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Syncretism Phenomena in the Clitic Systems of Italian and Sardinian Dialects and the Notion of Morphological Change

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Recommended Citation

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With the renewed interest in theoretical morphology and the introduction of an autonomous morphological component characterized by specific morphological operations, it is important to consider the notion of morphological change, and to determine under what conditions morphological systems change. One of the characteristic changes of morphological systems is syncretism, a change in which a given morphological exponent acquires functions previously expressed by another exponent.

This paper deals with the syncretic changes found in the clitic systems of Italian and Sardinian dialects where we find developments such as those in (1).

(1) a. In the Pugliese dialect of Bari, clitic /nǧə/, which is originally a locative (< Latin HINC+ epenthetic I), is now the exponent of the 1perPlur and of the dative, as well as of the locative.
    b. In the Salentino dialect of Otranto, the clitic /nde/ which was originally partitive (< Latin INDE), in addition to retaining its original function, has also become the exponent of the dative and of the 1perPlur.
    c. In the Salentino dialect of Campi, the clitic /nne/ originally a partitive (< Latin INDE), is now the exponent of the 1perPlur., as well as of the partitive. At the same time, the clitic /nči/, originally a locative, is now the exponent of the dative, as well as of the locative.
    d. In the Salentino dialect of Brindisi, clitic /nči/, which is originally a locative (< Latin HINC+I), is now the exponent of the 1perPlur, of the dative, of the genitive as well as of the locative.

151

ANDREA CALABRESE

e. In the Logudorese dialect of Sardinian, the exponent of the locative clitic replaces the dative clitic when this appears in combination with an accusative.

f. In the Toscan dialect of Lucca, the exponent of the reflexive/impersonal clitic /si/ has also become the exponent of 1perPlur.

g. In standard Italian, the clitic /či/, which was originally a locative clitic (from Latin ECCE HIC), is now the exponent of the 1perPlur, as well as of the locative.

h. In the Campidanese dialect of Sardinian, the exponent of the reflexive clitic /si/ has also become the exponent of 1 and 2 perPlur. It also replaces the dative clitic when this appears in combination with an accusative.

The changes in (1) are representative of the type of syncretic changes found in the Italian and Sardinian dialects. We can distinguish two sets of cases. The first set of cases involves the replacement of the dative clitic, the second set the replacement of the first person plural. As we will see, the first set of cases will be accounted for by assuming an operation on the terminal node of the target of the syncretic change. The second set of cases, instead, will be accounted for by assuming both an operation on the terminal node of the target of the change and on the feature assignments of the extended lexical item. As we will see, in both cases there are functional/semantic reasons for the change.

We can reconstruct the pronominal clitic system for the proto-Romance variety that developed into the Italian and Sardinian dialects in (2):

(2)

		3pers		2pers		1pers	
		m	f	m	f	m	f
ACC	SG	*(I)LLU	*(I)LLA	*TE/I		*ME/I	
	PL	*(I)LLOS	*(I)LLAS	*VOS		*NOS	
DAT	SG	*(I)LLI		The same as ACC			
	PL	*(I)LLIS					
REF	SG	*SE					
	PL						
LOC		*(EC)CE+IC / *(I)NC+[I],	*(I)BI				
GEN		*(I)NDE					

The syncretic changes in (1) brought about the modern systems in (3) (The targets of syncretism are boxed. The etymological basis of a form is mentioned only when it is due to a syncretic change): [1]

(3)   a.   MODERN ITALIAN

		3pers m f	2pers m f	1pers m f
ACC	SG	lo la	ti	mi
	PL	li le	vi (<(I)BI)	ci (< *CE +IC)
DAT	SG	gli	The same as ACC	
	PL	gli, loro		
REF	SG	si		
	PL			
LOC		ci (< *CE+IC) vi (<(I)BI)		
GEN		ne		

b.   BARESE

		3pers m f	2pers m f	1pers m f
ACC	SG	u la	tə	mə
	PL	lə lə	və	nǧə(<(I)NC+I)
DAT	SG	nǧə(<(I)NC+I)	The same as ACC	
	PL	nǧə(<(I)NC+I)		
REF	SG	sə		
	PL			
LOC		nǧə (<(I)NC+I)		
GEN		nnə		

c.   OTRANTINO

		3pers m f	2pers m f	1pers m f
ACC	SG	lu la	te	me
	PL	li le	bbu	nde (<(I)NDE)
DAT	SG	nde (<(I)NDE)	The same as ACC	
	PL	nde (<(I)NDE)		
REF	SG	si		
	PL			
LOC		nči		
GEN		nde (<(I)NDE)		

d.   CAMPIOTA

		3pers m f	2pers m f	1pers m f
ACC	SG	lu la	te	me
	PL	li le	bbu	nne (<(I)NDE)
DAT	SG	nči (<(I)NC+I)	The same as ACC	
	PL	nči (<(I)NC+I)		
REF	SG	si		
	PL			
LOC		nči (<(I)NC+I)		
GEN		nne (<(I)NDE)		

[1]   We will not be concerned here with the extension of the exponent of the nominative plural as the exponent of the accusative plural and the associated loss of final /s/ which characterizes the Italian dialects, but not Sardinian.

154   ANDREA CALABRESE

e.   BRINDISINO

		3pers m f	2pers m f	1pers m f
ACC	SG	lu la	te	me
	PL	li le	bbu	nči (<(I)NC+I)
DAT	SG	nči (<(I)NC+I)	The same as ACC	
	PL	nči (<(I)NC+I)		
REF	SG	si		
	PL			
LOC		nči (<(I)NC+I)		
GEN		nči (<(I)NC+I))		

f.   LUCCHESE

		3pers m f	2pers m f	1pers m f
ACC	SG	lo la	ti	mi
	PL	li le	vi (<(I)BI)	si (<SE)
DAT	SG	li, ni	The same as ACC	
	PL	li, loro		
REF	SG	si (<SE)		
	PL			
LOC		ci, vi (<(I)BI)		
GEN		ne		

g.   LOGUDORO SARDINIAN
(data from Blasco Ferre' (1986))

		3pers m f	2pers m f	1pers m f
ACC	SG	lu la	ti	mi
	PL	los las	vos	nos
DAT	SG	li	The same as ACC	
	PL	lis		
REF	SG	si		
	PL			
LOC		bi/nke		
GEN		nde		

h.   CAMPIDANO SARDINIAN
(data from Blasco Ferre' (1986))

		3pers m f	2pers m f	1pers m f
ACC	SG	ddu dda	ti	mi
	PL	ddus ddas	si (<SE)	si (<SE)
DAT	SG	ddi	The same as ACC	
	PL	ddis		
REF	SG	si (<SE)		
	PL			
LOC		ntʃi, nke		
GEN		ndi		

At first sight, some of the syncretic changes in (1) may appear to be without reason. We will see, however, that they make sense when considered in light of distributed morphology. Recent work by J. Harris (1994) and Bonet (1991) on Spanish and Catalan shows how syncretism can be dealt with in clitic systems from a synchronic point of view. Relying on their work, here we will focus on the historical evolution of the clitic systems of the Italian and Sardinian dialects and we will attempt to account for such changes.

We propose that in addition to cases of syncretism brought about by phonological changes--which are not of interest to us here-- two other types of syncretism may be recognized: 1) a functionally-motivated syncretic change brought about the activation of constraints disallowing the combination of certain morphological features, so that certain feature contrasts are neutralized, and 2) a semantically-motivated one brought about through the modification of the feature assignments of a lexical item. We will show that the replacement of the dative clitic by the locative and genitive found in some of the Italian dialects is a typical example of the first type of change. The replacement of the first person plural clitic by impersonal/reflexive /si/ is a typical example of the second type of change. In the explanation of both types of changes a substantial basis will be invoked, not a purely formal one. We will further show that these cases of historical changes cannot be accounted for by using the purely morphological operation of impoverishment which has been successfully used by Bonet (1992), Halle and Marantz (1994), and Harris (1994) to account for synchronic syncretism in clitic systems.

A concern that is of the utmost importance to us here is that of outlining a formal theory of syncretic change as part of a formal theory of linguistic change. We are interested in achieving an explanatory analysis which can account for why those changes occurred. In such an analysis, a linguistic change should be expressed in formally simple and elegant terms which are consistent with the theoretical framework used to account for the different synchronic stages of the change.

The analysis proposed here is couched in the framework of Distributed Morphology (DM). DM assumes the basic organization of grammar schematized in (4), where a Morphological Structure (MS) component is included in the familiar "principles and parameters" layout. The terminal nodes of SS trees into which Vocabulary items are inserted are organized into hierarchical structures determined by the principles and operations of the syntax.

(4)   Syntax

Morphology:
Morphological operations
Addition of morphemes,
Merger, fusion, fission
impoverishment,
Readjustment rules 1.

Vocabulary Insertion.

Readjustment rules 2.

Phonological rules

PF   LF

ANDREA CALABRESE
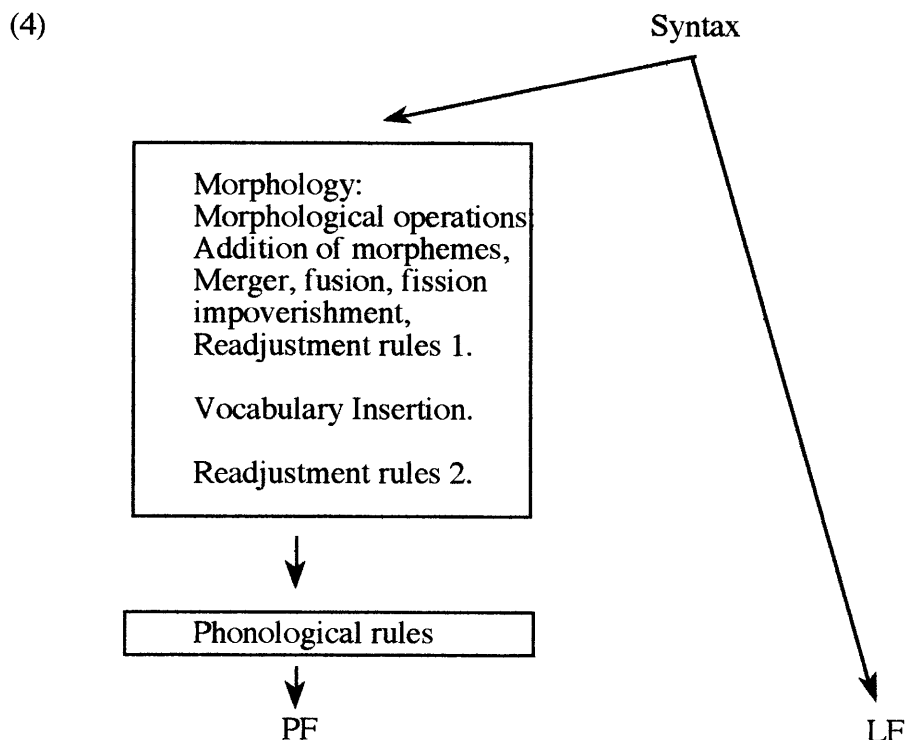
DM recognizes that MS is a level of grammatical representation with its own principles and properties. The apparent mismatches between the organization of the morphosyntactic pieces and the organization of the phonological pieces, which are commonly found in natural languages, are the result of well-motivated operations manipulating terminal elements at this level. The primary, and perhaps only, structural operations performed by the MS rules are given in (5) (from Harris (1994)):

(5) a. Impoverishment   b. Adjunction (as in syntax)

c. Fusion   d. Fission

$[x] \wedge [y] \rightarrow [x, y]$ $[x, y] \rightarrow [x] \wedge [y]$

where features grouped inside brackets belong to the same feature bundle and
$\wedge$ = adjacent, but linearly unordered.

The operations in (5) are followed by vocabulary insertion in MS, which inserts phonological features into the terminal nodes. According to Distributed Morphology, insertion obeys the condition that the contextual features of vocabulary items must be a subset of the semantic/syntactic features of the terminal node. Thus in Distributed Morphology, vocabulary items are characteristically underspecified with respect to terminal nodes. It is not uncommon for several vocabulary items to be available for insertion into a given terminal node. Lexical contextual features impose a partial ordering among these items in accordance with the familiar universal Paninian principle of 'more complex first'. Thus, the most highly specified vocabulary item whose identifying features are a subset of the features of the terminal node wins the competition and is inserted. This aspect of Distributed Morphology will be criticized here.

Let us sum up how vocabulary insertion occurs. The terminal nodes provided by the syntax consist of complexes of grammatical features which are specified for all the features that play a role in syntax and/or that depend on syntactic structure (for example, syntactic category, Case features, etc..), but not for morphological features such as idiosyncratic declension-class membership or for phonological properties. These feature complexes can be manipulated by rules such as those in (5) in the morphological structure component. These manipulated feature complexes form the slots in which the vocabulary items are filled in. Vocabulary insertion can only insert phonological and morphological features and does not add to or replace the semantic/syntactic features contained in the terminal nodes.

As shown in (5) the morphological component includes the operation of impoverishment which modifies the syntactic structure of a sentence prior to vocabulary insertion by deleting one or more of its features. As mentioned earlier, for an item to be inserted in a node, its identifying features must be a subset of the features specified at the node; hence a consequence of deleting features in a node is to take vocabulary items specified for the deleted features out of competition for insertion in the node in question. The situation brought about by impoverishment can then be characterized as a retreat to the general case, since a more highly specified vocabulary item loses out to one that is less specific, more general.

Impoverishment is illustrated in (6):

(6)   (From Halle and Marantz (1994 (their (3)):

The two vocabulary items of category X in (a) compete for insertion at a node of category X in (b), and the competition is won by the vocabulary item A because it contains a larger subset of the features in the node X than does Vocabulary Item B. If the language is subject to Impoverishment by rule (c), which deletes F_2 in a node of category X if followed by a node of category Y, vocabulary item A can no longer be inserted in a node X containing the features F_1, F_2 and F_3 as it is in (b), and the more general, less narrowly constrained item B will be inserted to express the feature complex F_1, F_2, F_3 under X that is operative in the syntax.

a.   Category X

Vocabulary Item A: $[F_1, F_2]$ → P_A
Vocabulary Item B: $[F_1]$ → P_B

b.

c. F_2 → $\emptyset$ /   X   Y

d.
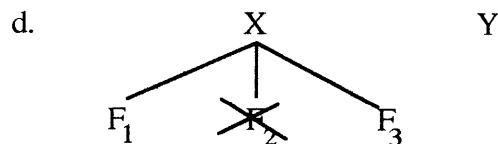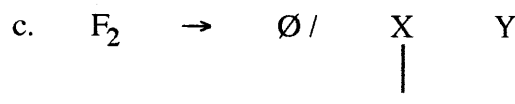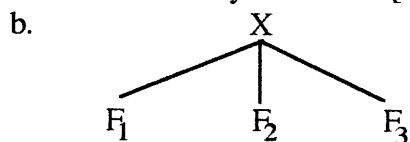
As an example of an analysis based on impoverishment, let us consider Harris' (1994) analysis of spurious /se/ in Spanish. Spanish has the clitic system in (7):

(7)

	3pers		2pers		1pers	
	m	f	m	f	m	f
ACC	SG lo	la	te		me	
	PL los	las	os		nos	
DAT	SG le					
	PL les			The same as ACC		
REF	SG					
	se					
	PL					

ANDREA CALABRESE

Harris proposes that like all Spanish words, pronominal clitics are to be morphologically decomposed into a stem and a class marker. The class markers are inserted by the rules in (8)

(8)   a.   Class Markers in Spanish:
            CM   →   e/ [Class III] + ____
            CM   →   a/ [Class II] + ____
            CM   →   o/ [   ] + ____

The assignment of stems to different classes is governed by the rule in (bi) that assigns Class II to [+feminine] stems. The III Class is assigned lexically and Class I is the default case as represented in (bii) and (biii.)

        b.   i.   fem → II
              ii.   III: lexically assigned
              iii.   I: default

In addition to class markers, Spanish has a number suffix which is spelled out by the exponents /-Ø/ or /-s/. The Ø- morpheme of the singular is considered to be the elsewhere case. We thus have the lexical items in (c):

        c.   s   ↔   Plural
              Ø   ↔   ___

Let us now consider the phenomenon of spurious /se/ in Spanish. When the dative clitic appears in a cluster with an accusative, it is realized with the same exponent of the reflexive /se/ as shown in (9):

(9)

		ACC sg m/f	ACC pl m/f
DAT	sg	se lo/la	se los/las
	pl		

Harris proposes the impoverishment rule in (10) and assumes that the vocabulary items for the pronominal clitic stems are those in (11):

$$
\begin{array}{cc}
\text{X} & \text{X} \\
| & | \\
\end{array}
$$

(10)   [dat]   →   Ø / ____   [acc]

(11)   Vocabulary items for the Spanish pronominal clitics:
            Basis   a.   n   ↔   __ 1per, plu
                         b.   Ø   ↔   __ 2per, plu
                         c.   m   ↔   __ 1per
                         d.   t   ↔   __ 2per
                         e.   l   ↔   __ Caso
                         f.   s   ↔   __

An assumption of Distributed Morphology is that each sublist of vocabulary items should include an elsewhere case, i.e., the vocabulary item that should be inserted when there is no other competing item. This elsewhere vocabulary item is characterized as being totally underspecified.

Crucially, in the entries in (11), the clitic /se/ is the elsewhere case of the Spanish clitic system, i.e., the clitic that should appear when there is no other competing clitic. The effect of rule (10) is the removal of such competing form. By removing the Dative node from the terminal node of the dative clitic, rule (10) in fact prevents rule (11e) from applying. The elsewhere case in (11f) then applies and inserts the exponent /se/.

Harris' analysis is simple and elegant. It would be desirable to use it to account for the diachronic changes we have discussed in (1). When we consider these changes more closely, however, we discover that we cannot extend Harris' analysis in the historical domain.

Before considering the analysis of the diachronic syncretic changes. I want to outline a general theory of case systems. Along the lines of Jakobson (1936), Noyer (1992), let us assume that the elements of a paradigm[2] are to be analyzed as belonging to an abstract system of contrasts analogous to that found in phonological inventories. Following Jakobson (1936), I assume that the first step to understand the syncretic changes is that of conceiving cases as bundles of feature specifications. We hypothesize that in the unmarked case if the use of an exponent of a certain case is extended so that it becomes the exponent of another case, the two cases share the same general meaning, i.e., a "gesamtbedeutung" in Jakobsonian terms, which is formally expressed as a distinctive feature.

I propose the feature system in (12) for the cases more commonly found in the Indo-European languages. This feature system is at first motivated by syncretism cases such as those listed in (13) (cf. Luraghi (1987), Meillet and Vendryes (1966)). The hypothesis is that in the unmarked case in a syncretism case we are preserving a feature value and neutralizing a feature opposition. As we will see later when we propose an formal account of the syncretism cases in (13), this holds for most cases of syncretisms. However, there are cases for which this is not true, e.g., the syncretism between locative and genitive observed in the Brindisino dialect which will be discussed below:

(12)

	Nom	Acc	Gen	Dat	Loc	Abl.	Inst.
Subject	+	-	-	-	-	-	-
Direct	+	+	-	-	-	-	-
Structural	+	+	+	-	-	-	-
Possessor	-	-	+	+	-	-	-
Location	-	-	-	+	+	+	-
Source	-	-	+	-	-	+	-
Association	-	-	-	-	-	+	+

(13)   Syncretism[3]   Languages in which it is found:
        Accusative - Genitive   Russian animate plurals
        Common feature: [+Structural]   of all declensions and
        Neutralized feature: [Direct]   singulars of *o-declension.

---

[2]   The notion of a paradigm is intended here in its descriptive sense of a subset of lexical items having the same syntactic function and not in the theoretical sense of the term which characterizes the work of linguists such as Carstairs-McCarthy (1987) and Anderson (1992).

[3]   Observe that only presence of a neutralization, and not direction of the neutralization is considered in the table in (13). Thus, for example, it can be argued that in the case of the Latin neuters, the accusative is replacing the nominative in the second declension, but the nominative is replacing the accusative in the third and fourth declensions. Both cases, however, are considered together in (13). The point is that in both cases the feature [subject] is no longer contrastive in the context of the feature [+direct], regardless of whether the feature [+subject] becomes [-subject] or vice versa.

ANDREA CALABRESE

Dative - Genitive		Rumanian. Armenian.
Common feature:	[+Possessor]	Italian dialects
Neutralized feature:	[Location]	Pronominal system.
Genitive - Ablative		Ancient Greek.
Common feature:	[+Source]	Romance Pronominal
Neutralized feature:	[Location]	system.
Ablative - Locative		Latin Common nouns.
Common feature:	[+Location]	
Neutralized feature:	[Source]	
Dative - Ablative		Ancient Greek.
Common feature:	[+Location]	Old Germanic.
Neutralized feature:	[Possessor]	
Dative - Locative		Ancient Greek.
Common feature:	[+Location]	Italian dialects
Neutralized feature:	[Possessor]	pronominal system.
		Hittite.
Ablative - Instrumental		Latin.
Common feature:	[+Association]	
Neutralized feature:	[Source]	
Nominative - Accusative		Latin Neuters.
Common feature:	[+Direct]	Russian inanimate
Neutralized feature:	[Subject]	plurals of all declensions and
		singulars of *o- declension.
		Armenian.
Accusative - All other cases		Proto-Romance
Common feature:	[-subject]	(seen in Old French).
Neutralized feature:	[Direct]	

I want to stress that the features proposed here are totally provisional and obviously open to revision. I consider the features in (12) as temporary conventions useful to describe the feature composition of case systems. Further research across languages is needed to establish their ontological status.

Observe that many possible combinations in (12) are missing. I hypothesize that they are ruled out by constraints disallowing certain combinations of features such as those in (14):

(14) a. *[+direct, -structural]
      b. *[+direct, +location]
      c. *[+direct, +possessor]
      d. *[+direct, +source]

Observe also that not all cases have the same status. Some cases are less frequent than other cases in case systems. Thus, for example, the ablative is less frequently found than genitive. I will try to capture this fact by assuming that following Calabrese's (1988,

In press) analysis of markedness in phonological systems, each case is characteristically identified by a constraint on a feature combination (a *filter* from now on). If a filter is active in a language, the relevant case is not present in that language. Crucially, these filters are hierarchically ordered. The lower a filter in the hierarchy, the more probable is that it is active across languages. Thus the filter characterizing the ablative is in a low position in the hierarchy. This expresses the fact that it is more rarely found across languages. A provisory hierarchy of case filters is given in (15):

(15) a.   [-subject, +structural]   (Accusative Case)
      b.   [+structural, -direct]   (Genitive Case)
      c.   [+possessor, +location)   (Dative Case)
      d.   [+location, -source]   (Locative Case)
      e.   [+source, +location]   (Ablative Case)
      f.   [-source, +association]   (Instrumental Case)

We can assume that the filters are motivated by the fact that the morphological spell-out of certain feature configurations adds complexity to the grammar. Therefore such configurations are disliked, avoided in morphology. The reasons for the complexity of such configurations will not be discussed here.

The presence of a filter which disallows the use of certain feature specifications in the context of other feature specifications identifies which features are playing a role in a morphological inventory and therefore identifies the meaning contrast characterizing this inventory. Thus, for example, the fact that gender and case features do not play a role in the 1st and 2nd person of the Romance clitic systems can be expressed by the filters in (16)-(17) (where [+Participant] is an abbreviation for [+Participant in Speech Event]):
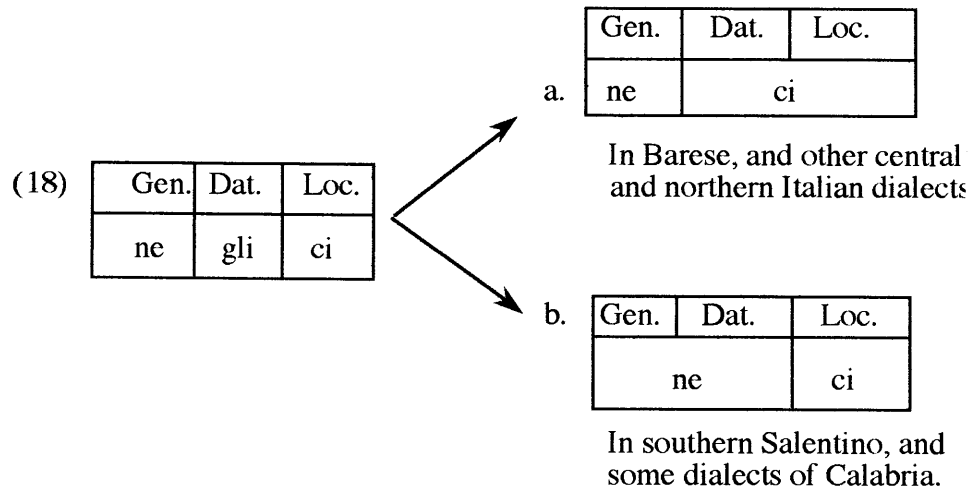
(16)   *[+participant, +feminine]

(17)   *[+participant, -direct]

The filters in (16) and (17) in conjunction with (14) state that the feature [feminine] and all Case features except [subject] cannot create a contrast in the case of the 1st and 2nd person. Therefore filters not only define the structure of a morphological inventory, but also define what features are contrastive.

Let us now consider how we can account for the syncretism cases observed in (1). We will focus on the syncretism phenomena targeting the 3rd person dative clitic which in some dialects is replaced by the exponent of the locative clitic, and in some other dialect by the exponent of the genitive clitic as represented in (18) (Standard Italian forms are used for descriptive convenience):[4]

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[4]   We will not provide a detailed analysis of the morphology of these clitics. We assume Harris' analysis of Spanish pronominal clitics according to which they are to be morphologically decomposed into a stem and a class marker. Observe that differently than in nouns where Case and Number features are encoded in suffixes which are added to the stem, in the case of pronominal clitics Case and Number features are directly encoded in the stem.

162   ANDREA CALABRESE

	Gen.	Dat.	Loc.
a.	ne	ci	

In Barese, and other central
and northern Italian dialects

(18)

	Gen.	Dat.	Loc.
	ne	gli	ci

	Gen.	Dat.	Loc.
b.	ne		ci

In southern Salentino, and
some dialects of Calabria.

The terminal nodes of the grammatical categories that are playing a role here, those of 'dative', 'locative', and 'genitive', are given in (19) (Features other than Case features are not mentioned. Also the features [Source], [Association],which are not relevant in the description of the Romance pronominal system, are not mentioned):

(19)   a.   'Genitive'   b.   'Dative'   c.   'Locative'
              X   X   X
              -subject   -subject   -subject
              -direct   -direct   -direct
              +structural   -structural   -structural
              -location   +location   +location
              +possessor   +possessor   -possessor

Let us first assume that the lexical items are underspecified. Given Harris' analysis of Spanish, the form that is extended in (18) should be the elsewhere case. Therefore to obtain the syncretisms represented in (18), we have to assume that the relevant lexical items in (18) are specified either as in (20) or as in (21) (Only Case features are mentioned):

(20)   a   gli   ↔   +location   b.   ci   ↔   [ ]
                          +possessor

        c.   ne   ↔   +possessor

(21)   a   gli   ↔   +location   b.   ci   ↔   +location
                          +possessor

        c.   ne   ↔   [ ]

Impoverishment of either the feature [+possessor] or [+location] in (19b) prevents the vocabulary item /gli/ from being inserted. Therefore, the elsewhere case must apply. (20) accounts for the syncretism in (18a); (21) for the syncretism in (18b).

However, prior to the syncretic change, there is no reason to suppose that the vocabulary items /ci/ or /ne/ are underspecified. Other underspecification patterns could be assumed as well. In fact, at least six other different ways of entering the same lexical entries could be postulated. One may well wonder why /gli/ is the most specified lexical item in (20) and (21), or why the features [+location], [+possessor] are not missing from the lexical item /ci/, /ne/ instead of other features. The point is that there is no independent

motivation to assume the underspecification pattern in (20) or (21) other than syncretism. Evidence for underspecification is only provided ex post facto by the occurrence of the syncretism. Prior to the syncretism there is no evidence whatsoever that those particular lexical items are underspecified. Therefore, the postulation of the underspecification patterns in (20)-(21) is arbitrary, and essentially circular.

In order to account for these cases of syncretism, we must postulate both that the dative clitic is more specified and that there is an impoverishment rule targeting the dative. Neither of these hypotheses has a motivation besides that of accounting for the syncretic change. Observe also that impoverishment and the postulation of the underspecification pattern in (20)-(21) are conspiring together to obtain the syncretism. There is no reason for such a conspiracy in this framework. It is totally accidental that this happens; however, it is necessary for the analysis. Again we obtain a faulty explanation. A valid analysis of these cases of syncretisms cannot thus presuppose underspecification.

I propose a different account in which syncretism is expressed by a single operation triggered by the activation of a filter neutralizing a feature contrast, and thus simplifying the structure of the morphological inventory. According to this proposal, lexical items are fully specified. Therefore, the problems caused by underspecification of lexical items are avoided.

If we assume full specification, the lexical items in (18) are represented as in (22), where the contrastive features characterizing each of the items are mentioned first. The terminal nodes of the relevant grammatical categories are those given in (19):

(22) a. gli   ↔   +location   b. ci   ↔   +location
                    +possessor   -possessor
                    -subject   -subject
                    -direct   -direct
                    -structural   -structural

      c. ne   ↔   -location
                    +possessor
                    -subject
                    -direct
                    +structural

As we have seen above, the Paninian principle relies on the idea that vocabulary items are underspecified with respect to the terminal nodes. Once full specification is adopted for lexical items, then the Paninian principle can no longer be maintained and insertion must therefore be governed simply by feature matching, i.e., a given vocabulary item is inserted in a terminal node when all of its features match all of the features of the terminal node.[5]

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[5] It is not clear to me at this point, if some form of the Paninian principle still govern the matching process. Further research is needed on this aspect of the proposal.

Observe that many linguists, among which Jakobson (1936), Manczak (1958), Watkins (1969), have noticed that there is a tendency to extend categories such as the singular, the masculine in the nominal morphology, or the third person and the present in verbal morphology. Such a tendency could be explained if we assume that such categories are unmarked. Let us suppose that the notion of markedness plays a role in morphology. Morphological feature specifications can be marked in the same way as phonological feature specifications (see Calabrese (In press) on phonological markedness). Thus one can assume that the features [+plural] and [+feminine] are marked in the nominal morphology, and features such as [+past], [+participant in speech event] are marked in verbal morphology. The extension of a lexical item representing an unmarked category would be accounted for by assuming an operation on terminal nodes

ANDREA CALABRESE

I propose that a syncretic change is obtained by the application of a rule affecting the terminal node provided by the syntax. This rule is triggered by the activation of a filter disallowing a combination of morphological features and it repairs this disallowed feature configuration by changing the value of one of its feature specifications. The vocabulary insertion rule characterized by the disallowed configuration can no longer apply. Instead, the vocabulary insertion rule characterized by the configuration which is the output of the repair rule applies. Thus the exponent identified by the disallowed feature configuration is eliminated and replaced by the exponent of an allowed configuration. The relevant morphological contrast is therefore eliminated.

Let us account for the changes affecting the dative in Romance. In the inventory in (2) characterizing the proto-Romance clitic system, one of the filters in (15) was active, in particular (15e) disallowing the ablative, but all the others were instead inactive. In particular, the filter in (15c) (repeated here as (23)) was inactive. Among the languages mentioned in (3), this system is preserved in Sardinian, Lucchese and Standard Italian. The remaining languages, however, are characterized by the activation of (15c=(23)). The filter in (23) will trigger the application of either the rule in (24) or the rule in (25).

(23)   *[+location, +possessor]

(24)   [+possessor]   →   [-possessor]   / $\underline{\qquad\qquad}$ +location

(25)   [+location]   →   [-location]   / $\underline{\qquad\qquad}$ +possessor

The application of (24) will change the terminal node of the dative in (19b) in that of the locative, whereas the application of (25) will change it in that of the genitive. If we assume the lexical items in (22), the application of (24) accounts for the case in which the locative is taking over the function of the dative, and the application of rule (25) will account for the case in which the genitive is taking over the function of the dative.

Observe that the application of rule (25) does not give immediately the feature bundle of the genitive. In order to obtain that feature bundle, the features [-structural] and [-source] characterizing the dative must be changed into [+structural] and [+source]. We can assume that these changes are instances of repair strategies triggered by the unviolable filters in (26) that always govern the combination of case features in case systems:[6]

(26)   a.   *[-location, -structural]/ [+possessor, $\underline{\qquad\qquad}$]
         b.   *[-location, -source]/[+possessor, $\underline{\qquad\qquad}$]

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changing the marked value into its unmarked counterpart. Thus the extension of the singular as also exponent of the plural is then represented as an operation in which the marked feature [+plural] of terminal nodes is is replaced by its opposite value which represent the unmarked value of this feature. The elsewhere case could be reinterpreted in this terms. The retreat to the general case formalized in terms of impoverishment and elsewhere case could be simple reinterpreted as retreat to the unmarked case. The notion of markedness, however, does not play a role in the analysis of the syncretic changes we propose. It is not clear if this is just an accident. We will not discuss this point further here.

[6]   Calabrese (In press) proposes that the same distinction between violable and unviolable constraints is found among constraints governing the combination of phonological features. The violable constraints-- called marking statements in that work--identify phonologically complex configurations which although found in some phonological inventories, are not found in others. The unviolable constraints--called prohibitions-- identify configurations which are never possible because of articulatory and acoustic reasons. An example of the former constraints is the marking statement *[+low, -back] governing the appearance of low front vowels in phonological systems. An example of the latter is the prohibition *[+high, +low] disallowing the simultaneous use of the features [+high] and [+low].

In the theory just developed, therefore, a syncretic change involves the activation of a filter on a combination of morphological features. Such an activation eliminates a morphological contrast and causes a restructuring in the inventory of the lexical items. This restructuring leads to syncretism. Observe that we are saying that morphological change of this type is performed by affecting the representations provided by the syntax, not the vocabulary items stored in the long-term memory.

We can now account for the replacement of the genitive with the locative that we observe in Brindisino. This development is represented in (27) (Standard Italian forms are used for descriptive convenience):

(27)

Gen.	Dat.	Loc.
ne	gli	ci

→

Gen.	Dat.	Loc
	ci	

Crucially in Brindisino, no dative case is present, as it has been replaced by the locative. Therefore the filter in (23) is active in Brindisino. The elimination of the genitive is accounted for by activation of the filter in (15b) (repeated here as (28)):

(28)   *[+structural, -direct]

The activation of this filter triggers the application of a rule affecting the terminal node characterizing the genitive. It changes the value of the feature specification [+structural] into [-structural]. The configuration in (29a) is thus obtained:

(29a)   -subject
        -direct
        -structural
        +possessor
        -location

In the configuration in (29a), the unviolable filter (26a) and the filters in (23) and (15e)-- which are active in this language-- are violated. Repair rules that change [-location] into [+location], and the features [+possessor] and [+source] into [-possessor], [-source] respectively, will automatically apply. Thus we obtain (29b):

(29b)   -subject
        -direct
        -structural
        -possessor
        +location

(29b) is the feature bundle characterizing the locative. The vocabulary insertion rule characterized by the genitive can no longer apply. Instead, the vocabulary insertion rule characterized by the locative applies.

This analysis of the syncretism between genitive and locative clitics crucially assumes that the filters in (23) and (15e) are active. Therefore no distinctive dative or ablative case morphemes could be present in a system where the genitive morpheme is replaced by the locative one. Further research should determine whether this is correct.

Now let us consider the contextual changes that occur in clusters of clitics. In Sardinian dialects, as in Spanish and Catalan, a dative clitic in a cluster with an accusative

166   ANDREA CALABRESE

clitic is changed into another clitic: a locative clitic in the Logudoro dialects, and a reflexive clitic in the Campidano dialects, as shown in (30):

(30)   Dative +   Accusative   →   X   +   Accusative
    Logudoro: li/lis   lu, la, los, las   bi   lu, la, los, las
    Campidano: ddi/ddis   ddu, dda, ddus, ddas   si   ddu, dda,ddus, ddas

Let us consider the case of the extension of /si/ to represent a pronominal dative when the latter is in a cluster with a pronominal accusative. /si/ is the exponent of 3person reflexive, of the medio-passive constructions, and of the impersonal.[7] I assume that /si/ is identified by the feature specifications in (31).
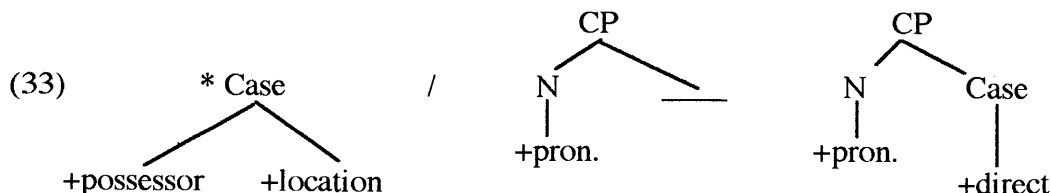
(31)   si   ↔   -participant
                    -referential[8]

Now, observe that in many languages no case contrasts are observable in reflexives. I assume that this is due to the presence in these languages of an active constraint stating that Case features can occur only in [+referential] nominal expressions

(32)   Case if and only if [+referential]

Observe that given (32), if a nominal expression does not have Case, it can only be [-referential]. This constraint is actively present in Sardinian, as in all of the Italian dialects listed in (3) where no case contrasts are found in reflexives.[9]

Now let us consider what happens when we have a cluster with Dative and Accusative pronominal clitics. This cluster is disallowed in many varieties of Romance. I propose the condition in (33) to account for this fact (The syntactic structures in (33) are simplified for descriptive convenience. CP = Case Phrase):

(33)   * Case   /   CP   CP
             ╱   ╲   ╱ ╲   ╱ ╲
      +possessor +location   N   ____   N   Case
                                    | | |
                                  +pron.   +pron. +direct

We can satisfy the constraint in (33) by changing one of the features of the dative case. This is what occurs in the case of Logudoro Sardinian, where we change the feature [+possessor] into [-possessor], as in (29):
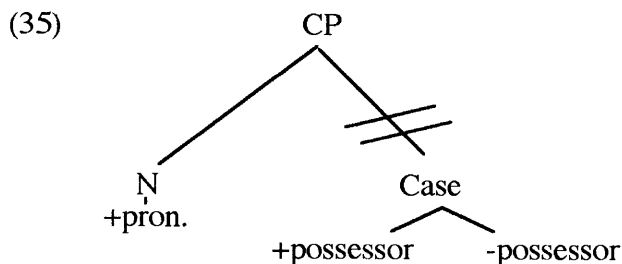
                                         -participant
                                         +location
(34)   +possessor   →   -possessor /   _____

I propose that in the case of Campidano Sardinian, we delink and delete the Case node as in (35) to satisfy the constraint in (33):

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[7]   It is not possible here to develop a detailed analysis of /si/, and explain why this originally reflexive clitic has become the marker of the medio-passive construction and of the impersonal.

[8]   Following Calabrese (1986) (see also Burzio (1992)), I assume that true reflexives are non referential because they are not deictic expression and lack person, gender and number features (Chomsky's φ-features))
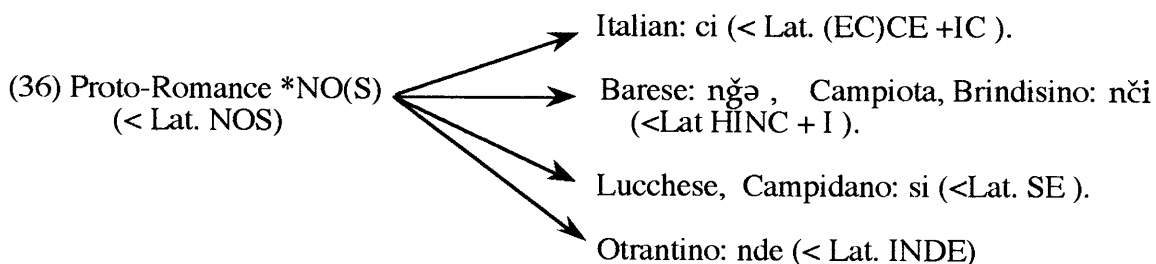
[9]   This constraint, however, is not active in Latin, where reflexives display Case contrasts.

(35)

```
                      CP
                   ╱    ╲
                  ╱      ╲╫╫
                 ╱         ╲
                N          Case
              +pron.       ╱  ╲
                    +possessor   -possessor
```

Given (32) the pronominal cannot be [+referential] any longer and becomes [-referential]. It has the feature [-participant], therefore the exponent /si/ can be inserted. A simple explanation of this contextual syncretic change is thus obtained.

The cases we just considered involved the change of a Case into another Case. Let us consider other syncretic changes observed in the Italian and Sardinian dialects, those involving 1 person plural and the reflexive. These are definitely more complicated changes which involve not only a change in Case, but also a change in person features. We will see that these changes not only involve a change in the terminal node triggered by the activation of a filter that eliminates a given vocabulary item, but also require a modification of the feature assignments of the lexical item which is used to replace the eliminated lexical item.

In these Italian and Sardinian dialects, the exponent of the first person plural is replaced by the exponent of the locative, genitive, or reflexive, as we see in (36):

(36) Proto-Romance *NO(S)
     (< Lat. NOS)

Italian: ci (< Lat. (EC)CE +IC).

Barese: nǧə , Campiota, Brindisino: nči (<Lat HINC + I).

Lucchese, Campidano: si (<Lat. SE).

Otrantino: nde (< Lat. INDE)

We assume that the first change affecting the first person plural clitics is the activation of the filter in (37):

+inclusive of speaker
(37)   *[+participant, +plural]/   _____

The filter in (37) will trigger the application of the repair rule in (38):

+plural
+Inclusive of speaker
(38)   [+participant]   →   [-participant]/   _____

We assume that the terminal node of first person plural in Proto-Romance (still present in Old Italian) included the following feature specifications

(39)   +participant
        +inclusive of speaker
        +plural
        +proximate

168   ANDREA CALABRESE

The change brought about by (38) will bleed the insertion of the lexical item /no/ whose identifying features are given in (40):

(40)   /no/   ↔   +participant
                           +inclusive of speaker
                           +plural

At this point, however, no other lexical item can be inserted, since no other lexical item competing for insertion in the terminal node of the first person plural exists. I propose that under such circumstances, speakers can resort to a morphological operation which involves the modification of the lexical item whose use is extended to cover the function of the eliminated lexical item.

      Let us now consider the replacement of the inherited exponent of the first person plural with the exponent of the reflexive clitic that occurs in the Toscan dialect of Lucca. My explanation for this replacement is based on the idea that it is possible to modify the feature assignments of a lexical item so that a new creative use of this lexical item is made possible. I maintain that such a modification of the feature assignments of a lexical item is the basic operation that makes possible the metaphorical use of lexical items. The idea is that certain features common to both the lexical item and the terminal node may play a pivotal role in the modification leading to the adjustments in the featural assignments of a lexical item, so that the lexical item can be inserted in that terminal node. Formally, this operation can be expressed as follows. Given a terminal node T with the assignments in (41):

(41)   aF
        bG
        cB
        dK

and a lexical item with the assignments in (42):

(42)   Φ   ↔   -aF
                           -bG
                           dK

the presence of dK in Φ--under circumstances still to be understood (perhaps dk is psychologically or semantically salient)--leads to a change of -aF, -bG to aF, bG respectively, and to the addition of cB so that Φ can be inserted in the terminal node T in (41) as an alternative to the lexical item Σ which has the feature assignments in 43):

(43)   Σ   ↔   aF
                              bG
                              cB
                              dK

It is important to observe that in the case of the metaphorical use of Φ,   Φ does not permanently replace Σ in the terminal node T, but simply represents a lexical alternative to it.

      The operation just discussed underlies the metaphorical use of a lexical item, i.e., a case in which a certain feature common to the lexical item and to a terminal node is pivotal in causing the change of other features of the lexical item so that this lexical item can be inserted in that terminal node where it could not be previously inserted. This is the type of

operation that accounts for the metaphorical use of /foot/ in "foot of the table": in the metaphorical use of the word, the feature [+sustaining part] common to the lexical item and the terminal node referring to that part of the table leads to a restructuring of the feature assignments of this lexical item so that the feature [+anatomical part of the human body] is removed, and the lexical item /foot/ can be inserted in that terminal node. As another example, let us consider the sentence /John is a pig/ where we are obviously not saying that "John" is the actual animal, but predicating of him some of the properties that society and culture assign to this animal. The lexical item /pig/ is therefore used metaphorically in this sentence. How is this use accounted for in the framework just outlined? The lexical item /pig/ is associated with features such as [-human], [dirty], [greedy]. The terminal node of the predicate in the previous sentence contains the features [dirty], [greedy]. Such features are also associated with the lexical item [pig] as just proposed. We propose that it is precisely this shared set of features which allows a new creative use of this lexical item in which the feature /-human/ is removed. Thus /pig/ can be inserted in the terminal node of the predicate of the preceding sentence.

I propose that essentially the same operation that plays a role in the metaphorical use of a lexical item plays a role in accounting for the different uses of the clitic /si/.

In order to understand the extension of /si/ to the function of 1stPlur. complement clitic, we have to consider the use of the reflexive si as the marker of the impersonal constructions characterizing Toscan and many other Italian and Romance varieties. In Italian in addition to uses of the impersonal /si/ constructions, such as those in (44a) where /si/ refers to an arbitrary group of individuals, there is a use in which /si/ refers to a group of individuals which is inclusive of the speaker. This use can be observed in (44):

(44)   a.   In Cina si mangia bene
                'In China one eats well'

        b.   A casa nostra si mangia bene
                'In our house, one eats well'

The impersonal /si/ construction in (44) has a meaning very close to a first person plural.[10] As matter of fact, in many Toscan dialects the first person plural subject is replaced by the impersonal /si/ construction so that the standard Italian forms in (45) are replaced by the Toscan forms in (46):

(45)   Noi andiamo   'we go'

(46)   Noi si va

How do we obtain this use of /si/?

Reflexive /si/ has the feature assignments discussed earlier in (31) and repeated in (47):

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[10] In this regard it interesting to observe the example in (i) pointed out by Burzio (1991) :

(i)   Si$_i$ é contenti quando   ci$_i$ scrivono
      SI is happy-PL when (they)   to-us write
      'We are happy when they write to us'

In (i) the pronoun with the impersonal /si/ as an antecedent is a 1pl clitic. Examples like this clearly show the presence of a 1pl component in at least one of the readings of the impersonal.

ANDREA CALABRESE

(47)   -participant
             -referential

For reasons not relevant here (see Calabrese (1986) for some discussion), when /si/ is used as a clitic referring to an impersonal subject, it is assigned the features [+arbitrary interpretation] and the correlated feature [+plural]. In addition, the feature [-referential] of reflexive /si/ is changed into [+referential]. Thus, impersonal /si/ is characterized by the feature assignments in (48):

(48)   'impersonal' /si/   ↔   +arbitrary interpretation
                                     +referential
                                     +plural
                                     +direct
                                     +subject

Through its use in sentences such as (44), /si/ may acquire the feature [+inclusive of speaker], as in (49):

(49)   'impersonal' /si/   ↔   +arbitrary interpretation
                                     +referential
                                     +plural
                                     +inclusive of speaker
                                     +direct
                                     +subject

The feature [+inclusive of speaker] is shared with the terminal node of the first person pronouns. The use in (46) is accounted for by changing the feature [+arbitrary interpretation] in the lexical item in (49). The use of /si/ as the exponent of the first person plural clitic complement is accounted for by changing both the feature [+arbitrary interpretation] and [+subject] of (49), as in (50):

(50)   '1pPlur.' /si/   ↔   -arbitrary interpretation
                                   +referential
                                   +plural
                                   +inclusive of speaker
                                   +direct
                                   -subject

The problem is now that of explaining why the type of operation we have just discussed does not account for the syncretism cases involving the third person dative we discussed in the preceding section. One could in fact propose that when the dative clitic is replaced by the locative clitic, we are dealing with a special use of the lexical item characterizing the locative clitic in which the feature [-possessor] is changed into [+possessor]. The feature specifications of this lexical item would then match those of the terminal node characterizing the dative pronoun. Therefore this lexical item could be inserted there. The point is that under this analysis this lexical item cannot replace the dative clitic. The dative clitic can also be optionally inserted. Both the metaphorically used locative clitic and the dative clitic would have the same set of feature, and match those of the terminal node. They would exist as two lexical alternates whose use is optional. Thus just a change in the lexical item cannot account for a case of syncretism where a given lexical item is replaced by another lexical item. We would just obtain an alternate lexical item for a given terminal node. Instead, a modification of the terminal node is a prerequisite for a change characterized by the replacement of a given lexical item by another lexical item, as proposed in the preceding section. If the modification of the terminal node triggered by the activation

of a filter is enough to account for the change as proposed earlier, there is no need for the 'metaphorical' extension of another lexical item. Such extension, however, is needed in the case of the first person plural complement clitics. The activation of the filter in (37) in fact cannot account for the syncretic change by itself, but only for the elimination of the lexical item /no/. The syncretic change can be accounted for eventually only by assuming the metaphorical extension of some other clitic, as discussed here.

The replacement of the First person plural with the locative clitic observed in Italian can be accounted for along the same lines. First of all, observe that in Old Italian the locative /ci/ has a proximate interpretation in contrast with the other locative /vi/ which has an obviative interpretation. We thus assume the lexical items for the locative /ci/ and /vi/ are represented as in (51-52):

(51)   /ci/   ↔   [-possessor]
                          [+location]
                          [+proximate]
                          ...

(52)   /vi/   ↔   [-possessor]
                          [+location]
                          [-proximate]
                          ...

It is plausible to assume that the morphosyntactic representation of the first person plural includes a noncontrastive [+proximate] interpretation referring to the people close to the speaker. Let us assume that this is correct for Old Italian. We can thus assume that the terminal node of first person plural in Old Italian included the following feature specifications:

(53)   +participant
        +inclusive of speaker
        +plural
        +proximate

The change in (38) will bleed the insertion of the lexical item /no/ as we have seen earlier. The lexical item /ci/ has the feature [+proximate] among its features as shown in (51). I propose that the presence of this common feature between the lexical item /ci/ and the terminal node in (53) allows a special "metaphorical" use of /ci/ which involves a restructuring of the set of features characterizing this item so that it can be inserted in the terminal node of the first person plural in (53). This restructuring includes the addition of the features [+participant], [+plura], [+inclusive of speaker].

Observe that in Italian the locative clitic of obviation /vi/ replaced the second person plural clitic. We can obtain this by extending the filter in (37) as in (54):

(54)   *[+participant, +plural]

The activation of this filter will bleed the insertion of the lexical item /vo/ of Old Italian. The feature [-proximate] that the second person plural shares with the locative /vi/ accounts for the metaphorical extension of this clitic to be the second person plural complement clitic.[11]

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[11] To account for the situation that we observe in Campidanese Sardinian where /si/ is the exponent of both the first and second person plural, we assume the same analysis proposed for Lucchese. In addition, we assume that in Campidanese the filter in (i) holds:

ANDREA CALABRESE

Finally, the most problematic case of all is the replacement of the exponent of the first person plural by the genitive clitic. I tentatively suggest that also in this case we are dealing with a metaphoric use of a given lexical item--a metaphorical use of the genitive. I submit that this metaphorical use is based on the feature [+possessor] characterizing the genitive. It is not implausible that this feature can be associated with an interpretation of the terminal node of the first person plural in which it indicates inclusion of others in the domain of the speaker. A common feature between the terminal node of the first person plural complement and the genitive clitic would thus be obtained. This common feature would be the basis for the "metaphorical" extension of the genitive. Several aspects of this change, however, are unclear to me. More research is needed on this syncretic change.

In this paper, I have outlined a general theory of Case systems and Case syncretism and applied it to some cases of syncretism observed in the clitic systems of Romance. It was proposed that Cases are bundles of morphological features. Certain combinations of these features may be disallowed by filters. A certain number of Case syncretisms are brought about by the activation of filters disallowing feature configurations characterizing given Cases. When this occurs, the disallowed configuration appearing in the terminal node provided by the syntax is repaired by changing one of the incompatible features. The lexical item identified by the disallowed configuration can no longer be inserted and therefore is eliminated. In its place, the lexical item characterized by the feature configuration which is the output of the repair rule is inserted. A morphological contrast is thus neutralized and a simplification of the morphological inventory is therefore obtained.[12]

Other cases of syncretisms involve a more complex operation which I have characterized as being a case of metaphorical use of a lexical item. This metaphorical use is possible when a certain feature is common between a lexical item and a terminal node. When this occurs, the feature assignments of the lexical item can be modified so that it can be inserted in that terminal node. In the case of clitics, this occurs when no other competing lexical item can be inserted in that lexical node.

The analysis which is proposed here not only is able to account for the synchronic dialectal variation found in Italian dialects in terms of a constrained theory of Case inventories, but is also able to account for the linguistic changes that brought about this variation in formally simple and elegant terms. We thus hope to have achieved the goal of outlining how a formal theory of syncretic change account for changes affecting the structure of morphological inventories.

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(i)   *[+participant, -inclusive of speaker]

The activation of this filter triggers a rule that changes the feature [-inclusive of speaker] into [+inclusive of speaker]. Thus the terminal node of the second person plural becomes identical to that of the first person plural, and therefore /si/ can also be inserted there.

[12] We have seen how a morphological system characterized by a number of case distinctions has been simplified by eliminating some of these case distinctions. We hope to have shown how this simplification is obtained by means of the activation of constraints disallowing certain combinations of case features. The challenge is now that of accounting for how case distinctions are introduced in morphological inventories, i.e. for how these constraints are deactivated.

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