventive nouns are predicates and have an argumental slot, called the Referential-role (R-role, Higginbotham 1985, Williams 1994). Further binding of the R-role by higher Q/D operators yields a referring DP. Class properties restrict the content of the argumental variable ultimately bound by D/Q. Similarly, Percus (2011) entertains the possibility of a conjunctive semantics for the (root, gender) pair. As for the traditional Class/gender vs. Number categorization in (8), Déchaine et al. (2014) assume that in reality Class is a field of categories including at least two projections for sortal Class elements (gender) and count/mas Class elements (number), labelled Inner and Outer NAsp. Conversely, the layered structuring of gender is advocated in current literature. Thus for Steriopolo and Wiltschko (2012), gender can be distributed over at least three nodes, namely the root, the *n* node and the D node.

Extra complexity arises in Indo-European languages from the fact that there is no one-to-one mapping between the content of Class, which enters agreement with determiners and modifiers, and the inflections of the noun. The latter are instead sensitive to inflectional class. The match between roots and inflectional classes can be obtained by the standard mechanism of selection. For instance, according to Oltra-Massuet and Arregi (2005), Kramer (2015) a Thematic vowel node Th is adjoined to Class/*n* postsyntactically in the Morphological Structure component. For Kramer, in Spanish the diacritics [I], [II], [III] are inserted under Th and then interpreted as vocalic endings, namely *-a* for [II], etc. In turn, the rule that inserts the class diacritics [I], [II], [III] is sensitive to the context determined by certain sets of roots, $\sqrt{p}adr$, $\sqrt{m}adr$, etc. This means precisely that we are in the presence of a selectional restriction. Indeed, this is the position taken by Kayne (2010a: 73-74). A similar approach is suggested by Acquaviva (2009: 5), namely that “morphological and semantic information can be dependent on the choice of a root without being encoded on the root itself”. To say that “a noun has gender X”, for instance, means in this perspective “a root Vocabulary item is licensed in the context of [n] with gender X”. In other words, the standard notion of selectional restriction is powerful enough to encode the fact that a certain Class content is associated with a certain lexical base and not with others.

As for nominal Class (i.e. gender) content, it may be determined directly by the root, as in Italian *donn-a* ‘woman’, feminine or *marit-o* ‘husband’, masculine – where the female or male sexual characters denoted by the root are mapped to feminine and masculine gender. What is more, some (root, Class) combinations are interpreted compositionally, as in *figli-o* ‘son’, *figli-a* ‘daughter’. In other instances, the standard notion of selectional restriction is again powerful enough to encode the fact that a certain Class content is associated with a certain lexical base and not with others.

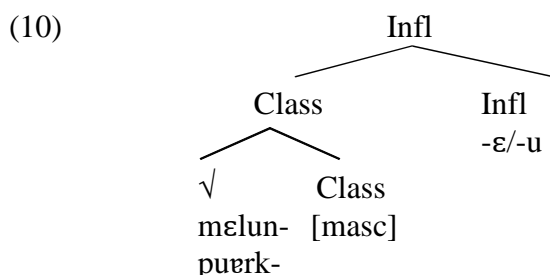
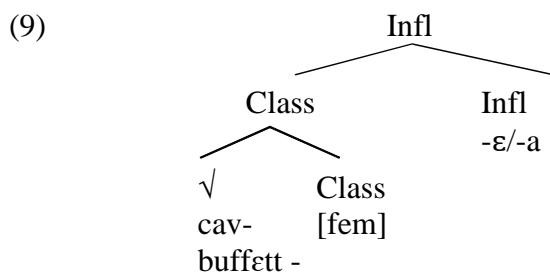
Theorists generally do not question the fact that Class (i.e. gender) may sometimes be interpreted and sometimes not and simply seek to model it. For Kramer (2015), the difference is to

⁴ The tree reflects the order of the surface string. Indeed we do not assume that structures are necessarily right branching and that mirror orders are created by movement, as one would in the Kaynian/cartographic tradition.

be expressed via the [interpretable] feature. Yet this cannot be assimilated to Chomsky's (2000) feature of the same name. In Chomsky (2000), a given category is never associated with optionally interpretable or uninterpretable features; for instance N is always associated with interpretable ϕ -features, while ν or T are always associated with uninterpretable ϕ -features. In the same way, we would expect Class/ n to be always interpretable or always uninterpretable – which is not the case. We keep to the original understanding of this feature and do not extend it to the distinctions required here. We may simplify matters by assuming that all gender is alike; its composition with the root yields a sex interpretation only in case the root has the relevant content. Therefore interpreted gender is a property of the configuration or ultimately of the root, not of the Class feature.

Similarly, it is problematic to find that there are morphological exponents, namely inflectional class vowels, that do not introduce any semantic content at all. The lack of meaning is particularly unexpected in a framework like the present one where we try to enforce the idea that morphology is syntax. The possibility that inflectional class vowels have in fact a semantic content is one of the foci of the discussion to follow.

We apply the model sketched in (8) to the Calabrian data presented in section 1. The structure in (9) corresponds to the feminine examples *cavε* 'key', *buffetta* 'table', while the structure in (10) corresponds to the masculine examples *mɛlunε* 'melon' and *puɛrku* 'pig'. These structures contain one novelty. Rather than introducing the inflectional vowel countercyclically as a Th node (see the discussion of Kramer 2015 above) we host it in a dedicated Infl position, generated above Class and hence capable of reflecting Class content. The Class slot hosts the specifications feminine and masculine.



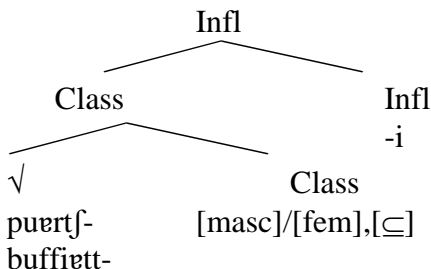
Differently from languages like Spanish, which have a specialized lexicalization for the plural, namely -s, in Italian varieties pluralization is obtained by a change of the Infl morpheme. One possible conclusion is that while in Spanish plural is represented higher than the Infl vowel, as part of the specialized Num node (as in (8)), in Italian varieties it is represented lower, hence in the same Class node that hosts gender. This in turn is only possible if plurality is a nominal Class property of sorts (see in particular the discussion of Déchaine et al. 2014 above). Following Manzini and Savoia (2011a, b), we formalize plural content as \subseteq ; this says that the denotatum of the predicate can be partitioned into subsets. Therefore the \subseteq property contributes plurality as schematized in (11) – namely by isolating a subset of the set (or set of sets) of all things that are *puɛrk-/buffett*⁵; in other

⁵ The alternation *buffetta/buffetti* is due to metaphony, the phonological process that in many South Italian dialects affects a stressed mid vowel followed by a [+high] post-tonic vowel. In this dialect the low mid stressed nucleus changes into a diphthong, specifically [iɐ uɐ] depending on the articulatory place of the vowel.

words, \subseteq says that subsets can be partitioned off the set (the property) denoted by the lexical base.

- (11) $\exists x \quad [x \subseteq \{\text{puerk-}/\text{buffett-}\}]$
 i.e. there is an x such that x is a subset of the set of individuals with the property ‘pig/ table’

In these terms, the plurals *puertf-i* ‘pigs’ and *buffiett-i* ‘tables’ have the structure in (12a). Note that we have kept the [masc]/[fem] Class property in the representation in (12a). This is because partitives like (7) show the availability of gender to anaphoric material in the singular. Since in Calabrian (and in fact in Standard Italian) *-i* has dedicated plural content, we can associate this Infl vowel with the interpretive content in (12b).⁶

- (12) a. 
- b. *-i*: Infl, $[\subseteq]$

Attributing an interpretive content to inflection also connects to rethinking the notion of agreement, given that the same *(-i)* element is found both as an inflection on the Noun in (12) and as a D. As is fairly well known, the agreement seen in Romance (or Bantu) DPs, even in the simplest of examples, pose special problems to minimalist probe-goal Agree (Carstens 2001 and subsequent literature). In D-N sequences D would be expected to be an uninterpretable probe on c-command grounds. However, D can be interpreted in isolation, namely as a (clitic) pronoun – which means that its ϕ -Features must be interpretable. On the other hand, if we associate the N head with uninterpretable features, we are faced with a probe that looks upwards rather than downwards – namely to the interpretable D head that eventually checks it. This type of difficulty has recently given rise to a stream of literature about multidirectional probing/agreement (Baker 2008, Béjar and Rezac 2009). Probing indifferently upwards and downwards may achieve empirical adequacy. Theoretically, however it weakens the minimalist conception of agreement originally defined by Chomsky (2000) in terms of c-command.

For these and similar reasons, Manzini and Savoia (2005, 2007, 2011a), propose that the Agree rule matches n-tuples of elements that are all interpretable. In other words, there are only positively specified properties in language. Therefore, there are no uninterpretable properties; all lexical material is interpreted at the Conceptual-Intentional (C-I) interface. Consequently they renounce the distinction between probes (uninterpretable) and goals (interpretable). Still we can say that an argument agrees with the predicate, in the sense that the Identity relation (or Match) holds of them, under conditions of c-command and Locality (Minimal Search). Agree, *qua* Minimal Search and Match (Chomsky 2001), is furthermore triggered by Full Interpretation at the C-I interface. The only difference is that for Chomsky the result of the operation is the deletion of all uninterpretable feature clusters. For Manzini and Savoia it is the creation of an equivalence set (a ‘chain’ of

⁶ An anonymous reviewer notes that the lexical entry for *-i* in (12b) includes properties belonging to two different nodes in the representation in (12a). Though the present framework does not allow string lexicalization (unlike nanosyntax), there are several possible formalizations from which to choose. One is that *-i* is hosted by Class, and therefore is not Infl. Another possibility is that *-i* is inserted under the Class node and moves to Infl. Alternatively, lexical entries such as (12b), encompassing properties of adjacent nodes, could be read as in (i) below; in other words properties of the Class node, such as $[\subseteq]$, are selected for.

(i) *-i*: Infl, selects for $[\subseteq]$

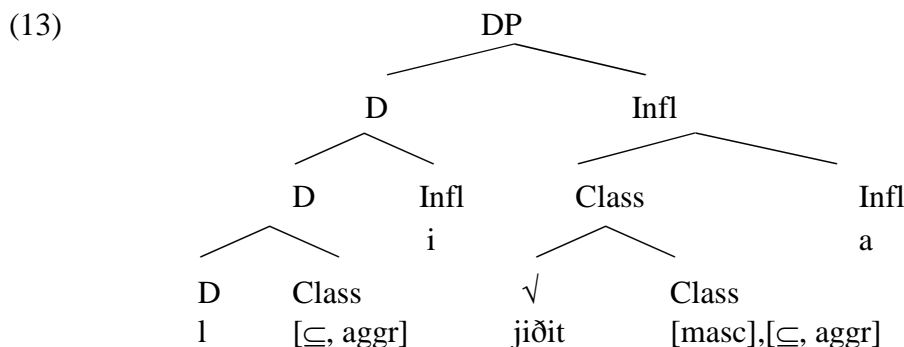
occurrences) of feature clusters, interpreted as a single argument. In either instance, Agree insures the satisfaction of the Theta Criterion, requiring a one-to-one mapping between argumental slots and referential arguments.

This theoretical background of assumptions means that in the discussion to follow we will not worry about the interpretable/uninterpretable status of the ϕ -Features (gender, number) we postulate on Ns and Ds. However it should be kept in mind that this issue is orthogonal to those directly addressed in this contribution.

3. Analysis of *-a* plurals in Central Calabrian

So far we have outlined some general assumptions about the syntactic structure of N and we have introduced the analysis of inflectional gender and number in Italian varieties. Next, we address the inflectional element that directly interests us here, namely plural *-a*. Acquaviva's (2008) semantic characterization of Standard Italian *-a* plurals as consisting of 'weakly differentiated parts' appears to hold for Calabrian as well, witness the body part Ns present among *-a* plurals (*labbr-a* 'lips', *jiðit-a* 'fingers'). This characterization applies not only to body part Ns but also to foodstuff with very much the same properties, such as *av-a* 'eggs', *pir-a* 'pears', *pum-a* 'apples'. Other *-a* plurals attach to artifacts; like *kurteɣ-a* 'knives'.

We assume that the *-a* inflection corresponds to a set whose members are rather more like parts of whole than like individuated atoms. At the same time, of course, basic tests like the possibility of partitive structures in (7) confirm that we are dealing with plurals. The notion of an aggregate is used by Chierchia (1998, 2010) to characterize the common core of mass and plural denotation. Manzini and Savoia (2017a, 2017b) assume the existence in Romance (and Indo-European) of an [aggr(egate)] class accounting for mass singulars. Assuming the existence of such a class it is tempting to differentiate the *-a* plural from the *-i* plural by associating [aggr] with the former. This raises the question how [aggr] specifications on N, represented by the *-a* morphology, come to agree with the [\subseteq] specifications that we have imputed to *-i* hence with the *li* determiner. One possibility is that *-a* plurals are in fact [aggr, \subseteq]. This yields structures of the type in (13) for *li jiðit-a* 'the fingers'.



The structure in (13) implies a very elementary ontology, consisting in the squaring of the two properties [\subseteq] [aggr] – each of which can be represented by specialized morphology in the languages we are considering.⁷ Thus in Italian varieties, including Iacurso, *-i* is a dedicated morphology for plural [\subseteq] while Central Italian varieties have a dedicated neuter, i.e. [aggr], morphology *-o* (with residual attestation in the determiners of languages like Spanish), cf. Manzini and Savoia (to appear

⁷ To be more precise, our claim is not strictly speaking about the underlying ontology of natural languages but rather about the ontology which is syntactically represented (in the type of languages we are considering). Indeed we hold that the syntax and the lexicon are relatively impoverished, albeit efficient means to restrict meaning, which is ultimately determined by contextual enrichment.

and references quoted there). Acquaviva (2008:155-156) comments on “the dimness of some grammatical intuitions” going on to state that “the lack of individual distinctive properties is a matter of how the lexical predicates are conceptualized, and this often leads to variation among speakers and uncertain intuitions for one and the same speaker”. This is consistent with what we are proposing here; rephrasing Acquaviva, the Iacurso speakers who indifferently render Italian *coltell-i* ‘knives’ with *kurtɛɾ-a* or *kurtiɐɾ-i* simply have two different ways of presenting the predicative content ‘knife’ – namely as consisting of individuated atoms [\subseteq] or as consisting of non-individuated atoms [aggr \subseteq].

We are finally in a position to come back to the question concerning the nature of the *-a* ending in (13). In the structure in (12) we have embedded the assumption that the Infl element *-i* is associated with interpretive content, namely [\subseteq]. As mentioned in the text, *-i* never turns up as nominal Infl except as a plural; this is made explicit in the lexical entry in (12b), reproduced below in (14a). In turn, we assume that *-a* in (13) does in fact have an [aggr] content, as in (14b). In the absence of other restrictions, we predict that the property [aggr] may be present on *-a* in the singular as well; this is verified by the fact that the inflectional *-a* class will include mass nouns (e.g. Iacurso’s *pɛɾɾ-a* ‘stone’, cf. English ‘made of stone’).

- (14) a. *-i*: Infl, [\subseteq]
 b. *-a*: Infl, [aggr]

Obviously, in the (feminine) singular, *-a* selects roots with individual content as well, like ‘table’ in (3), (9). If we are to continue assuming that there is a single Infl item *-a*, we need to resolve the potential conflict between *-a* nouns like (9) and the [aggr] content in (14b). There are essentially two possible approaches. One is to say that the [aggr] content in (14b) is optionally associated with *-a*; this configures a disjunctive lexical entry, which does not seem particularly desirable. Another, more principled possibility is to apply to [aggr] the same considerations that we applied to [fem] and [masc] in discussing structure (8). In essence, we proposed that the interpretation of [fem] and [masc] depends on the composition with the lexical base. If the latter is human, the [masc]/[fem] opposition is normally interpreted compositionally, as referring to sexual characters. Otherwise, lack of a compositional interpretation of nominal Class and the lexical base leaves the meaning of the lexical base unmodified at the C-I interface. We need not think of this as a failure of interpretation, but simply as a failure of compositional interpretation (i.e. an idiom of sorts).

Since in present terms conventional number is in fact a Class specification, similar assumptions could be made about [aggr] as about [fem] or [masc], namely that though the *-a* Infl implies [aggr], the latter is compositionally interpreted only with plural [\subseteq] or mass content. With singular count bases, the conditions for such an interpretation are lacking. This approach to the Class [aggr] makes the obvious prediction that the set plural [\subseteq] could also be found on bases that do not return a compositional interpretation. This appears the case for *pluralia tantum* such as English *news* (cf. *I heard the news/*new*) or Italian *ferie* ‘vacations’ (cf. *Vado in ferie/*feria* ‘I am going on vacation’). With these provisos, the lexical entry in (14b) provides an explanation of sorts for the syncretism of gender and number morphology that we are seeking. Indeed, (14b) points to a positively specified property of *-a* that bridges between singular and plural namely [aggr]. In other words, it is in virtue of the property [aggr] that *-a* turns up both as a plural, and a singular inflectional class marker.⁸

⁸ The classical historical account of Indo-European feminine singular and neuter plural *-a* (Clackson 2007+:107 for a summary) is that a neuter/collective plural *-a* was extended to a new inflectional class for collective/abstract singulars – which only secondarily came to coincide with the default class for feminine animates. Viewed as a projection on the historical, external axis of an analysis motivated on internal grounds, this reconstruction appears to be quite compatible with the present discussion.

4. -a plurals in North Lombard dialects: Tresivio (Valtellina)

In the next sections we will consider several patterns of occurrence of *-a* inflections, whereby *-a* externalizes both singular and plural in feminine nouns. The relevant pattern characterizes Bregaglia Valley and North Lombardy varieties and appears in the dialects spoken in North-West Tuscany (Lunigiana and Garfagnana).⁹

We begin with the North Lombardy variety of Tresivio (Valtellina). In this variety, the same determiner *i* and the same *-i* inflection on demonstratives cover feminine and masculine plural, as illustrated in (15)–(16). The adjectives have *-a* both in singular and plural feminine, as shown by the plural forms in (15). In the masculine, prenominal adjectives can take the *-i* plural inflection, behaving like prenominal determiners, as in (16). Otherwise masculine nominal bases and postnominal adjectives appear bare in both the singular and the plural. Plural *-i* occurs in a subset of masculine nominal bases, as illustrated in (16e–f).

(15)	a.	l-a femm-a the-F woman-F 'the woman'	a'.	i femm-a the.PL woman-F 'the women'
	b.	kwel-a bəl-a femm-a that-F nice-F woman-F 'that nice woman'	b'.	kw-i bəl-a femm-a that-PL nice-F woman-F 'those nice women'
	c.	n-a femm-a weʒ-a a-F woman-F old-F 'an old woman'	c'.	kw-i femm-a weʒ-a that-PL woman-F old-F 'those old women'
(16)	a.	l kaŋ the dog 'the dog'	a'.	i kaŋ the.PL dog 'the dogs'
	b.	l dʒi' nø:tʃ the knee 'the knee'	b'.	i dʒi' nø:tʃ the.PL knee 'the knees'
	c.	kwe-l bəl kaŋ that nice dog 'that nice dog'	c'.	kw-i be-i/braw-i kaŋ that-PL nice-PL/good-PL dog 'those nice/good dogs'
	d.	kwe-l om ve:tʃ that man old 'that old man'	d'.	kw-i o:m ve:tʃ that-PL man old 'those old men'
	e.	əl kur'təl the knife 'the knife'	e'.	i kur'te-i the.PL knife-PL 'the knives'
	f.	əl fra'dəl the brother 'the brother'	f'.	i fra'de-i the.PL brother-PL 'the brothers'

Tresivio

The morphologization of the plural takes place also in prenominal possessives, in the form of a metaphonetic outcome of the tonic vowel in the masculine, as in (17). By contrast, the morphology of the plural possessive combining with feminine nouns is *-a* exactly as for the singular, as in (18).

(17)	a.	əl me/tø/sø fra'dəl the my/your/his brother 'my/your/his brother'	a'.	i me/tø/sø fra'de-i the.PL my/your.PL/his.PL brother-PL 'my/your/his brothers'
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⁹ A hypothesis proposed in historical studies is that this feminine plural *-a* could derive from the Latin ending *-as* in consequence of the loss of the final *-s* (Ascoli 1873, Salvioni 1902, Rohlfs 1949 [1968]).

- (18) a. $\begin{array}{llll} \text{b.} & \text{\textcircled{a}}\text{l} & \text{n}\text{\textcircled{o}}\text{s}/\text{v}\text{\textcircled{o}}\text{s}/\text{s}\text{\textcircled{o}} & \text{f}\text{r}\text{a}'\text{d}\text{\textcircled{e}}\text{l} \\ & \text{the} & \text{our/your/their} & \text{brother} \\ & \text{'our/your/their brother'} \end{array}$ b'. $\begin{array}{llll} & \text{i} & \text{n}\text{\textcircled{o}}\text{s}/\text{v}\text{\textcircled{o}}\text{s}/\text{s}\text{\textcircled{o}} & \text{f}\text{r}\text{a}'\text{d}\text{\textcircled{e}}\text{-i} \\ & \text{the.PL} & \text{our.PL/your.PL/their.PL} & \text{brother-PL} \\ & \text{'our/your/their brothers'} \end{array}$
- a. $\begin{array}{llll} \text{l-a} & \text{mi-a/to-a/so-a} & \text{s}\text{u}\text{r}\text{\textcircled{e}}\text{l-a} & \text{a'}. \\ \text{the-F} & \text{my-F/your-F/his-F} & \text{sister-F} & \\ \text{'my/your/his sister'} \end{array}$ $\begin{array}{llll} \text{i} & \text{mi-a/to-a/so-a} & \text{s}\text{u}\text{r}\text{\textcircled{e}}\text{l-a} & \\ \text{the.PL} & \text{my-F/your-F/his-F} & \text{sister-F} & \\ \text{'my/your/his sisters'} \end{array}$
- b. $\begin{array}{llll} \text{l-a} & \text{n}\text{\textcircled{o}}\text{s-a/w}\text{\textcircled{o}}\text{s-a/so-a} & \text{s}\text{u}\text{r}\text{\textcircled{e}}\text{l-a} & \text{b'}. \\ \text{the-F} & \text{our-F/your-F/their-F} & \text{sister-F} & \\ \text{'our/your/their sister'} \end{array}$ $\begin{array}{llll} \text{i} & \text{n}\text{\textcircled{o}}\text{s-a/w}\text{\textcircled{o}}\text{s-a/so-a} & \text{s}\text{u}\text{r}\text{\textcircled{e}}\text{l-a} & \\ \text{the.PL} & \text{our-F/your-F/their-F} & \text{sister-F} & \\ \text{'our/your/their sisters'} \end{array}$

Tresivio

In short, the data in (15)-(18) show that inside the DP the plural is realized as *(-i)* in determiners and partially in masculine nouns and adjectives, as well as in possessives (where *i* is realized through the metaphony of the vocalic nucleus). Feminine nouns, adjectives and possessives in the plural preserve the *-a* inflection. In the phrasal domain, the *-i* morpheme does not occur on perfect participles in (19) so that the distinction between singular and plural is carried entirely by the object clitic.

- (19) a. $\begin{array}{llll} \text{a} & \text{ll} & \text{a} & \text{t}\text{f}\text{a}\text{m}\text{a}\text{\textcircled{d}}\text{-a} \\ 3 & 3 & \text{has} & \text{called-F} \\ \text{'He has called her.'} \end{array}$ a'. $\begin{array}{llll} \text{i} & \text{a} & \text{t}\text{f}\text{a}\text{m}\text{a}\text{\textcircled{d}}\text{-a} & \\ 3.\text{PL} & \text{has} & \text{called-F} & \\ \text{'He has called them(f).'} \end{array}$
- b. $\begin{array}{llll} \text{a} & \text{ll} & \text{a} & \text{t}\text{f}\text{a}\text{m}\text{a}\text{t} \\ 3 & 3 & \text{has} & \text{called} \\ \text{'He has called him.'} \end{array}$ b'. $\begin{array}{llll} \text{i} & \text{a} & \text{t}\text{f}\text{a}\text{m}\text{a}\text{t} & \\ 3.\text{PL} & \text{has} & \text{called} & \\ \text{'He has called them(m).'} \end{array}$

Tresivio

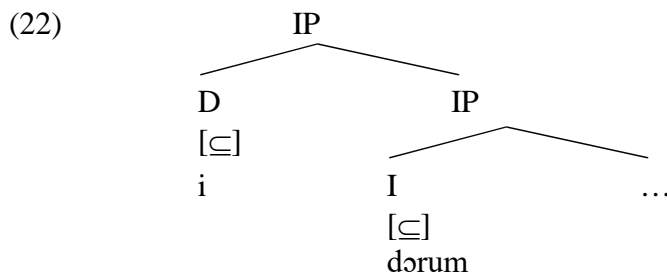
Furthermore, in the Tresivio dialect, verbs do not externalize 3rd person number agreement by means of a specialized plural inflection; in the verbal paradigm, 3rd singular, 3rd plural as well as 2nd singular and 1st plural coincide in an identical form, as illustrated in (20). It is subject clitics that differentiate 3rd person singular from plural (and masculine from feminine in the singular). Specifically, the plural is lexicalized by the *i* clitic, for both masculine and feminine, as happens with the determiners of nouns. Thus subject clitics do the same work as determiners in lexicalizing, or contributing to lexicalizing, the plural interpretation [\subseteq], for instance in (21).

- (20) $\begin{array}{l} \text{d}\text{\textcircled{o}}\text{r}\text{m-i} \\ \text{te} \quad \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{\textcircled{a}}\text{l/la} \quad \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{\textcircled{e}}\text{\textcircled{n}} \quad \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{d}\text{u}\text{r}'\text{m-i} \\ \text{i} \quad \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{'I sleep/you sleep/ etc.'} \end{array}$
- (21) a. $\begin{array}{llll} \text{ly} & \text{\textcircled{a}}\text{l} & \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} & \\ \text{he} & 3.\text{M} & \text{sleep} & \\ \text{'He sleeps.'} \end{array}$ a'. $\begin{array}{llll} \text{i} & \text{r}\text{e}'\text{d}\text{a}\text{s} & \text{i} & \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{the.PL} & \text{boy} & 3.\text{PL} & \text{sleep} \\ \text{'The boys sleep.'} \end{array}$
- b. $\begin{array}{llll} \text{le} & \text{l-a} & \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} & \\ \text{she} & 3.\text{F} & \text{sleep} & \\ \text{'She sleeps.'} \end{array}$ b'. $\begin{array}{llll} \text{i} & \text{f}\text{e}\text{m}\text{m-a} & \text{i} & \text{d}\text{\textcircled{o}}\text{r}\text{u}\text{m} \\ \text{the.PL} & \text{woman-F} & 3.\text{PL} & \text{sleep} \\ \text{'The women sleep.'} \end{array}$

Tresivio

The fact that the plural *(-i)* systematically lexicalizes the plural independently of gender distinctions means that its only content is the plural property [\subseteq], like *-i* in the Iacurso dialect, cf. the

lexical entries in (14). This content characterizes both the inflectional occurrence of *-i* and its occurrence as an object or subject clitic, as in the representation in (22) for its subject clitic occurrence.



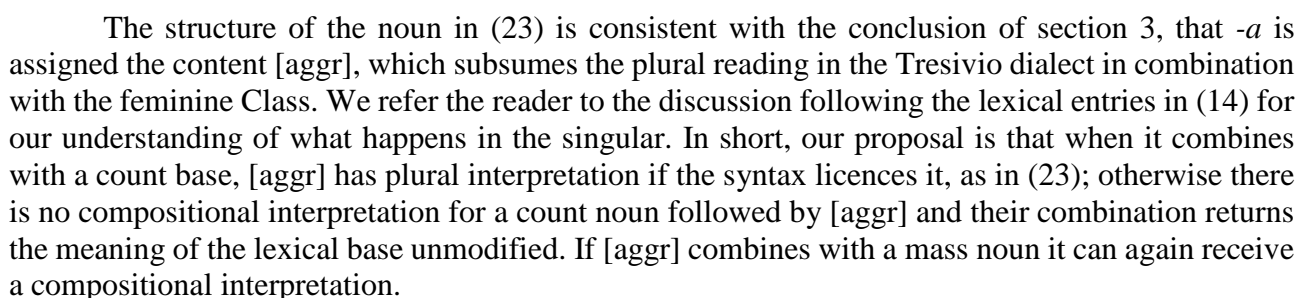
The data in (16) show that in the masculine, the plural agreement morphology *-i* may occur in pre-nominal adjectives and on some nouns; possessives in turn lexicalizes [⊆], even if by means of a morpho-phonological device, i.e. metaphony, as in (17). In the feminine, however, only determiners host *(-i)*. Relevant comparison data come from Costa and Figueiredo (2002) concerning some Brazilian Portuguese varieties in which the plural inflection *-s* only occurs on the determiners of prenominal adjectives, as in *o-s/est-es/algum-s/un-s livr-o muit-o bonit-o* ‘the/these/some book very nice’. Costa and Figueiredo adopt a distinction between dissociated and singleton morphemes. According to Embick and Noyer (2001), agreement and case morphemes are not syntactic projections and so they are not represented in syntax but they are added postsyntactically “during Morphology”. Typically, dissociated morphemes convey an information “separated from the original locus of that information in the phrase marker” (Embick and Noyer 2001: 557). In European Portuguese, where plural agreement occurs on all of the elements internal to DP, plural is a dissociated morpheme, that combines “post-syntactically with all items able to bear plural mark” according to Costa and Figueiredo (2002: 24). The plural in Brazilian Portuguese corresponds to a singleton, i.e. a specialized interpretable morpheme, which combines only with the “element anchoring the information concerning number”, namely Determiners.¹⁰

The distinction dissociated/singleton could be rephrased as the split between agreement properties with general occurrence and those associated only with one category, i.e. with specialized occurrence. In the Tresivio variety, the element *(-i)* could then be understood as a specialized morpheme. However in Brazilian Portuguese the same restricted distribution of *-s* involves both feminine and masculine. This correlates with the fact that in Portuguese and Spanish and other Romance varieties, *-s* introduces plural without interacting with the Class category and the vocalic inflection. By contrast, recall that Italian dialects, as well as Italian, express plural by changing the inflection (and possibly Class) as seen for the *-a* plural in Standard Italian and in the Iacurso dialect in section 3. In Tresivio, the occurrence of *(-i)* as inflection of determiners or as autonomous lexicalization of plural articles is crucially restricted to the feminine; the distribution of *(-i)* in the masculine, as inflection of determiners and of pre-nominal adjectives/possessives as well as of some nouns, shows that we are not dealing with a singleton at all.

Instead, one may describe the Tresivio data by saying that the occurrence of *(-i)* is not the only realization of plural. Rather, in feminine combinations *-a* is able to externalize the plural. Thus in possessives and prenominal adjectives the *-a* inflection with plural value is retained in the feminine, independently of the fact that the specialized *-i* morphology for the plural is available in the masculine. In a word, *-a* is really the plural inflection of feminines and as such it is in complementary

¹⁰ Costa and Figueiredo (2002) differentiate the Spec-head configuration, that is responsible for the triggering of Subject-I agreement, from the D-N relation, where the plural singleton occurs. Despite the partial lack of Verb agreement in Brazilian Portuguese, they conclude that it requires V-to-I movement and agreement just like European Portuguese. Indeed, following Vikner (1997), they assume that the presence of a specialized inflection in a subset of forms allows us to assume that the usual verbal agreement mechanisms apply. Perfect participle agreement is independently excluded in Ibero-Romance.

The question is why *-a* is compatible with both the singular and the plural – while we have no attestations of comparable patterns with the masculine (*-u*, *-o* inflectional classes) in those Romance languages that form plurals via switch in Infl vowel. We argue that this is just a different manifestation of the fact that *-a* has the content that in section 3 we have characterized as [aggr]. Specifically, we obtain a structure like the one in (23), where the [] specification is externalized by the [aggr] content associated with the *-a* inflection. This is sufficient to lexicalize plural on the noun (adjectives, etc.) – though determiners require a specialized plural inflection [] also in the feminine. Since in the Tresivio dialect this inflection is the same as for masculine, namely (*-*)*i*, we conclude that it is a pure gender-neutral plural, as already proposed for the clitic in (22).



5. *-a(-η)* plurals in Bregaglia Valley dialects (Casaccia)

(24) a. l-a don-a a'. l-a-ŋ don-a

¹¹ An anonymous reviewer reiteratedly inquires about the possibility of treating the data in terms of DM. Since we are not aware of DM treatments of Italian *-a* plurals, it is difficult for to address this question properly. In some instances, it is relatively easy to envisage what a DM model could look like. Thus we could deal with the particularly simple pattern of Tresivio by deleting [plural] in the context [fem] by means of an Impoverishment rule, on all nominal categories but determiners. We could then assume that the morpheme *-a* is not specified for number, so that it is inserted under any [fem] specified node. However this treatment would yield no obvious continuity with the *-a* plurals of Italian or of Central Calabrian in section 3 – where *-a* is specified for plural and not for gender. The desirability of establishing such a continuity is the central theme of this work.

- | | | | |
|----|--|-----|--|
| | the-F woman-F
'the woman' | | the-F-PL woman-F
'the women' |
| b. | kwel-a bel-a don-a
that-F fine-F woman-F
'that fine woman' | b'. | kwel-a-ŋ brav-a don-a
that-F-PL good-F woman-F
'those good women' |
| | | c'. | kwel-a-ŋ don-a veil-a
that-F-PL woman-F old-F
'those old women' |
| | | d'. | kwel-a-ŋ altr-a don-a
that-F-PL other-F woman-F
'those other women' |
| | | e'. | altr-a-ŋ /tant-a-ŋ don-a
other-F-PL/many-F-PL woman-F
'other/many women' |
| f. | l-a ti/nɔs-a fi-a
the-F your/our-F daughter-F
'your/our daughter' | f'. | l-a-ŋ mi/nɔs-a fi-a
the-F-PL my/our-F daughter-F
'my/our daughters' |
| g. | l-a mi fi-a py grand-a
the-F my daughter-F more big-F
'my oldest daughter' | | |

Casaccia

As for masculine nouns, they generally lack inflectional endings, both in the singular and in the plural, though determiners have the (-)i inflection in the masculine plural, as in (25). The -i inflection in the masculine also appears in a subset of adjectives, i.e. the prenominal adjectives in (25b'-c'), and as on some nouns, as in (26). So, in these varieties, the plural feminine inflection differs from the masculine one both on nouns and on determiners/quantifiers.

- | | | | |
|---------|---|------|--|
| (25) a. | kwel kaŋ
that dog
'that dog' | a'. | i/ kw-i/ kwift-i/ tantʃ-i kaŋ
the.M.PL/that-M.PL/this-M.PL/many-M.PL dog
'the/those/these/many dogs' |
| b. | al bel kaŋ
the fine dog
'the fine dog' | b'. | i b-i kaŋ
the.M.PL fine-M.PL dog
'the fine dogs' |
| c. | kwel buŋ om
that good man
'that good man' | c'. | kw-i bryt-i/ pɔk-i omaŋ
this-M.PL ugly-M.PL/few-M.PL men
'these ugly/few men' |
| | | c''. | kw-i omaŋ veil
that-M.PL men old
'those old men' |
| d. | al me/nɔs fi
the my/our son
'my/our son' | d'. | i me/nos fi
the.M.PL my/our son
'my/our sons' |
| (26) a. | kurtel
'knife' | a'. | kurte-i
'knives' |
| b. | martel
'hammer' | b'. | marte-i
'hammers' |

Casaccia

In copular contexts, in the presence of the plural form of *be*, the -ŋ feminine plural inflection does not occur on the predicative adjective or noun, as in (27a-b), though it inflects the postcopular demonstrative in (27c). In the masculine, -i may be lexicalized in a subset of lexical entries, including the subject clitic, postcopular quantifiers and demonstratives, prenominal adjectives as in (27b'-c').

- (27) a. 1 e-ŋ nøv-a/veil-a/buŋ-a
3 are new-F/old-F/good-F
'They are new/old/good.'
- b. 1 e-ŋ don-a (veil-a)
3 are woman-F (old-F)
'They are old women.'
- c. 1 e-ŋ kwel-a-ŋ
3 are that-F-PL
'They are those.'
- b' i e-ŋ oman veil
3.M.PL are men old
'They are old men.'
- b". i e-ŋ brav-i faɲtʃ
3.M.PL are good-M.PL boy
'They are good boys.'
- c'. i e-ŋ kwɪʃt-i/pok-i
3.M.PL are this-M.PL/few-M.PL
'They are these/few.'
- Casaccia

A comparable distribution characterizes perfect participles of unaccusative verbs, in (28), where the *-ŋ* inflection on the auxiliary is sufficient to interpret the plural number of the subject in the feminine. The participle shows the *-a* inflection, exactly as the adjectives in the predicative construction in (27).

- (28) a. 1 e ɲid-a
3 is come-F
'She has come.'
- b. 1 e ɲi
3 is come
'He has come.'
- a'. 1 e-ŋ ɲid-a
3 are come-F
'They(f) have come.'
- b'. i e-ŋ ɲi
3.M.PL are come
'They(m) have come.'
- Casaccia

The historical literature relates the *-ŋ* ending of the feminine plural in these dialects to the 3rd plural person morphology of the verb (Salvioni 1902, Rohlfs 1949 [1968]: §371). This reconstruction is supported by the fact that the plural feminine inflection *-ŋ* is in complementary distribution on the subject clitic and the verb. The subject clitic never presents the plural *-ŋ*, as long as the latter is realized on the verb, as can further be seen in (29a-a'); note the presence of the *-a* inflection on the subject clitic in front of the consonant-initial verb, absent in the pre-vocalic, copular contexts in (28a-a'). In (28)-(29) the masculine 3rd person subject clitic has a specialized plural *i* form, contrasting with singular *al*. Importantly, both *i* and *l-a-ŋ* occur as determiners in the masculine and feminine plural in (24); therefore the absence of a subject clitic *l-a-ŋ* form in (29a') is syntactically determined

- (29) a. l-a dɔrm
3-F sleep
'She sleeps.'
- b. al dɔrm
3.M sleep
'He sleeps.'
- a'. l-a dɔrm-aŋ
3-F sleep-3l
'They(f) sleep.'
- b'. i dɔrm-aŋ
3.M.PL sleep-3l
'They(m) sleep.'
- Casaccia

What is more, both *i* and *l-a-ŋ* occur as plural object clitics, respectively masculine and feminine, as seen with lexical verbs in (30). The legibility of the data in (30) is somewhat obscured by two phenomena, which however characterize a large set of Lombard dialects (Manzini and Savoia 2005) and can thus be shown to be entirely uninfluential on the issue at hand. First, in the presence of a 3rd person object clitic, a 3rd person subject clitic takes a reduced form *a*. Second, the singular object clitic in (30a-b) takes a form not differentiated for gender – which seems to be the feminine *la*; however Manzini and Savoia (2005) show that this *la* form may trigger both masculine and feminine

agreement. The example in (31c) shows that various occurrences of *-ŋ* combine, specifically a plural feminine subject (*-ŋ* on the determiner and on the agreeing verb inflection) combines with a feminine plural object clitic (*-ŋ* on the clitic itself).¹²

- (30) a. a ll-a ve a'. a l-a-ŋ ve
3 3-A see 3 3-F-PL see
‘He sees her.’ ‘He sees them(f).’
b. a ll-a ve b'. a i ve
3 3-A see 3 3.M.PL see
‘He sees him.’ ‘He sees them(m).’
c. laŋ mi fia a l/ i/ l-a/l-a-ŋ vendan
the my daughters 3 3.M.SG/3.M.PL/3-F/3-F-PL sell
‘My daughters sell it/them’ *Casaccia*

In participial structures, in (31), the plural feminine object clitic again has the plural inflection *-ŋ*, while the participle has the simple *-a* feminine inflection. In the masculine, an analogous distribution shows up, in that the specialized plural object clitic *i* occurs, while the participle, like most adjectives, lacks inflectional endings.¹³

- (31) a. a ll a klaməd-a a'. a l-a-ŋ a klaməd-a
3 3 has called-F 3 3-F-PL has called-F
‘He has called her.’ ‘He has called them(f).’
b. a ll a klama(:) b'. a i a klama(:)
3 3 has called 3 3.M.PL has called
‘He has called him.’ ‘He has called them(m).’ *Casaccia*

The data we have considered so far can be schematized as in table 1.

(a)	DP phase:	D/Q -ŋ/-i	Adj Ø/(-i)	N Ø/(-i)	Adj Ø
(b)	CP phase:	SubjCl Ø/i	I -ŋ		
(c)	vP phase:	ObjCl -ŋ/i	Participle Ø		

Table 1. Distribution of *-ŋ/-i* plurals in the variety of *Casaccia*

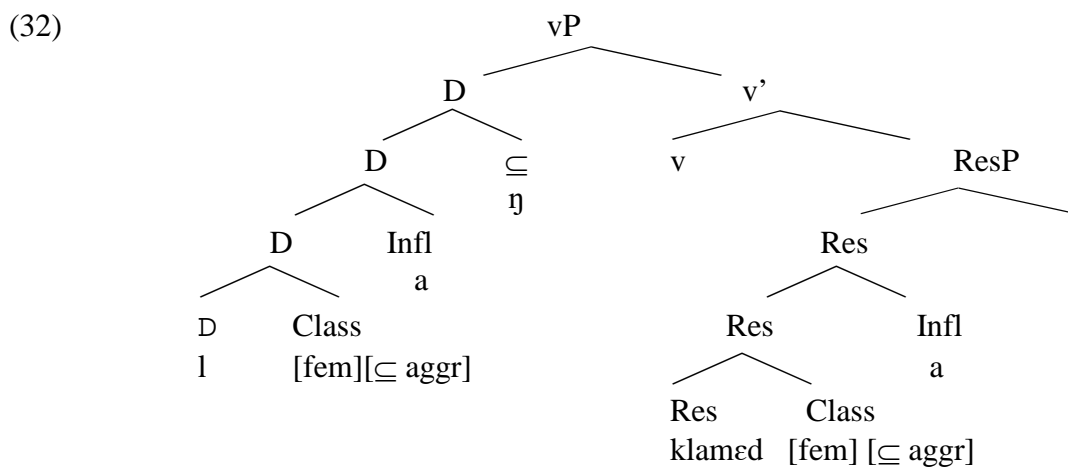
As we can see, the distribution of *(-i)* is similar to the one generally attested in Italian varieties.

¹² Thus we are not faced with “omnivorous number” in the sense of Nevins (2011). In Nevins (2011: 8, 5) “omnivorous number” indicates “the phenomenon [...] in which an agreement morpheme dedicated to realizing number shows up under the condition that either or both of the subject and object is plural”. For Nevins, the ability of number in ambiguously extending to object or subject descends from the underspecified treatment of singular, whereby “unmarked values of number, e.g. [-singular], are never syntactically active and never referred to in the syntax”. By contrast, “person features are always fully specified on syntactic arguments”, thus excluding generalization processes.

¹³ An anonymous reviewer suggests that long final stressed *-a*: in the participles in (31b-b') could include inflectional information. However if long *-a*: continued the etimological final *-i*, we would expect it only in the plural. This is not so, suggesting a different conclusion. In this variety, as in many Lombard Alpine varieties, the lengthening of the stressed vowel occurs in contexts where a following (C)V element has fallen, as in [fɔ:g] ‘fire’ (Savoia 2015, Baldi and Savoia to appear); the realization in final position is optional, like in [al ve:]/[al ve] ‘he sees’, and, similarly in the examples in (31).

Specifically, *(-)i* occurs on nouns (N) and on adjectives (Adj), though with severe restrictions, as well as on determiners and quantifiers (D/Q); it also occurs as subject clitic (SubjCl) and as object clitic (ObjCl). By contrast (a) schematizes the distribution of *-η* within DP, where *-η* is excluded on nouns and on adjectives, while the functional element D/Q realizes it in the DP phase. (b) schematizes the distribution illustrated in (30), where *-η* associates with the verb in I and not with the subject clitic (CP phase). (c) corresponds to the distribution in (31), where *-η* is on the object clitic and is excluded from the participle (vP phase); as shown in (28) *-η* does not occur even on unaccusative participles, being realized on the finite auxiliary.

Two theoretical questions are raised by the Casaccia data. One is has to do with the distributional restrictions on *-η* summarized in table 1; we return to it in section 6. The other question concerns the nature of the *-a* inflection, insofar as it is compatible with both singular and plural reading. Consider for instance the structure in (32) for sentence (31a'). As schematized in Table 1, within the *v* phase, the *-η* inflection on the object clitic combines with the *-a* inflection on the participle (here labelled as Result).



The morphological question raised by structures like (32) is that the *-a* inflection can combine with *-η*, as in the object clitic in (32), but it also admits a plural interpretation by itself, as on the perfect participle in (32). With respect to this question, we adopt the same approach as for the Tresivio variety in section 4, and ultimately for Central Calabrian *-a* plurals in section 3, namely that *-a* is fundamentally an [aggr] inflection. As such it can externalize plurality alone, though nothing prevents it from combining with pure exponents of plurality \subseteq – which is what we assume *-η* to be.

6. A note on the syntactic distribution of plural inflections

The object of study of this article is the internal structure of the Noun and specifically the realization of gender and number (Class) properties within it. Nevertheless in discussing Tresivio in section 4 and Casaccia in section 5 we reviewed significant facts concerning the distribution of their plural markers in phrasal syntax. An explicit account of this syntactic distribution is not crucial to our thesis that the *-a* inflection of Italian varieties has an [aggr] property that allows it to realize plurality. Nevertheless it is important to indicate along which lines such an account may be sought. The main thread of the discussion is picked up again in section 7 where we introduce a North Tuscan variety where the distributional issues debated here do not arise.

The common property shared by the Tresivio and Casaccia dialects is the fact that plural inflection is regularly expressed on the determiners, which take the plural *(-)i* in Tresivio and the *-η* inflection in Casaccia, in the context of feminine nouns. Recall that the distribution of feminine *-η* of Casaccia is summarized in Table 1 above, compared to masculine *(-)i*. The data of Tresivio in (15)–(18) are summarized in Table 2 below. The *(-)i* morphology is a specialized pluralization morpheme

that encompasses feminines on a par with masculines, introducing the plural reading [\subseteq]. However in the DP, the distribution is markedly different for feminine and masculine.

(a)	DP phase:	D/Q -i	Adj F:Ø/M:(-i)	N F:Ø/ M:(-i)	Adj Ø
(b)	CP phase:	SubjCl i	I Ø		
(c)	vP phase:	ObjCl i	Participle Ø		

Table 2. Distribution of *-i* plurals in the variety of Tresivio

There are conceptual/interpretive reasons, relating the interpretive role of D, why the distribution in tables 1-2 is interesting. For Costa and Figueiredo (2002), briefly reviewed in section 3, the occurrence of plural *-s* only on determiners (in Brazilian Portuguese varieties) is connected to the fact that the specialized plural morpheme “must be attached to the head responsible for establishing the link with semantic interpretation”, that is the determiner, introducing the definite reading. Though we rejected their implementation in terms of dissociated vs. singleton morphemes, we of course agree with the general idea that determiners have a crucial interpretive role, in that they provide definiteness and other deictic information to the C-I system.¹⁴ In other words, we may expect some type of morpho-syntactic split, whereby definiteness and deictic elements are endowed with specialized morphology given the role they play in the identification of the participants in (arguments of) the event. Specifically, in the analysis of Higginbotham (1985), discussed in section 2, the nouns are predicates endowed with an argumental slot; the noun’s argument is lexicalized by the determiner, i.e. by its definiteness content coupled with its ϕ -features, i.e. inflectional, content.

In varieties where the plural specification is externalized on deictic/definiteness elements to the exclusion of other DP nodes, the noun inflection does not introduce the ϕ -features information relevant for fixing the argumental reference. The masculine coincides with the nominal/adjectival root, except for a reduced class of plurals in *-i*; the feminine has the same *-a* inflection in the singular and in the plural. The overall result is that nouns in themselves do not provide morphological means for differentiating interpretive categories like count/mass, singular/plural, necessary for interpretation. Rather, the externalization of the specialized plural inflection is found in the lexical elements associated to a referential reading. The occurrence of the *(-)i* and *-η* morphology in the D-Adj-N-Adj contexts of Tresivio and Casaccia respectively, as in tables 1-2 fits in with this generalization.

There are also formal syntactic reasons that make the distribution in table 1-2 interesting. In current minimalist theorizing, it is generally accepted that DP is a phase and D is a phase head. In Chomsky (2001), sentential phase heads, namely C and *v* have a special role in Agree in that they are probes, endowed with uninterpretable ϕ -features. At the end of section 2, we discussed the difficulties involved in extending Chomsky’s conception of Agree from the sentential domain to the DP domain; indeed one of our reasons was precisely that the ϕ -features on the D phase head surely must be interpretable. As a consequence, we suggested eliminating the interpretable/uninterpretable asymmetry from Agree; all ϕ -feature bundles are interpretable and Agree creates an equivalence set of identical ϕ -feature bundles, interpreted as multiple copies of the same argument.

In short, the discussion which precedes highlights the correspondence between referential content (definite/deictic) and ϕ -feature specialization. The D phase head carries the crucial referential

¹⁴ Manzini and Savoia (2005, III: 625) also conclude that “the existence of a specialized inflectional paradigm for determines [...] is obviously related to the fact that they lexicalize the D definiteness properties of the noun phrase”.

content (definiteness/deixis) made available by it to further computation. Agree matches its ϕ -features with those of the nominal and adjectival heads in the DP phase; D makes these ϕ -features available to the next phase as well. In languages like Italian these ϕ -features are symmetrically realized on all heads internal to DP. In the Casaccia or Tresivio varieties, externalization privileges the phase head interfacing with the higher phase. Thus only the D phase head (or quantifiers in its absence) are endowed with the $-i/-\eta$ unambiguous plural morphology in addition to (or instead of) the $-a$ inflectional class present on all phase-internal elements.

Other choices are known to be possible. For instance, Manzini and Savoia (2005: §8.2.5) report Lunigiana (Northern Tuscany) varieties where the D element is deprived of plural (feminine) morphology, which instead appears on nouns or adjectives. On the evidence of morphological (and external) continuity we expect these varieties to admit a unified account with those in tables 1-2; further potential problems therefore arise for Costa and Figueredo's (2002) opposition between dissociated and singleton morphemes, to the extent that the latter are predicted to be associated with D. We leave these further distributional facts, as well as the evidence from sentence internal contexts, namely (b) and (c) in tables 1-2, for future work.¹⁵

7. North Tuscany singular/plural $-a$

In a number of North West Tuscany (Garfagnana and Lunigiana) dialects, the $-a$ inflection externalizes both singular and plural in every nominal element, as in the examples of Viano in (33). So, not only nouns and adjectives or participles, but also determiners externalize plural and singular feminine reference through the same $-a$ inflection, both in DP-internal and in sentential contexts. Note that in this dialect, the original (Latin) III class nouns have converged with the I class ($-a$ inflection) in the feminine, as in (33f).

- (33) a. l-a/ kol-a/ kweʃt-a femən-a/dənn-a
 the-F/ that-F/ this-F woman-F
 'the/that/this woman', 'the/those/these women'
- b. kod altr-a dən-a
 that-F other-F woman-F
 'that other woman/those other women'
- c. kol-a bəl-a dən-a
 that-F fine-F woman-F
 'that fine woman/those fine women'
- d. kol-a dən-a vɛc-a
 that-F woman-F old-F
 'that old woman/those old women'
- e. d ɛ vɛc-a/bəl-a/no-a e'. d eɲ vɛc-a/bəl-a/no-a
 3-F is old-F/fine-F/new-F 3-F are old-F/fine-F/new-F
 'She/it(f) is old/fine/new.' 'They(f) are old/fine/new.'
- f. noʒ-a

¹⁵ In the SubjCI-I environment of Casaccia, $-\eta$ is excluded from the subject clitic and lexicalized on I, as summarized in (b) in table 1. According to Chomsky (2001), I inherits its features from the C phase head; hence we may think of C-I as a discontinuous phase head. The fact that $-\eta$ shows up on I is therefore consistent with the generalization that it is associated with phase heads. On the other hand, in ObjCI-participle environments, the object clitic bears $-\eta$ inflection, whereas the perfect participle does not, as schematized in (c) in table 1. This is unexpected, since the v head of the vP phase should correspond to the participle. Perhaps we may say that the object clitic is the actual spellout of the ϕ -features of v (cf. Roberts 2010).

In Casaccia, the lexicon is immaterial, since $-\eta$ is associated with the verb (CP-phase) or with a clitic (vP -phase) depending on the syntactic configuration. Matters however are less clear in Tresivio in (b-c) in table 2, where it is always the clitic that carries plurality. This distribution may therefore be built into the lexicon.

The masculine in (34) is characterized by the specialized plural inflection *-i*, in nouns, determiners, adjectives and clitics. In the singular, the masculine *-o* inflection emerges. (Latin) III class nouns have converged with the II class in the masculine (*-o* inflection), as in (34h).

- | | | | | | | | | |
|------|----|--------------------------|-----------|------------------|-----|-------------------------|-------------------|---------------------|
| (34) | a. | əl | gatt-o/d | om-o | a’. | i | gatt-i/i | om-i |
| | | the | cat-M/the | man-M | | the.M.PL | cat-M.PL/the.M.PL | man-M.PL |
| | | ‘the cat/man’ | | | | ‘the cats/men’ | | |
| | b. | kol | bəd | om-o/kol gatt-o | b’. | k-i | bε-i | om-i/ gatt-i |
| | | that | fine | man-M/that cat-M | | that-M.PL | fine-M.PL | man-M.PL/cat-M.PL |
| | | ‘that fine man/that cat’ | | | | ‘those fine men/cats’ | | |
| | c. | koɖ/ft | om-o | | c’ | k-i/ | ft-i | om-i |
| | | that/this | man-M | | | that-M.PL/this-M.PL | man-M.PL | |
| | | ‘that/this man’ | | | | ‘those/these men’ | | |
| | d. | koɖ | altr-o | om-o | d’ | k-i | altr-i | om-i |
| | | that | other-M | man-M | | that-M.PL | other-M.PL | man-M.PL |
| | | ‘that other man’ | | | | ‘those other men’ | | |
| | e. | koɖ | om-o | vεc-o | e’ | k-i | om-i | vεc-i |
| | | that | man-M | old-M | | that-M.PL | men | old |
| | | ‘that old man’ | | | | ‘those old men’ | | |
| | f. | i | ε | kweɖ-o/kwest-o | f’. | i | εɲ | kwe-i/kwest-i |
| | | 3-M | is | that-M/this-M | | 3-M | are | that-M.PL/this-M.PL |
| | | ‘He is that/this one.’ | | | | ‘They are those/these.’ | | |
| | g. | i | ε | vεc-o/no-o | g’. | i | εɲ | vεc-i/ no-i |
| | | 3-M | is | old-M/new-M | | 3-M | are | old-M.PL/new-M.PL |
| | | ‘He/it(m) is old/new.’ | | | | ‘They are old/new.’ | | |
| | h. | kor-o | | | | | | |
| | | ‘heart’ | | | | | | |

In the clitic paradigm, the feminine forms *l-a* (preconsonantly) and *d* (prevocalic) characterize both subject and object clitics, both in the singular and in the plural, as in (35); these forms further coincide with those of the determiner. Thus singular and plural are disambiguated only by the finite verb in (35a-b); in object position the ambiguity is not resolved, as in (35c-d).

- | | | | | | | | | |
|------|----|---------------------------|-----------|--------|-----------------|-----------|----|--------|
| (35) | a. | l-a | dərm-ənə | a’. | l-a | dərm-ə | | |
| | | 3-F | sleep-3PL | | 3-F | sleep-3SG | | |
| | | ‘They(f) sleep.’ | | | ‘She sleeps.’ | | | |
| | b. | d | εɲ | vnut-a | b’. | d | ε | vnut-a |
| | | 3-F | are | come-F | | 3-F | is | come-F |
| | | ‘They(f) have come.’ | | | ‘She has come.’ | | | |
| | c. | a | l-a | veð-ə | | | | |
| | | SubjCl | 3-F | I.see | | | | |
| | | ‘I see her/them(f).’ | | | | | | |
| | d. | a | d | ə | viɬt-a | | | |
| | | SubjCl | 3 | I.have | seen-F | | | |
| | | ‘I have seen her/them(f)’ | | | | | | |

In the masculine object clitic paradigm in (36c-d), *l* (preconsonantly) and *d* (prevocalically) externalize the singular; the plural is lexicalized by *i*. This again parallels the determiner system. The masculine subject clitic has the sole form *i*, for singular and plural, prevocalically and

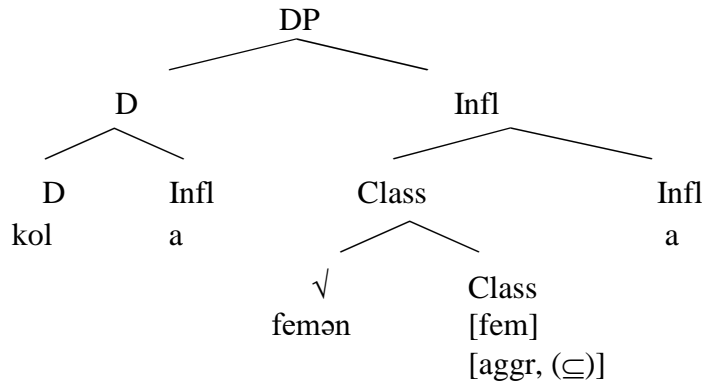
preconsonantly as in (36a-b).

(36)	a.	i	dɔrm-ə		a.ʼ	i	dɔrm-ənə		
		3-M	sleep-3SG			3-M	sleep-3PL		
		'He sleeps.'				'They(m) sleep.'			
	b.	i	ε	vnut-o		i	eŋ	vnut-i	
		3-M	is	come-M		3-M	are	come-M.PL	
		'He has come.'				'They(m) have come.'			
	c.	a	l	veðə		a	i	veðə	
		SCl	3-M	I.see		SubjCl	3-M.PL	I.see	
		'I see him.'				'I see them.'			
	d.	a	ɔ	viʃt-o		a	i	ɔ	viʃt-i
		SCl	3	I.have seen-M		SubjCl	3-M.PL	I.have seen-M.PL	
		'I have seen him.'				'I have seen them(m).'			

The data in (33) exclude the hypothesis that the ability of *-a* to introduce a plural interpretation depends on the presence of an unambiguous inflectional category for the plural (e.g. *-i* in Tresivio or *-η* in Casaccia) on the D phase head. Recall that the singleton morpheme hypothesis formulated by Costa and Figueredo (2002) for Brazilian Portuguese data does not account for the masculine/feminine asymmetry found in North Lombard varieties. In addition, the fact that plural morphology in Tresivio, both masculine and feminine, is represented by an inflectional vowel (*-i*) and not by an additional morpheme (*-s*, *-η*) introduces additional complexities in turn. In any event, differently from the data of Tresivio in section 4 and Casaccia in section 5, in the Viano variety the plural interpretation associates to *-a* independently of the co-occurrence with an unambiguously plural inflection in the nominal domain or, in fact, in the verbal domain, if we consider object clitic examples. Thus the sequences in (33) and in (36c-d) are ambiguous between plural or singular interpretation. Only agreement with the finite verb, in (35a-b), avoids this interpretive ambiguity. This brings out the fundamental feminine/masculine asymmetry in a particularly stark form. As we mentioned at the beginning, we know of no Italian or Romance variety where the asymmetry is reversed. Note that there is no morphological reason why it couldn't be reversed in Viano, where *-a* feminine inflection is paralleled by masculine *-o*.

We conclude the Viano evidence supports our thesis that *-a* is able to cover both singular and plural readings. This is so because it has semantic content corresponding to the [aggr] property characterizing singular mass terms (divisibility into parts) and plurals (divisibility into subsets). In the discussion in section 3, we have argued that the [aggr] class in Italian and in Central Calabrian is responsible for a type of plural whose semantic content corresponds to a set whose members are rather more like parts of whole than like individuated atoms of a plural set. What is more, we have hypothesized that there is only one inflectional *-a*, which preserves [aggr] also in the singular. This feature is interpreted compositionally with mass nouns; with count singular it returns no compositional interpretation. Other nominal Class specifications, namely [fem]/[masc], similarly return a compositional only when combining with a subset of roots (animates). When applied to examples like (33a), with the structure displayed in (37), this analysis allows us to account for the compatibility of *-a* with plural and singular interpretation – whereas no comparable phenomenon is observed in the masculine.

(37)



Let us then briefly review the masculine data. In Iacurso in section 3 and in the North Lombard dialects in sections 4-5, we have associated $(-i)$ with the specialized interpretive content $[\subseteq]$, i.e. plural. In the Viano dialect $(-i)$ is restricted to the masculine. Following the discussion in section 2, we may connect its restricted distribution in Viano with a selectional mechanism, whereby the inflectional morpheme selects a sub-set of nominal roots, here masculine ones. This leaves out the subject clitic i which lexicalizes also with singular. Manzini and Savoia (2011c, 2014) discuss a similar syncretism involving $-s$, which is both plural and (nominative) singular in Latin (e.g. *die-s* ‘day/days’) and residually in some Romance varieties (Sursilvan masculine singular adjectives in $-s$).

One possible way out of this predicament is offered by the systematization of number provided by Borer (2005). Borer argues that a category Div is necessary for count interpretation, both in the singular and in the plural. One could then surmise that $[\subseteq]$ morphology is compatible both with plurals and with singulars because it really corresponds to the count category. Under this account, the masculine clitic subjects of predication in Viano would introduce an individuating property (what Manzini and Savoia call quantificational in their discussion of Latin and Sursilvan $-s$). The issues that this account raises are beyond the scope of the present contribution, whose focus is the feminine and plural $-a$.

8. Conclusions

This work deals with the theoretical status of nominal inflections, on the basis of Romance variation data – in an effort to better understand the relevant phenomena and more generally the interface between the computational system and externalization (more or less the traditional syntax/morphology interface).

Specifically, languages vary in the arrangements they make for the externalization of syntax via morphology and the lexicon. From a theoretical point of view, a large class of generative grammar models confront this wide and subtle linguistic differentiation by assuming that what matters in syntax are abstract underlying patterns that are mostly universal; all that is left is differences in pronunciation that are by definition removed from both structure and interpretation. This is true of the cartographic approach in the syntax and of the DM approach in the morphology. Our proposal is that syntactic structures and computations are built from morphemes endowed with semantic content; hence syntax is externalized without the mediation of a morphological buffer, and traditional morphological variation must be dealt with directly within the syntax.

From an empirical point of view, in the theoretical literature nominal inflections in Romance have mostly been studied in relation to the system of Ibero-Romance (Kramer 2015 for a recent survey), where plural is denoted by a specialized $-s$ morpheme. Italian has attracted attention because of $-a$ plurals (Acquaviva 2008), while Romanian has been studied in relation to its *genus alternans* (masculine singular, feminine plural) sometimes connected to Italian $-a$ plurals. We have focussed our attention on Italo-Romance, where plurality is denoted by a change in inflectional vowel. In a sense the Italo-Romance configuration is more similar to the Bantu one, where pluralization is

effected by change in nominal class (Déchaine et al. 2014 for a recent survey).

Within this general typology, the *-i* inflection belongs to the etymological background of Romance varieties, and in general works along predictable lines in all grammars. Its extension from the masculine plural to the gender neutral plural seen in Tresivio in section 4 is a phenomenon that affects many North Italian varieties (for South Italian varieties see Iacurso in sections 1-3). By contrast, we have concentrated on *-a*, introducing a plural interpretation besides the feminine one that it normally lexicalizes in Romance.

In Central Calabrian, the *-a* plural essentially corresponds to the standard Italian *-a* plural, although the set of nouns which take this type of plural is bigger and the inflectional paradigm of this dialects is slightly different from the Italian one. We argued that the *-a* inflection includes the [aggr] content, that contributes to the plural interpretation. The *-i* Infl is specialized for the canonical plural reading, that we identify with the subset content [\subseteq]. In the three North Italian varieties that we examined (Tresivio, Casaccia, Viano), the *-a* inflection encompasses the singular and the plural feminine. Thus, the distribution of *-a* is different from that of Italian and Calabrian varieties. However, also in Northern Italian varieties we argued that it is the same intrinsic property of *-a* that allows it to lexicalize the plural, namely [aggr].

Another aspect of our discussion concerns the fact that the occurrence of *-a* as both singular and plural inflection often goes together with the presence of an unambiguous inflection for plural lexicalized by determiners (in Tresivio and Casaccia). Thus in DPs where nouns and adjectives lack an explicit inflection for the properties of plural, non-ambiguous referential specifications may nevertheless be externalized by determiners. Similar distributions have been described in the literature in connection with Ibero-Romance (Costa and Figueredo 2002), where however the masculine/feminine asymmetry is not observed. We connect the lexicalization of specialized plural properties to the definiteness/quantificational content introduced by the determiners of the noun, and to the phase head nature of D.

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