Reducing "case" to denotational primitives: Nominal inflections in Albanian

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Abstract

The nominal inflection system of Albanian includes specifications of case, definiteness, number and nominal class (gender). Our analysis recognizes three types of properties as theoretically relevant, namely N(ominal class), Q(uantification), D(efiniteness). Q inflections are responsible for the so-called oblique case – effectively a dyadic operator yielding a "zonal inclusion" (possession) relation between the element to which it attaches and the internal argument of the verb (dative) or the head of a noun phrase (genitive). Q inflections are further responsible for plurality, while N inflections satisfy argument-of contexts (accusative) and D characterizes EPP contexts (nominative). Syncretisms (e.g. of dative and genitive, nominative and accusative) are not the result of morphological rules requiring Late Insertion of exponents (Distributed Morphology). Rather they are instances of ambiguity, resolved in the syntax (different embeddings) or at the interpretive interface. As such they are compatible with projection of the morphosyntax from lexical entries.

1.   *Empirical and theoretical background*

Some difficulties attach to the notion of case in minimalist theory; for instance, for Chomsky (1995) case is uninterpretable on both the probe and the goal, unlike other features that are interpretable at least on the goal. These difficulties are caused by the fact that while *bona fide* features correspond to inherent properties of certain lexical items (e.g. phi-features correspond to referential properties of nouns), the traditional notion of case is relational in nature. This makes it ill-suited to feature status, more or less as argued by Chomsky (1995) for theta-roles. More recent minimalist literature, explicitly or implicitly, recognizes these difficulties and correspondingly attempts a reduction of case to phi-feature checking (Chomsky 2001, 2008), to T feature relations (Pesetsky and Torrego 2004, 2008), or in general to independently motivated relations of grammar.

We pursue the same general line of research, of reducing case to independently established

primitives of grammar, from a rather different perspective. In particular, we consider a language, Albanian (specifically the variety of Shkodër[1]), which has overt case inflections. From the morphological analysis of the relevant lexical entries we conclude that they are in reality characterized entirely by non-case properties such as nominal class (gender), definiteness, quantification (e.g. plurality) and so on. Interestingly, somewhat similar conclusions on the actual make-up of ÷exponentsø are independently forced in Distributed Morphology (Halle and Marantz 1993) for syncretic inflections. Thus a lexical element syncretic between different case properties must perforce be underspecified with respect to case, and hence defined solely by phi-features, and other non-case properties.

Our proposals diverge from Distributed Morphology in that we assume that syntax is projected from actual lexical items, rather than from abstract bundles of features subject to impoverishment and other morphological rules before the insertion of lexical material. Similarly, we diverge from recent minimalist work of which we share the general outlook. What we detect under the descriptive label of case are not uniform relations of phi-feature, temporal checking or other; rather we find that different types of inflectional entries satisfy different types of syntactic contexts (thematic, EPP, etc.) in virtue of their lexical content. In this sense case is not even a unitary phenomenon.

The article is articulated into three sections. In section 1 we lay out the background to our discussion, including the empirical evidence, some relevant literature, and preliminary analyses of non-case inflections (also in section 2.1). Section 2 presents the analysis of the basic case system of Albanian, including nominative, accusative and oblique. In section 3 we discuss further refinements, namely prepositional contexts, the ablative case and genitive contexts.

1.1 Nominal paradigms in the Geg Albanian variety of Shkodër.

Albanian varieties have a definite and an indefinite noun declension. The singular declension in the variety of Shkodër is illustrated in (1)-(4); the indefinite is exemplified in (a) and the definite in (b). We generally exemplify four lexical bases, namely *vajz* ÷girlø, *msus-ɛ* ÷teacher (feminine)ø, *burr* ÷manø and *dial* ÷boyø The nominative case in (1) is illustrated with the subject of finite verbs, the accusative in (2) with the object of transitive active verbs, and the oblique in (3) with the dative. As discussed in section 3.1, in Albanian varieties the dative is systematically syncretic with the

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genitive; as a consequence, we adopt the label ɔobliqueø for the relevant case. Finally, the ablative in (4) shows up in prepositional contexts. For each of the cases in (1)-(4) there is at least a non-syncretic exponent, in particolar *-n* for the definite accusative and *-s* for the definite oblique feminine. The ablative in turn is differentiated by the fact that *-t* appears in the feminine definite (distinguishing it in particular from the oblique) in a restricted set of locative nouns, illustrated with *ʃpi* ɔhouseø in (4ø).

(1)   *Nominative singular*

a.	εɾði	ɲi	vɑjz/	msus-ε/	burr/	dial
	came	a	girl	teacher-f	man	boy
b.	εɾði		vɑjz-a/	msus-ja/	burr-i/	dial-i
	came		girl-fs.def	teacher-fs.def	man-ms.def	boy-ms.def

ɔThere came a/the girl/teacher/man/boyø

(2)   *Accusative singular*

a.	pɑ:ʃ	ɲi	vɑjz/	msus-ε/	burr/	dial
	I.saw	a	girl	teacher-fs	man	boy
b.	pɑ:ʃ		vɑjz-ε-n	msus-ε-n	burr-i-n	dial-i-n
	I.saw		girl-fs-Acc.def	teacher-fs-Acc.def	man-ms-Acc.def	boy-ms-Acc.def

ɔI saw a/the girl/teacher/man/boyø

(3)   *Oblique singular*

a.	ja	ðɑ:ʃ	ɲi	vɑjz-ε	msus(ε)-jε	burr-i	dial-i
	her.it	I.gave	a	girl-fs.Obl/	teacher-fs-Obl/	man-ms.Obl./	boy-ms.Obl
b.	ja	ðɑ:ʃ		vɑjz-s	msus-ε-s	burr-i-t	dial-i-t
	her.it	I.gave		girl-fs-Obl.def/	teacher-fs-Obl.def/	man-ms-Obl.def/	boy-ms-Obl.def

ɔI gave it to a/the girl/teacher/man/boyø

(4)   *Ablative singular*

a.	pɾej/	mas/	para	ɲi	vɑjz-ε	burr-i
	by/	behind/	before	a	girl- fs.Abl	man- ms.Abl
b.	pɾej/	mas/	para		vɑjz-s	burr-i-t
	from/	behind/	before		girl-fs-Abl.def	man-ms-Abl.def

ɔfrom/ behind/ before a/the girl/man/houseø

(4ø) pɾej/ mas/ para   ∫pi-ɛ-t

from/ behind/ before   house-fs-Abl.def

=from/ behind/ before the houseø

Let us comment briefly on the data in (1)-(4), beginning with the indefinite declension. In nominative and accusative contexts, as in (1a)-(2a), the noun appears in its base form, inclusive of the nominal class inflection -ε in the *msus-ε* feminine class. The oblique in (3a) is lexicalized by the nominal class inflection, -*i* in the masculine and -ε in the feminine. Definite contexts introduce inflections combining nominal class with case specifications. In particular, the nominative in (1b) is lexicalized by the nominal class inflection -*i* for the masculine and by the specialized -*a* for the feminine. The accusative in (2b) is lexicalized by -*i-n* and -ε-*n* inflections for the masculine and feminine respectively, combining -*i/-*ε nominal class morphology with a specialized -*n* accusative ending. The dative in (3b) is lexicalized by -*i-t* for the masculine and (-ε)-*s* for the feminine, again combining nominal class morphology with what appear to be specialized endings for the oblique case. The -*t* ending (combined with -*i*, -ε nominal class morphology) also shows up in (4), exemplifying ablative case; as already noted, in the feminine this -*t* ending is distinct from the -*s* oblique morphology. In the indefinite, the ablative is completely syncretic with the oblique.

The data in (5)-(8) illustrate the plural. The -*a* nominal class inflection shows up on both masculine and feminine nouns. However the *msus-* base maintains the same nominal class inflection -ε as in the singular. The base for =boyø has two allomorphs, one for the singular (*dial*) and one for the plural (*diεm*), and the latter appears without the -*a* inflection. The definite nominative and accusative (5b) and (6b) are formed by the addition of the -*t* ending. The oblique, both definite and indefinite, is lexicalized by -*vε*, as in (7), which also shows up in ablative contexts, as in (8). In the latter, the specialized -∫ indefinite inflection appears to be restricted to generic environments, for instance (8ø).

(5) *Nominative plural*

a. ɛɾðən ∫um vɑjz-a   msus-ε   burr-a   diεm

came   many girl-pl/   teacher-fpl/   man-pl/   boys

b. ɛɾðən   vɑjz-a-t   msus-ε-t   burr-a-t   diεm-t

came   girl-pl-Nom.def/ teacher-fpl-Nom.def/   man-pl-Nom.def/ boys-Nom.def

=There came many/the girls/teachers/men/boysø

(6)   *Accusative plural*

    a.   pɑːʃ   ʃum   vɑjz-a   msus-ɛ   burr-a   diɛm

          I.saw   many   girl-pl/   teacher-fpl/   man-pl/   boys

    aø   pɑːʃ   vɑjz-a-t   msus-ɛ-t   burr-a-t   diɛm -t

          I.saw   girl-pl-Acc.def/ teacher-fpl-Acc.def/ man-pl-Acc.def/ boys-Acc.def

        ⹂I saw many/the girls/teachers/men/boysø

(7)   *Oblique plural*

    a.   ja   ðaːʃ   ʃum   vɑjz-a-vɛ   msus-ɛ-vɛ   burr-a-vɛ   diɛm-vɛ

          them.it I.gave many girl-pl-Obl/   girl-pl-Obl/   man-pl-Obl/   boys-Obl

    b.   ja   ðaːʃ   vɑjz-a-vɛ   msus-ɛ-vɛ   burr-a-vɛ   diɛm-vɛ

          them.it I.gave   girl-pl-Obl.def/ teacher-fpl-Obl.def/ man-pl-Obl.def/ boys-Obl.def

        ⹂I gave it to many/the girls/teachers/men/boysø

(8)   *Ablative plural*

    a.   ɐʃt   tʃɛp   pɾej   ʃum   vɑiz-a-vɛ   burr-a-vɛ

          it.is   sewn   by   many   girls-pl-Abl   girls-pl-Abl

    b.   ɐʃt   tʃɛp   pɾej   vɑiz-a-vɛ   burr-a-vɛ

          it.is   sewn   by   girls-pl-Abl.def   men-pl-Abl.def

        ⹂It has been sewed by many/the girls/menø

(8ø)   pun   pɾej   gɾaː-ʃ

      job   for   women

      ⹂a womenøs jobø

      A compact picture of the facts in (1)-(8) is provided in Table 1, which summarizes the definite and indefinite, singular and plural declensions of *vaiz-*, *msus-* and *burr-* . It is evident that all that varies is the realization of the nominal class inflections, while consonantal case terminals are constant across declensions. We avoid summarizing the *dial-/ diɛm-* data, which in the singular reproduce the *burr-* data while simply displaying an absence of nominal class inflection in the plural.

	Indef.sg	*Def.sg*	*Indef.pl*	*Def.pl*
Nom	vɑjz	vɑjz-a	vɑjz-a	vɑjz-a -t
Acc	vɑjz	vɑjz-ɛ -n	vɑjz-a	vɑjz-a -t
Obl	vɑjz-ɛ	vɑjz -s	vɑjz-a -vɛ	vɑjz-a -vɛ
Nom	msus-ɛ	msus-ia	msus-ɛ	msus-ɛ -t
Acc	msus-ɛ	msus-ɛ -n	msus-ɛ	msus-ɛ -t
Obl	msus-(ɛ)-jɛ	msus-ɛ-s	msus-ɛ -vɛ	msus-ɛ -vɛ
Nom	burr	burr-i	burr-a	burr-a -t
Acc	burr	burr-i -n	burr-a	burr-a -t
Obl	burr-i	burr-i -t	burr-a -vɛ	burr-a -vɛ

Table 1

The personal pronouns case system is briefly illustrated in (9)-(10). This displays a dissociation between 1st/2nd person and 3rd person. The 3rd person has essentially the same case system as nouns; in particular, the accusative is distinct from the oblique and the latter also occurs in prepositional contexts, as in (9). By contrast, 1st and 2nd person distinguish the nominative from an objective case, inclusive of the accusative and of the dative, and distinguish the latter from the ablative, associated with prepositional contexts, as in (10). There are specialized possessive pronouns for genitive contexts.

(9)		*Nom*	*Acc*		*Obl*	*Abl*
	3sg	ai/aja	atɛ		atij	atij
	3pl	ata	ata		asɑj	asɑj
(10)		*Nom*		*Obj*		*Abl*
	1sg	un		mu		mej-ɛ-t
	2sg	ti		ty		tej-ɛ-t
	1pl	na		ne		ne-ʃ
	2pl	ju		ju		ju-ʃ

Person split phenomena are pervasive in natural languages, specifically in case systems, as can be seen in classical ergativity/ accusativity splits. This range of phenomena is beyond the scope of the present article (see Manzini to appear a; Manzini and Savoia 2010b, to appear); in section 3.2 we consider just one aspect of the data, namely the fact that specialized ablative morphology already reviewed for the nominal system, also shows up with 1st/ 2nd person pronouns. Thus the singular has *-t* combined with *-ɛ* nominal class material; the plural has *-ʃ*.[2]
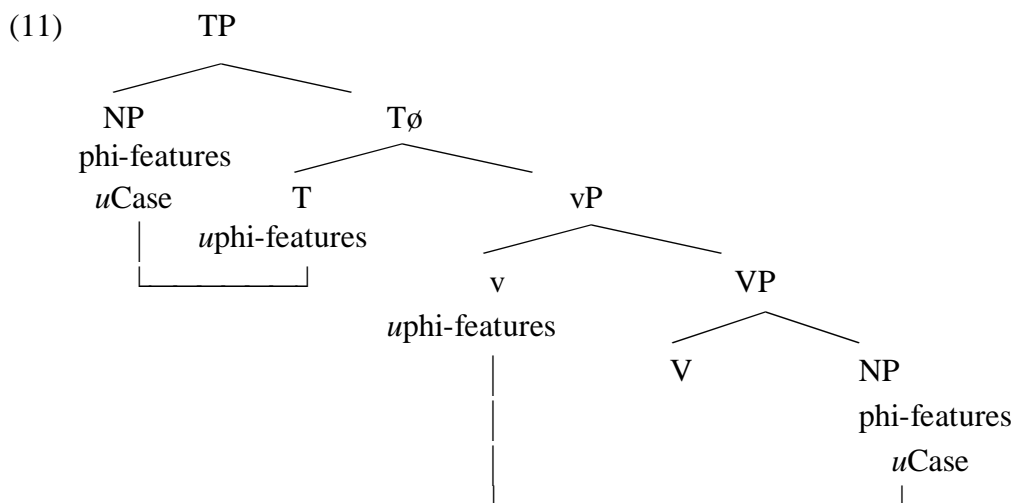
1.2   Generative approaches to case

In the minimalist approach of Chomsky (1995 ff.) properties such as number and person, which correspond to denotational primitives of nominal constituents, are (phi-)features. However theta-roles, which are relations, are not features at all, but correspond to configurations, resulting from the merging of a predicative constituent with an argumental one. In other words, relations, such as theta-roles, are configurational (syntactic); features, that are intrinsic properties of lexical items, are not relational. In this perspective, it is potentially problematic to find that case is a feature. The fact that it is the only feature in Chomsky (1995) which is radically uninterpretable (i.e. which does not have an interpretable counterpart) is but a reflex of the deeper difficulty of reconciling its relational core with its feature status. The analysis to which Chomsky (2001, 2008) arrives is that the real underlying relation between Case assigner and case assignee is an agreement relation, involving *bona fide* features, i.e. phi-features; case is but a reflex of this relation on nominal constituents.

Specifically, as schematized in (11), the verbal T(ense) head is taken to have uninterpretable phi-features (*u = uninterpretable*), which require that a noun phrase (in the Spec of T), checks them

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[2] A note on Albanian varieties is useful at this point. In traditional Albanian dialectology two main groups of varieties are distinguished, namely Geg (Northern Albania and the Kosovo) and Tosk (including the standard and Arbëresh, i.e. Italo-Albanian, dialects). Shkodër falls into the Geg group. Comparison with the case paradigms reported for standard Albanian (Solano 1972, Camaj 1984, Beci 2004) shows a substantial coincidence with the Shkodër variety, with differences regarding in essence inflectional vowels. For instance for the definite singular of the base *vaiz* we find the accusative *vajzën* [vaizən] and the oblique *vajzës* [vaizəs] in the standard; what varies with respect to Shkodër is the quality of the inflectional vowel. More interestingly, Shkodër and the standard differ with respect to the distribution of definite and indefinite forms. Thus in the standard, demonstratives combine with indefinite nouns, while in Shkodër they combine with definites. Roughly speaking, the standard has a single definiteness morpheme per noun phrase, while in Shkodër demonstrative and noun agree in definiteness (Savoia and Manzini 2011b). Furthermore, though in the oblique singular (3a) we exemplify the indefinite forms in the context of *ɲi*, in Shkodër it is equally possible (or preferred) to find *-s, -t* forms in this context; this is not attested in the standard. We return in example (i) of fn. 5. An analysis of the case system of Italo-Albanian dialects is presented by Savoia (2008), Manzini and Savoia (2011b).

against its interpretable phi-features. In the process, the values of the phi-features of the noun are assigned to the corresponding unvalued features of T. The uninterpretable features are then deleted and are not read by the LF interface, though they remain legible to the phonological component. The Case feature is in turn uninterpretable on the NP. Though no case feature is present on T, in the agreement configuration the case feature on the NP also receives a value, i.e. nominative, and is deleted (Chomsky 2001). Similarly, accusative case is a manifestation of the [Spec, v] relation, ÷which surfaces as case or agreement according to the morphology of the languageø (Chomsky 1995: 121).

(11)

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                    TP
            _____|_____
           /                 \
         NP                    Tø
     phi-features        _____|_____
       uCase      T     /             \
              uphi-features            vP
              |_____|        _____|_____
                               /             \
                              v               VP
                        uphi-features     ____|____
                              |           /         \
                              |          V           NP
                              |                   phi-features
                              |                     uCase
                              |_____|
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Proposals by Pesetsky and Torrego (2004, 2007) treat case as a temporal property, uninterpretable [uT] on nominal DP constituents, but interpretable [iT] on the T head of the sentence. Pesetsky and Torrego (2007) further distinguish the interpretability of a feature from the assignment of a value to it. The presence of an interpretable but unvalued features T[x] on the functional head T acts as a probe for the subject DP, associated with the same T[x] feature, both uninterpretable and unvalued, yielding agreement between these two elements. The value of the feature is assigned through a further agreement operation with the T feature of the verb, which is uninterpretable, but valued, as schematized in (12) (from Pesetsky and Torrego 2007).

(12)

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         _____
        |                                   |
        |    _____           |
        |   |                    |          |
       Tns       [vP    DP      [v     V
       iT[x]            uT[x]          uT val [x]
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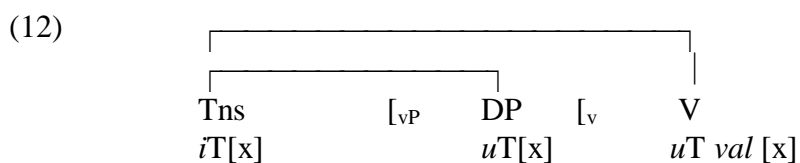
Now, if case is reduced to other primitives along the lines of (11)-(12), we may wonder why we need to keep the case label at all. In other words: given Chomskyøs (2001, 2008) reduction of

case to agreement, what is the difference between a language which has just agreement (say, Italian or Spanish) and a language like Albanian which has the ʻcaseʼ reflex of agreement? Or what is the difference between agreement proper and its ʻcaseʼ reflex in the nominal system of Albanian? Similarly, saying like Pesetsky and Torrego (2004, 2007) do, that (nominative) case is but the name that Tense takes when lexicalized on a noun, leaves us without a clue as to why we still need to refer to this Tense of nouns as case. Otherwise stated: where is the evidence, either morphological or interpretive, that independently connects the Tense of verbs and the supposed ʻTenseʼ of nouns? The primary aim of this article is in a sense to implement the eradication of case, since we assume with the minimalist program that properties of lexical items cannot correspond to relational primitives. However we attack the problem at the PF interface; in other words, we start with a study of morphological case in Geg Albanian, as illustrated in (1)-(10). We argue that the traditional label of case attaches to morphological constituents whose real content is denotational, consisting of primitives such as nominal class (gender), definiteness, quantification. We then discuss why these denotational morphology has been taken to correspond to a lexicalization of a specialized relation of case.

The data in (1)-(10), in laying out the basic distribution of case morphology in the nominal system of Shkodër, illustrate the existence of inflectional endings which associate with two or more interpretations, yielding instances of so-called syncretism. In our examples we find two types of syncretism: (i) some inflections correspond to two (or more) cases; (ii) some inflections correspond to both a case interpretation and a nominal class interpretation (the traditional gender and number). For instance the *-a* inflection lexicalizes the nominative definite (for the feminine singular class) in (1b) and the nominative/ accusative indefinite (for the plural class) in (5a) and (6a). Thus *vajz-a* is ambiguous between ʻthe girl (Nom)ʼ and ʻgirls (Nom/Acc)ʼ. At the same time the *-a* morphology also appears as a nominal class inflection in plural formations involving specialized consonantal/ syllabic case endings, for instance the oblique (definite and indefinite) in (7) and the nominative/accusative definite in (5b)-(6b). Similarly, the *-i* inflection, corresponding to the nominal class inflection for the masculine singular, taken alone lexicalizes the oblique indefinite in (3a) and the nominative definite in (1b). In turn the *-t* inflection is associated with the oblique (singular masculine) in (3b), with the nominative/ accusative (plural) in (5b)-(6b) and with the ablative (feminine singular) in (4ø). The *-vɛ* inflection is uniquely associated with the oblique plural, yet it includes both the definite and the indefinite reading, as in (7).

In Table 2 we list the morphological endings associated with case in the Shkodër nominal system in (1)-(8); we do not tabulate the pronominal system. For each of the forms we indicate the traditional case, definiteness, and number features associated with them. The fact that most entries

are associated with more than one row of values implies that they are syncretic. We abstract from the nominal class inflections, i.e. the vocalic formatives that appear between the nominal root and the consonantal/ syllabic endings *-t, -vɛ* etc; rather, we have tabulated the vocalic formatives *-i, -ɛ, -a* only as they occur word finally. We have also left out the traditional gender (nominal class) from the properties being tabulated.

	Nom	Acc	Obl	Abl	Def	Indef	Sg	Pl
-a	*				*		*	
	*					*		*
		*				*		*
-i	*				*		*	
		*				*	*	
-ɛ	*					*	*	
	*					*		*
		*				*	*	
		*				*		*
			*			*	*	
-t	*				*			*
		*			*			*
			*		*		*	
				*	*		*	
-vɛ			*			*		*
			*		*			*
-n		*			*		*	
-s			*		*		*	
-ʃ				*		*		*

Table 2

When it comes to syncretic forms, current standard models propose treatments in which each interpretation corresponds to a different underlying category. Such models include an abstract feature representation of the content of lexical items and regulate the insertion of actual lexical material on the basis of (under)specification (Distributed Morphology) or the extrinsic ordering of constraints (Optimality Theory). Under this view, syncretisms such as those reviewed above have the effect of associating the same morpheme with properties that are distinguished on the syntactic as well as on the interpretive level. Here we will argue for a different theory, which takes syncretism to correspond to the availability of several readings for one and the same lexical item, in other words an instance of ambiguity. We will argue that such a theory is feasible, and no more complex, or even simpler than more conventional approaches.

In the Distributed Morphology framework (Halle and Marantz 1993, 1994, Embick 2000)

lexical insertion is governed by the principle that ‑the most highly specified Vocabulary Item whose identifying features are a subset of the features of the terminal node wins the competition and is insertedø (Halle and Marantz 1994: 276). In other words, the lexicalization of syntactic positions obeys an Elsewhere criterion in the sense of Kiparsky (1973), under which a rule characterized by a richer context of application takes precedence over a less specified rule. Since a vocabulary item inserts under a terminal node if its features are a subset of the features of the terminal node, several vocabulary items may in principle be available for insertion under one node. If the lexicon of a given language has an element which exactly corresponds to a given feature cluster, it is inserted under it; if such a lexical entry is lacking (or excluded by other principles) then a compatible (underspecified) form is inserted.

In this model, a crucial role is played by the requirement that lexical insertion applies after syntactic derivation (Late Insertion), and in fact after morphological rules have operated on the abstract terminal nodes. These rules can combine several features/ clusters under a single terminal node (Fusion), divide them into several nodes (Fission), or delete them, creating underspecified nodes (Impoverishment). The Impoverishment rule makes it possible for underspecified exponents to be inserted, specifically in syncretic contexts. Halle and Marantz (1993) propose a treatment for case syncretism in the inflection of Potawatomi. In this language, for instance, the form /-mun/ denotes the 1st person plural as a subject and, in the context preceding the preterite affix, as an object. Halle and Marantz (1993: 157) conclude that /-mun/ is specified in the lexicon just for the features [+1], [+pl] and that it is inserted as an accusative because of an Impoverishment rule that deletes [ACC] in front of the preterite, as in (13).

(13)   [ACC] $\rightarrow$ $\varnothing$ / ____   [+preterite]
                    [+1]

In general, lack of isomorphism between interpretive categories and morphological categories is circumvented by assuming that at the syntactic level all semantic properties relevant for interpretation are abstractly represented ó but some categories to which syntactic computation applies do not have any morpholexical expression.

Suppose we tried to extend this type of treatment to the syncretisms in Table 2. We could assume for instance that /-t/ is associated uniquely with a definiteness specification in the lexicon, i.e. [+Def], while the case features [ACC] or [NOM] present in the terminal nodes are deleted in the context of [+Def], [+pl], as in (14).

(14) [ACC/ NOM] → ∅ / ____

                        [+DEF]

                        [+pl]

What interests us here is that under such a treatment, only a few morphemes truly specialized for case would be left in Table 2, namely /-n/, /-s/ and /-vɛ/, while the other inflections would inevitably turn out to lack case specifications. In other words, in case-inflected languages, the presence of morphological entries associated with several case contexts leads to the conclusion that these case morphologies have a purely denotational content, devoid of case properties, and associated only with nominal class, number, definiteness, etc.

We differ from Distributed Morphology in assuming a unified morphosyntactic component where structure is projected from actual lexical items. In such a model there is no room for Late Insertion, hence for morphological rules applying to abstract terminals, including Impoverishment. We have argued elsewhere (Manzini and Savoia 2005, 2007, 2008a, 2011a) that reasons of simplicity and restrictiveness of the theory suggest this move; in particular the morphological component is redundant with the syntactic component (at least with respect to the Merge rule) ó while it enriches it by introducing other rules, for instance Impoverishment, i.e. a deletion rule which unlike syntactic deletion rules, is not constrained by Recoverability.

In what follows we avoid recourse not only to Impoverishment of abstractly present morphological features but also to zero morphology. From the present perspective zero morphology has the same problems as Impoverishment, namely lack of restrictiveness. Thus it is difficult to see what surface strings a grammar including either device could not generate. It should be noted that Kayneøs (2006, 2008) proposal about ÷silentø categories is in fact a promotion of zero morphology into the syntax, since under his account any functional head may be abstract. As far as we can tell, while Kayne is aware of the restrictiveness problem, he has no solution to it (Manzini and Savoia 2008a, 2010a, 2011a, Savoia and Manzini 2010).

If we consider the lexicon, the logic of Distributed Morphology is that if a vocabulary item inserts under different terminals, with properties incompatible among them, then the vocabulary item cannot be specified for any of these properties, as already noted in connection with (13)-(14). In other words a given lexical element is able to occur in several environments (corresponding to a traditional syncretism) to the extent that it has no property incompatible with them. In the limit, the vocabulary item will be void (i.e. a default). Our lexicon again differs from that of Distributed Morphology in crucial respects. Since structure is projected from actual lexical entries, the latter can hardly be devoid of properties; rather they must have the necessary and sufficient information to

determine syntactic structure. Therefore in instances where a given lexical element can appear in different syntactic environments, we must conclude that those environments have some fundamental property in common ó that will be imputed to the lexical element.

This does not prevent the results of the present analysis to coincide with those of Distributed Morphology on an important conclusion, which the discussion of (13)-(14) was meant to highlight. If a given inflection is found to correspond to several different cases, the inflection is not associated with any of them as a lexical property. At the same time, for Distributed Morphology case maintains its reality as a feature (or set of features) of abstract terminals. For us, on the other hand, if phi-features are the only content of vocabulary items that purportedly lexicalize case, then these are the only properties projected onto the syntactic tree; therefore case is not a property of syntactic representation at all[3]. Of course, we will have to show that syntactic and semantic composition can be successfully effected on the basis of this more restrictive approach.

1.3   Agreement inflections

In our approach (as in Distributed Morphology) the same set of categories underlies both syntactic structures and the internal morphological structure of words (Manzini and Savoia 2004, 2005,

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[3] A model of lexicalization different both from the present one and from that of Distributed Morphology is introduced by Nanosyntax (Starke (2009), Caha (2009)). Nanosyntax, like Distributed Morphology, assumes that syntax is projected from abstract categories, with lexical insertion taking place only at the PF interface. For Distributed Morphology the abstract constituents of syntax are bundles of features, for Nanosyntax they are structured subtrees; it is not terminal nodes that receive a lexicalization, but terminal strings. Correspondingly, where Distributed Morphology has the Subset principle, to determine lexical insertion, Nanosyntax has a Superset Principle, according to which a phonological exponent is inserted ̶if its lexical entry has a sub-constituent that is identical to the nodeø which it lexicalizes. Where two or more lexical items satisfy either the Subset or the Superset principle, the one more similar to the abstract terminal wins the competition, by an Elsewhere Condition. In the case of the Subset principle, it will be the item with more specifications, in the Superset model, it is the less rich item.

The point of contact between Nanosyntax and the present model is that vocabulary items cannot be underspecified; correspondingly there are no dedicated morphological rules (Impoverishment) for the manipulation of abstract terminal nodes, so as to allow for the insertion of underspecified lexical items. It is evident however that Nanosyntax maintains some of the postulates of Distributed Morphology that we argue against here ó in particular the adoption of a model where abstract syntactic structures are realized by exponents rather than being projected from them. Syncretism brings into sharp relief the different predictions of the various models reviewed. As just discussed in the text, for Distributed Morphology a syncretic case entry is not specified for any of the syncretic categories. The same is true for us, though for us it must be positively specified for some super-category able to project all of the syncretic environments (as will be clarified in the text). For Nanosyntax the syncretic case entry must be specified for all cases that enter into the syncretism. From the perspective of the present work, the structure of the lexicon that results from Nanosyntax is equally counterintuitive as that resulting from Distributed Morphology.

2007, 2008a, 2008b). Consider the syntactic level. Predicative elements such as verbs and nouns, project a number of argumental positions such as D(eterminer), Q(uantifier), (1/2) P(erson), Loc(ative), N(ominal class) which yield a structure of the type in (15). In (15), I(nflection) corresponds to the position where a lexical, predicative head, verb or noun, combines with inflectional specifications. The D, Q, P, Loc, N sequence of positions corresponds to the argumental/ referential domain of this I position, and is realized in the sentence for instance by the pronominal clitics of Romance languages and in the noun phrase by determiners, quantifiers and other specifiers of the noun.

(15)

```
        D
             Q
                  1/2P
                       Loc
                            N
                                 I        í
```
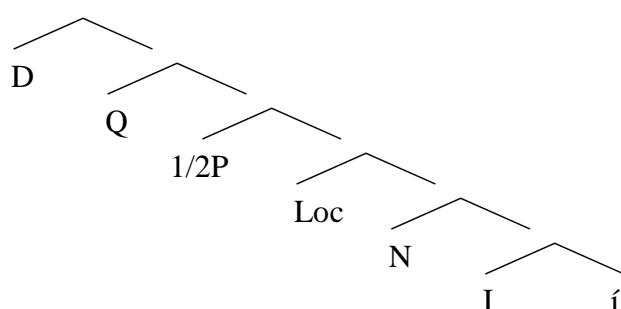
At the morphological level, the internal structure of nouns and verbs can be associated with a hierarchy of the same type, in which the lexical base, expressing predicative content, combines with inflectional elements, fixing the denotation of its arguments. In particular, the inflection of the verb can be construed as the verb internal realization of the EPP argument of the sentence, as illustrated in (16) with a simple Italian verb, *lav-o* ='wash-1sg' The verb internal EPP argument is notated as D, in keeping with Chomsky's (1995) suggestion as to the nature of the EPP property; the predicative base is labelled with √ (root), as in Distributed Morphology. The D/ EPP argument saturates one of the arguments of the predicative base, here the external argument.

(16)

```
        √           D
      lav (x, y)    o_x
```
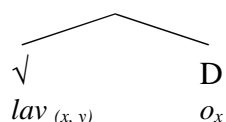
We assume that the internal argument of the noun (its unique argument for common nouns) corresponds to an N position, as illustrated in (17) for *macchin-a* ='car-fsg' of standard Italian, where we identify the N argument with the *-a* nominal class inflection. Given structures like (17) the nominal character of *macchina* need not be the result of intrinsically nominal properties of the root, nor a consequence of the Merge of this root with a dedicated functional projection *n* (Marantz

1997). Rather the nominal reading of the constituent in (17) can be made to depend on the presence of the N inflectional head.

(17)

$$\sqrt{}\quad\quad N$$

macchin $_{(x)}$ a_x
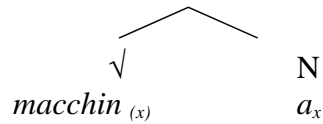
Saying that in (17) the root has just predicate content while the inflection holds properties which are part of the phi-features set, such as nominal class, configures a situation where the argumental status which is imputed to the noun as a whole does in fact belong to its inflection, which is evaluated at the LF interface as a pronominal-like argument of the predicative base. In other words yet, we propose that the inflection in, say, (17) provides a realization, albeit elementary, of the obligatory thematic slot of the predicate, i.e. its internal argument (which is also its sole argument for a non-eventive predicate like *macchin-*). In Romance this elementary lexicalization is not sufficient (al least not in the singular of count nouns), and must be supported by syntactic level operators, such as the determiner *la* =theø in (18), which introduces definiteness properties and is correspondingly associated with the D position of the noun phrase, in the standard way.

(18)

D
la_x $\sqrt{}$ N

macchin $_{(x)}$ a_x
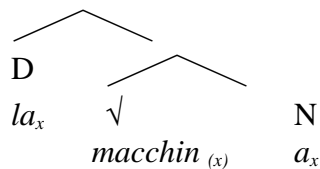
The structure in (18) introduces an agreement relation between the determiner and the noun, i.e. its inflection. Recall that for Chomsky (1995) agreement is the result of checking uninterpretable features against interpretable ones. Yet in (18) it is very hard to see how non-interpretability could be attributed to either one of the sets of phi-features involved, on the noun or on the determiner. In fact, in Romance languages, determiners coincide with pronouns (thus *la* is the feminine singular accusative clitic for 3rd person), and can therefore be sole carriers of phi-features, which must be interpretable on them. How can we then construe agreement between two sets of equally interpretable features? Following the line of analysis introduced in (17), the noun as a whole is not argumental, rather its inflection is, providing an elementary closure of the internal (and sole) argument of the predicative base. When it comes to the determiner, a standard construal of its interpretation has it filling the argument slot of the noun inflection (Higginbotham 1985), to which it contributes definite reference. Now, if in a structure like (18) both the *-a* inflection and the

determiner individuate a referent for the same argument slot, their relation is independently defined in generative grammar, as a chain. Agreement reduces to the requirement that the denotational properties of chain members be compatible; for only in this ways they can contribute to the individuation of a single argument. The objection can be raised that in this way the chain relation is disjointed from movement. Yet if Brody (2003) is correct, there are independent reasons to consider chains primitive with respect to movement.

In terms of this model, in a sentence like (19a), with the structure in (19b), the internal argument of the transitive verb *lavo* 'I wash' is saturated by the pair of nominal element (D, N) within the noun phrase *la macchina* 'the car'. To be more precise, the article itself has an internal structure, represented by the *l-* lexical base for definiteness and the *-a* nominal class inflection. It is the chain made up of the two *-a* inflections, quantified over by the *l-* operator, that satisfies the internal argument of the verb, as well as the predicative base of the noun. As already illustrated in (16), the *-o* inflection of the verb saturates the second argument of the predicative base *lav-* 'wash', i.e. its external argument.

(19)　a.　Lavo　la macchina

I.wash the car

'I am washing the car'

b.
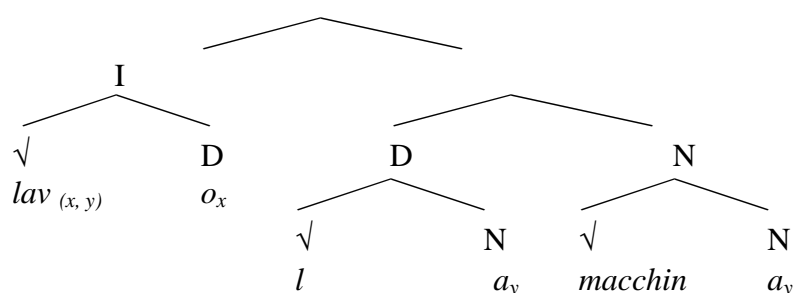
2.　*Case reduces to denotational properties*

2.1　*Preliminary analyses of Albanian nominal inflections*

In the light of the discussion that precedes, let us now consider the nominal inflection system of Albanian, as presented in section 1.1 and summarized in Table 1. We begin with the vocalic inflections *-a, -i, -ɛ*. In the plural the *-a, -ɛ* forms (depending on nominal class) combine with *-t* in the definite non-oblique, with *-vɛ* in the oblique and with *-ʃ* in the indefinite ablative. At least *-t*

appears also in the singular, where between it and the root we find *-i, -ε* vowels depending again on nominal class (masculine and feminine respectively). In turn *-i, -ε* combine with *-n* for the accusative singular and *-ε* combines with *-s* in the oblique. This distribution leads us to conclude that the lexical entries for *-a, -i, -ε* are associated with what in traditional terms are agreement properties such as number and gender ó like the vocalic endings of languages like Italian in section 1.3. At the same time, it is not clear that the *-a, -i, -ε* forms can be assigned entries based on conventional number and gender. In particular, *-a* covers both the plural (gender-neutral) and the singular feminine, where it lexicalizes the nominative definite. The problem then is that in traditional terms the *-a* morphology is associated with contradictory agreement features (singular and plural). This kind of syncretism has a parallel in other languages, for instance in Italian, where the *-a* morphology for feminine singular, e.g. *ragazz-a* ÷girlø also shows up in a restricted class of plurals such *uov-a* ÷egg-sø similarly *-e* is both the II class singular morphology, e.g. *noc-e* ÷nutø and the plural feminine for I class, e.g. *ragazz-e* ÷girl-sø Manzini and Savoia (2005) conclude that all of these various vocalic endings of Romance do not register number properties; rather, they are pure nominal class morphemes. The fact that *-a* or *-e* crop up as plurals simply means that the shifting of nominal class receives a number interpretation.

Let us then assume then that *-a, -i, -ε* of Albanian are nominal class endings. In keeping with the discussion in section 1.3, we assign them an N categorization, which effectively exhausts their lexical entry. The combination of a nominal root with an N morphology gives rise to structures like (20)-(22).

(20)

$$\sqrt{} \qquad N$$
burr/ vajz   *a*

(21)

$$\sqrt{} \qquad N$$
burr   *i*

(22)

$$\sqrt{} \qquad N$$
msus/vajz   *ε*

We will return to vocalic inflections in section 2.4. Before addressing the various questions

they pose, we consider consonantal inflections, beginning with -*t*. In traditional terms -*t* forms the plural definite non-oblique and the dative and ablative definite singular, depending on nominal class in the dative/ ablative[4]. It is evident even from this list that occurrences of -*t* in the nominal paradigm contribute definiteness properties to the bases to which they attach. This suggests that -*t* includes a definiteness specification taking in its scope indefinite structures like (20)-(22). Correspondingly, we assign the categorial signature Q to the position projected by -*t* in the structures in (23) for the plural and in (24) for the oblique singular[5].

(23)


```
              Q
   √       N   t
 vajz/burr   a
```

(24)


```
              Q
   √       N   t
 burr       i
```

Now, having a nominal class inflection in N combining with a higher Q inflection, as in (23)-(24) seems not to be substantially different from having a nominal class inflection combining with a determiner in Romance, as in (18)-(19). If the vocalic inflections of Albanian in (23)-(24), like those of Italian in (19) fix the denotation of the internal (and sole) argument of the predicative base, the determiner in Romance and the -*t* inflection in Albanian take these argumental

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[4] For expository reasons we delay any discussion of the ablative till section 3; in other words, in this section we shall effectively be working with a simplified three case system (nominative, accusative, oblique).

[5] There are reasons why -*t* cannot simply be identified with definiteness morphology ó and why therefore its Q characterization must ultimately be given a content other than definiteness. Indeed in the variety of Shkoder the oblique indefinite singular can coincide with the definite, including -*t* for the masculine and -*s* for the feminine, as illustrated in (i). Therefore -*t* can, but need not, be associated with definiteness.

(i)   *Oblique singular*

a.	ja	ðɑːʃ	ɲi	vɑjz-s/	msusɛ-s/	burr-i-t /	dial-i-t
	her.it	I.gave	a	girl-fs.Obl/	teacher-fs-Obl/	man-ms.Obl./	boy-ms.Obl

'I gave it to a girl/teacher/man/boyø

b.	pɾej/	mas/	para	ɲi	vɑjz-s/	burr-i-t
	by/	behind/	before	a	girl- fs.Abl /	man- ms.Abl

'from/ behind/ before a girl/man/houseø

specifications in their scope and contribute definiteness to them. This parallelism may invite a treatment of the *-t* inflection of Albanian as a postnominal article. Indeed, Dimitrova-Vulchanova and Giusti (1998) consider the postnominal definiteness element of Balkan languages to be an article generated on N; N then raises to the Focus position within NP, where it checks the D position (at the LF interface). Turano's (2002, 2003) analysis assumes that the postposed article is generated in the canonical D position and explains its suffixation on the noun as the result of its incorporation into the noun following the movement of N to D.

These movement analyses ultimately do not explain why the noun should move to D. The solution suggested by Dimitrova-Vulchanova and Giusti (1998), namely that it is a Focus position that licences the order N-Art, does not appear to be convincing, since a clear correlation with other Focus phenomena seems to be lacking. What is more, there are independent reasons to reject the treatment of the *-t* morphology as a postnominal article, implying a movement derivation. As illustrated by the data in (25), with kinship nouns the definiteness inflection can combine with a preposed article (Solano 1972, Camaj 1984, Demiraj 1997, 2002). The prenominal article agrees with the definiteness inflection of the noun in nominal class (gender), number and case properties; thus in the masculine nominative context in (25a), the article is *i*, whereas in the plural non-oblique context in (25b) it is *t*. In fact, it will be observed that in (25) the *i, t* articles coincide with the *-i, -t* inflections. This coincidence, and their shared definiteness properties (at least in what concerns *-t*), suggest that they correspond to the same lexical item, though inflections are inserted below the conventional word level, while articles are syntactic level constituents within the noun phrase[6].

(25) a.   ɛrði   i   vlɑ-i

           he.went   Art   brother-ms.Nom.def

           ='The/his brother went'

      b.   ɛrðən   t   vlezn-i-t

           they.went   Art   brother.pl-m-Nom/Acc.def

           ='The/his brothers went'

It is evident that the lack of complementary distribution between articles and inflections leaves little room to analyses deriving one from the other via movement. We assume that in the sentences in (25) the preposed article lexicalizes D position within the NP, as in (26). The postnominal inflection cannot be a syntactic level determiner at any stage of the derivations for the

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[6] For the morphosyntax of prenominal articles see the discussion of genitives in section 3.1

simple reason that the syntactic level D position is already filled by the article.

(26)

```
            ╱‾‾‾╲
        D        ╱‾‾‾╲
        i    √        N
            vla       i
```
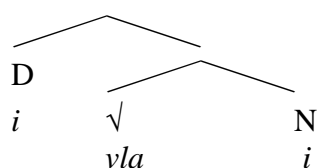
Still, case is missing from the account of -*t* so far. Using the traditional case terminology, the problem is why the -*t* morphology in the singular (23) is restricted to the oblique while in the plural (24) it is restricted to the non-oblique. Avoiding the case terminology altogether, the problem is that of limiting the -*t* morphology to certain syntactically defined environments, whatever the exact definition of them will turn out to involve. The case problem can be stated in similar terms for vocalic inflections as well. Thus why is the definite reading of -*a* and -*i* morphologies in isolation constrained to what is conventionally known as the nominative context? Or why is the indefinite reading of -*i* constrained to the oblique? At this point it is unclear whether these restrictions can even be stated, if case is not an available primitive. We turn to these questions in the next sections.

2.2   *The -t inflection*

Let us begin with the masculine singular oblique in (24). The form that the general question of case takes in this particular instance is: how do the quantificational properties of -*t* determine its context of appearance, corresponding roughly to the second argument of ditransitives (the so-called dative) and (anticipating section 3.1) to the genitive? The dative - genitive syncretism is widely attested, characterizing for instance Modern Greek, Romanian, and the pronominal clitic system of some Romance varieties where genitive and dative are syncretically lexicalized by *ne*. Manzini and Savoia (2005, 2007, 2008a, 2010a) conclude that *ne* denotes a superset in relation to which some other argument is interpreted. This superset-of denotation is obvious in the case of partitive genitives (e.g. *three of the boys*) where *the boys* specifies a lager set to which the *three* singled out belong; genitives of inalienable possession and attribution of mental states are equally clear cases since in *John∅s nose* or *John∅s fears*, the nose or fears are part of the collection of properties that we call ‒John∅ Similarly in Manzini and Savoia (2011b) we argue that the predicate *have* fundamentally denotes (set) inclusion. In fact in certain instances *have* is equivalent to ‒include∅ as in *Italian has two auxiliaries* (or more abstractly *This set has two members*). Though the inclusion relation yields inalienable and psych state possession in a particular natural way, we can take all possession to fall under a reasonable extension of the same relation. This proposal is close to that advanced by Belvin and Den Dikken (1997:170) according to whom ‒the ‒meaning∅ of *have*í

denotes a special kind of inclusion relation í dubbed –zonal inclusionø Entities have various zones associated with them, such that an object or eventuality may be included in a zone associated with an entity without being physically contained in that entityí The type of zones which may be associated with an entity will vary with the entityø

Now, possession, hence in present terms –zonal inclusionø is a natural characterization for the dative as well. In particular, the second internal argument of ditransitives has been connected to possessives at least since Kayne (1984). English *He gave a fright/ a book to everybody* corresponds to the attribution of a mental state or a material possession to the –dativeø argument. ó and Romance languages also have inherent possession datives as in *Ho lavato i capelli a Maria* lit: –I have washed the hair to Maryø, i.e. –I washed Maryøs hairø In terms of the discussion that precedes, then, the dative/ genitive syncretism seen in the Albanian oblique points to a superset-of/ inclusion characterization for the relevant morphology, in particular *-t* in (24). This in turn appears to be compatible with the **Q** quantificational characterization that we have assumed for *-t*. In this perspective, we propose that oblique case in (24) reduces to the quantificational element *-t* denoting a superset-of/ inclusion relation (roughly a possessive one) between the argument it attaches to and some other argument.

We characterize the $Q(\subseteq)$ relation more precisely below when we turn to the syntactic structures that (24) is embedded in (cf. (27), and section 3.1. for genitives). Before doing this, we consider the other major context where *-t* is found to occur, as the nominative/ accusative plural in (23). The syncretism of oblique (i.e. dative) with nominative/ accusative plural is again independently attested in the Romance clitic system. Thus the standard Italian dative singular *gli* is an allomorph of accusative plural *li*; other varieties display an exact coincidence on the same *(l)i* form. In Manzini and Savoia (2005, 2007, 2008a) we explain this syncretism by proposing that the *(l)i* morphology of Italian varieties has a quantificational content. This finds two instantiations: superset-of (i.e. dative) and plurality. We take the superset-of reading of Romance *(l)i* to depend on a sentential scope of its quantificational specifications. By contrast, in the plural interpretation the **Q** specifications of *i* take in their scope just the noun they apply to. We extend this analysis to the coincidence of oblique singular and non-oblique plural readings on Albanian *-t*. Thus when *-t* is read as plural, as in (23), it takes in its scope its head noun. When it is read as superset-of, its scope is sentential, applying to the internal arguments of the verb (on genitives, see section 3.1). Interestingly, it follows that the two readings are in complementary distribution. *-t* can be oblique, but it will not be plural; or it can be plural, but it will not be oblique.

Similar syncretisms between oblique and plural are also found in the inflectional systems of other languages, e.g. Romanian and Latin (Manzini and Savoia 2010b, 2011b). In Romanian, *-i* is

the oblique (dative/ genitive) singular and the (masculine) nominative/ accusative plural. Latin *-i* in turn shows up as genitive (and eventually dative) singular and nominative plural in both the I and II class; Latin *-s* is (among other things) genitive singular and nominative/ accusative plural in the III, IV, V class. In Halle and Vaux's (1997) discussion of Latin, *-s* is treated as the default, and two separate entries for *-i* are provided (cf. Calabrese 1998, 2008). Yet Johnston (1996: 102-107) shows that the same syncretism between genitive singular and nominative plural is also found in Russian, and he recognizes the systematicity of the pattern, despite the fact that these ÷homonymies∅ cannot be captured within the model he advocates, ÷because the elements involved have no element in common along any inflectional dimension∅ (102). In fact he even preconizes the possibility of a ÷geometric constraint that the relevant paradigm cells *not* be continuous∅[7].

It is useful at this point to illustrate the conclusions of this section in relation to the embedding of Albanian noun phrases, involving *-t* inflections, into sentential structures; we delay the analysis of genitive structures, i.e. of embedding within the noun phrase, till section 3.1. Let us begin with (27), which represents the embedding of the noun (phrase) in (24) as a so-called dative[8].

(27)
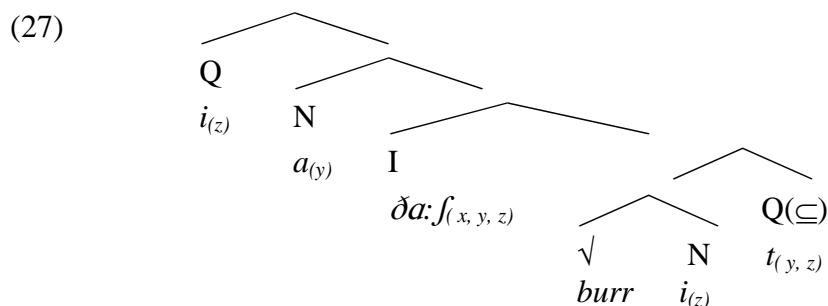
In discussing (24) we have proposed that the so-called dative interpretation of *burrit* is a

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[7] These data are also directly relevant to an assessment of Caha's (2009) account of case within the Nanosyntax model. He assumes a hierarchy of cases ... Instr - Dat - Gen - Acc - Nom built into a functional tree [Instr [Dat [Gen [Acc [Nom N] and a descriptive generalization to the effect that ÷only adjacent cases show non-accidental syncretism∅ (Law of Adjacency). By definition non-accidental syncretism must involve ÷various different exponents∅ and ÷show up across paradigms∅. He then argues that the functional sequence of cases together with the Superset Principle of insertion and the Elsewhere Condition (cf. fn. 3) yield the Law of Adjacency. For instance, dative and genitive, or genitive and accusative can be syncretic, but not dative and accusative, skipping over the genitive. Now, if we take syncretisms like that of oblique singular with non-oblique plural (Albanian *-t*, Latin *-s*, Latin *-i*, Romanian *-i* etc.) to be significant (÷non-accidental∅), one cannot maintain Caha's (2009) Law of Adjacency. For instance, in the Latin I/II class, the syncretism of *-i* as nominative plural and genitive singular skips the accusative, countervening Caha's hierarchy. This pattern therefore constitutes a problem for the Nanosyntax model, which by construction is incapable of capturing it.

[8] In (27) the dative clitic corresponds to a Q position in the inflectional string , while the accusative corresponds to N, as will be discussed again in the next section for accusative inflections inside the noun.

quantificational superset-of interpretation (roughly a possessor one) depending on the *-t* quantificational inflection. More specifically, this interpretation arises when *-t* takes sentential scope, defining a relation between the argument it attaches to and the internal argument of the predicate, i.e. the pair (y, z) in (27), so that the former (z) ‒includesø the latter (y), in the way of ‒zonal inclusionø defined above. In view of this fact, rather than speaking of ‒sententialø scope of the $Q(\subseteq)$ operator, it is more appropriate to characterize $Q(\subseteq)$ as taking scope over VP, i.e. over the elementary event resulting from the combination of the predicate with its internal argument(s) (here *burrit* and the *a* accusative clitic) prior to the composition with the external argument[9].

In discussing (23), we further suggested that the same operator $Q(\subseteq)$ responsible for the reading of (zonal) inclusion, i.e. the oblique, when taking sentential scope, corresponds to the plural reading when taking just the nominal base in its scope. We assume that the basic denotation of a predicate is a set of individuals (or a set of sets of individuals). Then the $Q(\subseteq)$ morphology/ operator picks a subset of this set of (sets of) individuals, yielding the plural reading, in the case at hand ‒a subset of the set of (sets of) individuals that are ‒manø.

This plural reading is found in the embedding of noun (phrases) like (23) as conventional nominatives or accusatives, as shown in (28). In (28) *burrat* corresponds to a nominative when combined with the unaccusative $\varepsilon r\eth\partial n$ ‒(they) cameø and to the accusative when combined with the transitive $pa{:}\int$ ‒I sawø. We have already seen that in the substructure in (23), the internal (and only) argument of the *burr-* nominal base is satisfied by the *-a* nominal class specification. We take it that this is also sufficient to satisfy the internal or EPP argument of the verb.

(28)

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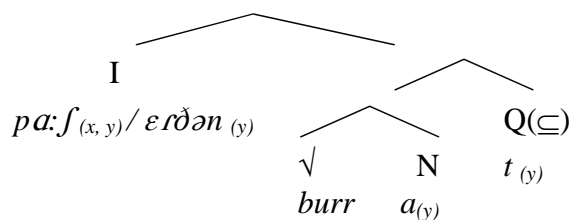
[9] In construing the oblique as a dyadic operator we reproduce one of the crucial properties of Pylkkänenøs (2002), Cuervoøs (2003) Appl(icative) head, whose complement is the internal argument of the verb and whose Spec is the dative. However, Appl heads are a primitive of the theory which assumes them, no less than ‒dativeø is in other theories, and in this sense just a restatement of the problem. Here we proposed a genuine reduction of the notion ‒dativeø to more elementary primitives; this allows us to capture its syncretism with plural and of course the much more straightforward syncretism with genitives in section 3.1.

Summing up so far, when satisfaction of certain syntactic junctures (theta-configurations, or others) by lexical elements like *-t* occurs, one traditionally labels the relevant configuration as a case configuration and the relevant elements as case elements. Yet the property of case has no reality; for, ‒caseø elements are denotational and the real nature of the configurations they enter into is that of an argument-predicate (thematic) structures, etc. This is brought into relief in the present discussion by the identification of the categorial content of so-called plural and so-called oblique. The fact that the plural and the oblique readings of *ót* cross and do not combine can also be derived, as an effect of the incompatibility of the two different scopes of $Q(\subseteq)$ involved.

2.3   *Other consonantal case inflections*

For the so-called accusative definite, as in (28) above, we have just argued that it is fundamentally N morphology that satisfies the accusative context, very much as it lexicalizes the internal argument of the predicative base of the noun. If we apply this way of reasoning to the *-n* morphology of the singular definite forms, we can conclude that the *-n* ending simply has N properties. In other words, it is an N inflection (further specialized for definiteness) as illustrated in (29). In these terms *-n* therefore introduces reference to a specialized (definite) nominal class. Since *ón* cannot directly attach to the nominal stem, but must select a nominal class vowel, we may surmise that the latter is responsible for closing the argument of the nominal base, while the *ón* specification connects to the satisfaction of an argument of the higher predicate.

(29)
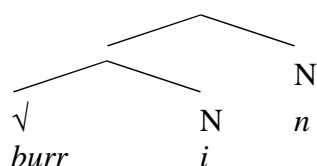
Now, in current generative theorizing, accusative corresponds either to an agreement configuration with v (Chomsky 2001, 2008, briefly discussed here in connection with (11), or to a ‒dependentø configuration in the sense of Marantz (2000), Baker and Vinokurova (2010). Here we concentrated instead on the other half of the descriptive case problem, i.e. the nominal inflectional material ó which for so-called accusative is (we surmise) a pure realization of N properties. In virtue of these properties accusative inflections are not able to satisfy neither oblique environments nor EPP ones. What they are able to satisfy is (any other) argument environment.

In short, accusative simply corresponds to the lexicalization of N properties sufficient to satisfy the argument-of relation to a predicate. This means that we do not expect it to have any specific semantic relation to the predicate ó though it will systematically fill internal argument-of

configurations which exclude Q(⊆) embedding (hence oblique) or EPP/D closure (hence nominative, cf. section 2.4). Despite a long tradition to the contrary, based on the morphological markedness of accusative, we think that there are good indications that this is descriptively correct. For, it is accusative forms that turn up unexpectedly ó not nominatives for instance under Focus, as in English *Itøs me*, or under ellipsis, as in *He is taller than me*[10].

The classical test for the conclusion that accusative is not linked to any particular theta-configuration, i.e. it is a structural case in the sense of Chomsky (1986), is so-called Exceptional Case Marking. Now, in generative theorizing the essence of ECM (as of raising) is that the embedded sentence is somehow transparent to the matrix sentence, hence a defective projection of some sort (Sø deletion in Chomsky 1981, not C hence not a phase head in Chomsky 2001, etc.). Suppose that this defectivity means that the embedded sentence is not EPP-closed; if so, we predict that the embedded subject will turn up in the argument-of case (accusative) rather than in EPP/D case (nominative).

Interestingly, there is a tradition in generative grammar proposing that the position of the accusative in ECM is not that of an embedded subject but that of a matrix object (Postal 1974, Johnson 1991). Chomsky (1975 [1955]) in turn treats English ECM as an instance of restructuring of the propositional attitude verbs with the embedded predicates, making the embedded subject into the thematic object of this complex predicate. Indeed in Albanian (as in Romance), accusative subjects of infinitives are restricted to causative environments (Manzini and Savoia 2007 and references quoted there), where predicate unification can independently be argued to take place and the embedded subject is interpreted as the theme (the causee) of the complex predicate formed by the causative verb and the embedded verb.

If we accept the validity of our characterization of *-n* and *-t* inflections, as N and Q(⊆) respectively, the table of Shkodër consonantal inflections in Table 2 falls into place. In particular, in the feminine the oblique definite singular is lexicalized by *ós*; in the plural, all nominal classes and both definites and indefinites are associated with oblique *-vɛ*. But, if *-t* is able to lexicalize the second argument of ditransitives etc. in virtue of its superset-of denotation, then *-s* and *-vɛ* are characterized by essentially the same denotation, projecting the Q category as well, as in (30)-(31).

---

[10] Note that the present model has no default. In particular, the oblique context is uniquely satisfied by the Q(⊆) elements of the language (*-t* and the others to be seen immediately below), without any need for an optimization device preferring these lexicalizations over competing ones. Perhaps more transparently, we can say (modifying slightly the LF in (27)) that the Q(⊆) operator itself introduces the ÷obliqueø argument slot which its head noun satisfies. The accusative N morphology then satisfies contexts where the argumental slot is independently defined. The nominative fits into this schema in that it involves a D (EPP) embedding in turn along the lines of section 2.4.

(30)

```
        ╱‾‾‾╲
    √           Q(⊆)
   vajz           s
```

(31)

```
            ╱‾‾‾╲
                      Q(⊆)
     ╱‾‾‾╲             vɛ
   √        N
  vajz      a
```
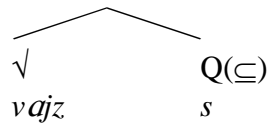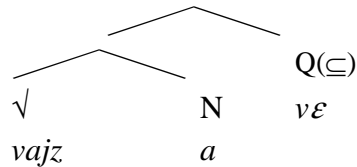
2.4   Vocalic case inflections.

We begin our analysis of vocalic inflections by considering the nominative (singular definite) which has been left out of our discussion so far. In (32), the noun (phrase)s in (20)-(21) are embedded as the sole argument of the unaccusative verb *ɛrði* '(s/he) came'. The latter is analyzed as consisting of a predicative base *ɛrð-* and of an *-i* verbal inflection to which we associate the categorial signature D in keeping with Chomsky's (1995) suggestion as to the nature of the EPP. Within the present framework, saying that in (32) the verbal inflection *-i* agrees with the nominal inflection *ói/ -a* means saying that they concur to the satisfaction of the EPP argument of the verb, (x) in (32). Therefore the argument slot notated by the *x* variable in (32) is satisfied by the chain formed by the two inflections (*-i, -i/-a*) (cf. section 1.3 on Italian).

(32)

```
        ╱‾‾‾‾‾‾‾╲
     ╱‾‾╲          ╱‾‾╲
   √       D      √       N
  ɛrð(x)   ix    burr    i(x)
                 vajz    a(x)
```
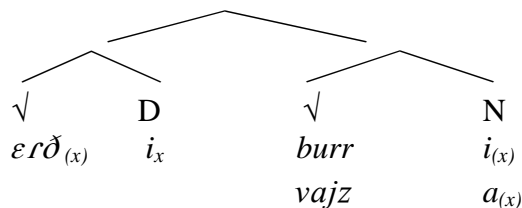
In turn, saying that the N inflections *-i/ -a* are nominative amounts to saying that they satisfy the D/EPP environment introduced by the *-i* finite verb inflection (i.e. they can form a chain with it, etc.). In other words, there is once again no nominative case. There is on the one hand nominal class morphology, and on the other hand the context of insertion it satisfies, namely the chain it forms with the verb inflection. Recall that in discussing the definite plural nominative/ accusative in section 2.2, we again proposed it is the nominal class vowel that satisfies the nominative (and accusative) context of embedding, not the Q(⊆) operator introduced by *ót*.

Now, while in the definite paradigm nominal class vowels ó not followed by any consonantal ending ó are effectively restricted to the nominative singular, they have a much wider distribution in the indefinite paradigm. At the same time, when we consider the overall distribution of *-a, -ɛ, -i* in the definite and indefinite declension, an interesting pattern emerges. We note that they can appear as definite, but this will exclude plural and oblique, as in the nominative singular *-a, -i*; or they can appear as oblique, but this will exclude definiteness and plurality, as in the oblique indefinite singular *-i, -ɛ*; or they can appear as plural, but this will exclude definiteness and oblique interpretations, as in the indefinite non-oblique plural *-a, -ɛ*. In short definiteness, oblique case and plurality appear to be compatible with nominal case inflections, but only as long as no two of them co-occur.

This complementary distribution is reminiscent of the facts reviewed in section 2.2 for the definite morphology *-t*, which can either have superset-of properties (oblique) or plural properties, but not both (i.e. cannot be both oblique and plural). In this latter case we proposed that both so-called oblique and plural corresponded to quantificational properties inherently associated with *-t*. But since plurality depended on *-t* taking scope over the noun and so-called oblique on it taking sentential scope, the two readings were predicted to be in complementary distribution.

There is an obvious difficulty in extending this treatment to nominal class inflections, namely that no quantificational properties have been imputed to them ó nor can they be, since we find such elements in contexts that do not warrant a quantificational treatment, e.g. as so-called thematic vowels. This difficulty can however be circumvented, if we assume that the definite, plural and oblique properties accruing to nominal class inflections depend on their closure by abstract quantificational operators at the LF interface.

Let us begin with definiteness, which is associated with vocalic inflections in the so-called nominative singular. On the basis of the discussion surrounding (32), in the nominative configuration the nominal class inflection satisfies the EPP argument of the verb, forming a chain with the finite inflection of the verb, i.e. in present terms a D specification. Two possibilities then arise. First, the nominal inflection can be in the scope of an operator, for instance an existential (the indefinite article), in which case an indefinite reading arises. Alternatively, if it does not as in (32), the D/EPP argument licences a sort of definiteness closure leading to the definite reading. In other words, definiteness is the interpretation for nominative in the absence of existential closures.

A number of descriptive problems arises in this connection. In the *msus-ɛ* class, *-ɛ* can lexicalize the nominative singular indefinite, but only ó*a* can lexicalize the definite. This alternation can be captured by assuming that *-ɛ* is inherently indefinite, so that when alone, *-ɛ* only has an

indefinite interpretation (in the nominative but also in the accusative of the *msus-ɛ* class and in the feminine dative singular). In the *vajz* and *burr* classes, on the other hand, the *óa* and *ói* nominative definite singular inflections alternate with bare lexical bases in the nominative (and accusative) indefinite singular. In the present framework, zero morphology is excluded ó fundamentally for reasons of restrictiveness. Therefore what appear to be inflectionless elements really are treated as such. Lack of nominal inflections (which of course systematically characterizes a language like English) in turn does not create any problems if the argumental variable is closed by a quantifier/ determiner, typically the indefinite article triggering an existential closure, or even simply by the latter[11].

No independent overt closure comparable to that provided by the D/EPP inflection is available for the oblique interpretation of nominal class inflections, in the indefinite singular. We speculate therefore that it derives from an abstract quantificational closure at the sentential level, licensing the superset-of (possessor) interpretation. In other words the $Q(\subseteq)$ quantificational property that we associate with terminals such as *-t, -s, -vɛ* is available also in the form of an abstract closure at the LF interface. It is the presence of this abstract quantifier that licenses the oblique (superset-of) reading for the nominal classes *ói* (masculine singular) and *óɛ* (feminine singular).

Note that with the nouns of the *msus-ɛ* class, the *-a, -ɛ* endings in the nominative definite and the oblique indefinite are preceded by the element *-j-*. In the dative singular indefinite *-jɛ* can either attach directly to the base *msus* or to the base *msus-ɛ*, inclusive of the *-ɛ* inflection. In this latter occurrence it is reasonable to take *-jɛ* as an allomorph of *-ɛ* specialized for phonological contexts where it is preceded by vowels. This treatment can then be extended to *msus-jɛ/ -ja,* assuming that these result from *msusɛ-jɛ/ -ja* via the deletion of the intermediate *-ɛ* vowel caught between the primary stress and the final syllable, along the lines of (33). Now, the fact that we find *msusɛ* in the nominative/ accusative indefinite singular, as opposed to the bare *vaiz*, suggests that a nominal class inflection is always necessary to satisfy the internal argument of bases like *msus*. Since the *-ɛ* inflection has indefiniteness properties according to the discussion that precedes,

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[11] Mass nouns are a case in point, occurring without (indefinite) determiners, as exemplified in (i) in an accusative context.

(i)   ai   pin   vɛn

         he   drinks   wine

         ~~He drinks wineø~~

satisfaction of the nominative definite, requires an additional layer of N inflections, yielding the form in *ója* just discussed. The same structure characterizes the indefinite oblique.

(33)

```
            _____
           /           \
        __/__           N
       /     \          jε
      √       N
     msus     ε
```
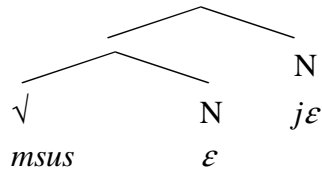
We have now accounted for nominal class inflections associated with definite interpretation (nominative singular) and oblique interpretation (singular indefinite). It remains for us to analyse the plural interpretation (indefinite nominative/ accusative). In relation to *-t*, we have proposed that the same Q($\subseteq$) quantificational properties can be read as plurality when they take the nominal base in their scope. If Q($\subseteq$) is available as a closure at the LF interface, then we predict also that nominal bases inflected only with a nominal class vowel could have a plural interpretation. In Albanian in particular it is *-ε* and *-a* that admit of this closure, yielding the plural indefinite (in the oblique).

Finally, the preceding discussion implies that different abstract quantificational closure combine with different subsets of vocalic inflections. We have already suggested that *-ε* is intrinsically indefinite, explaining why it cannot appear as the nominative definite singular. Similarly, *-i* which does not appear as a plural inflection will not be compatible with Q($\subseteq$) plural closure and *-a*, which does not appear as oblique, is incompatible with Q($\subseteq$) ‒zonal inclusionø closure.

The objection may be raised at this point that though we do not allow into our grammar abstract morphosyntactic material (in the form of impoverished features, zero morphemes, silent categories à la Kayne, the string lexicalization of Nanosyntax, or uninterpretable/ unvalued properties), we do allow for abstract quantificational closures. However, mechanisms such as existential closure for indefinites, and generic closure for PROøs, are independently needed and generally postulated in generative grammar. In other words, even if we had impoverished features or silent categories for syncretisms, we would need quantificational closures in the contexts just mentioned[12]. Our argument here is that vice versa operator closures are sufficient to yield contexts

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[12] An anonymous reviewer suggests that in Distributed Morphology, impoverished features are needed not just for syncretism but also ‒e.g. in clitic clusters, Bonet 1991ø We assume that the reference is to phenomena such as the Spurious *se* of Spanish, whereby the *le lo ‒to.him itø dative - accusative cluster of Spanish is excluded and repaired as *se lo*. This repair proceeds via Impoverishment of the [dative] feature on the first clitic of the cluster, allowing for the

(syncretisms and so on) ordinarily falling under the impoverished features, silent functional heads description.

2.5   Overview

The starting point of the present discussion were the data in Table 2, which laid out the nominal inflection system of Shkodër, classified in terms of the traditional case, definiteness and number categories. Our aim was showing that case categories could be entirely abandoned in favour of denotational primitives. As we took great care to stress in section 1, this line of inquiry is not in itself new. As far as we can tell, the reduction of case to referential primitives is the gist of the minimalist program on case since Chomsky (2001, 2008). Yet Chomsky (2001, 2008), as well as Pesetsky and Torrego (2004, 2007), simply substitute the case diacritic with what seem to us other diacritics (uninterpretable case, nominal T, etc.). What is more, this kind of theory typically requires a heavy dose of abstract categories (zero affixes, impoverished features) of the type ordinarily deployed by Distributed Morphology.

The relative novelty of the present perspective rests on a strict adherence to the (minimalist) postulates of projection of the syntax from actual lexical entries (no impoverishment, etc.) and of the ÷perfectionø of the computational module (no uninterpretability etc.). The restrictions imposed on us by these assumptions combined with the descriptive complexity of Albanian nominal inflections required a fairly lengthy discussion at various points. Yet the overall picture that emerges can be summarized in a fairly compact table (Table 3) that can now be substituted for Table 2 (we have only omitted ablative -ʃ, which will be discussed in the next section). Nominal classes (genders) are not considered in Table 3, but they are not considered in Table 2 either. Despite the emphasis that we placed on restrictiveness, what we are perhaps most interested in is the fact that Table 3 is a genuinely different way of cutting the data, so that we expect direct empirical evidence to be able to discriminate between Table 2 (or its rendering by conventional morphosyntactic theories) and Table 3. Indeed one of the syncretisms that we capture by means of the categorizations we propose, though recognized to have systemic properties by more traditional literature, is very difficult to get by conventional means, namely the syncretism between oblique singular and non-oblique plural.

Roughly speaking there are three types of properties relevant for the nominal inflections of Shkodër: N(ominal class), Q(uantification), D(efiniteness). N elements, which include vowels and

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insertion of default *se*, instead of *le*. Independently of any other consideration, note that the result of Spurious *se* is in fact a syncretism, since *se* comes to cover 3rd person dative as well as reflexive. Elsewhere (Manzini and Savoia 2005, 2007, 2008a, 2010a) we motivated a treatment for Romance clitic clusters that dispenses with Impoverishment.

-n, can have definiteness, or they can have plurality, or they can have possessor interpretation, but the three are in complementary distribution. If the discussion at the end of section 2.4 is correct, the latter are not intrinsic to vocalic inflections, but contributed by the context of insertion in the shape of quantificational closures (as indicated in Table 3 by the parentheses). The other consonantal/ syllabic endings *-t* and *-s* and *-vɛ* are all quantificational and will be either plural (*-t*, *-vɛ*) or oblique (*-s*, *-t,*); *-t* and *ós* are definite, while *óvɛ* can be definite or indefinite. One residual problem with Table 3 has to do with the ambiguity which characterizes *-vɛ*, between definite and indefinite. We have notated it with a parenthesis in the relevant cell of the table ó indeed the simplest hypothesis as to this ambiguity is that definiteness corresponds to an abstract closure[13].

	Q.pl	Q.obl	Def	Standard description
-a (N)			(+)	Sg, direct, def
	(+)			Pl, direct, indef
-i (N)			(+)	Sg, direct, def
		(+)		Sg, oblique, indef
-ɛ (N)		(+)		Sg, oblique, indef
	(+)			Pl, direct, indef
-t (Q$_\subseteq$)		+	+	Sg, oblique, def
	+		+	Pl, direct, def
-vɛ (Q$_\subseteq$)	+	+	(+)	Pl, oblique, (in)def
-n (N)			+	Sg, direct, def
-s (Q$_\subseteq$)		+	+	Sg, oblique, def

Table 3

The translation of Table 3 into a conventional feature system (nominative, accusative, oblique, singular and plural, definite and indefinite) is entirely mechanic, though the properties in Table 4 only identify the opposition between direct and oblique case ó not between nominative and accusative. Going back to the discussion of the accusative surrounding (29), we conclude that D/

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[13] Recall that in fn. 5 we introduced a variety where *ós* and *ót* of the oblique singular are also insensitive to definiteness. For these we can adopt an account parallel to that of *- vɛ* in the text. The fact that ót in the plural is always definite would then mean that in the relevant variety ót selects for a thematic vowel that ha undergone a definiteness closure.

EPP closure can only take in its scope ordinary nominal class N inflections that closes the argument of the nominal vase – not the consonantal *-n* inflection that connects to the satisfaction of an argument-of relation to a higher predicate.

Note that there some general properties of the case system of Albanian emerge from the summary presentation in Table 3 – namely that no more than one abstract Q/D closure (+) is available for nominal class inflections. Another uniqueness constraint regards the fact that there is at most one Q inflection per nominal base (thus we couldn't have a sequence of *-t*, lexicalizing oblique and plural). Of more direct empirical relevance is the observation that of the three nominal class vowels, *-a* does not have an oblique reading, *-ε* does not have a definite reading and *-i* does not have a plural reading. This yields the possible combinations consonantal endings with *-i* and *-ε*, as in Table 4. The shaded areas of the Table follow once the selectional properties of *-t* (excluding *-ε*) and of *-s* (excluding *-i*) are taken into account. The restrictions on *-a* require a different constraint. The other vocalic inflections can be closed by operators – but can also appear as thematic vowels in the absence of any closure (unless provided by overt lexical material). The *-a* vocalic inflection on the other hand must always be either definite (nominative singular) or plural. This explains why it is mutually exclusive with singular *-t, -n, -s*.

	-n	*-t* pl	*-t* obl	*-s*	*-vε*
-i	+	-	-	+	-
-ε	+	+	+	-	+
-a	-	+	-	-	+

Table 4

The important point is that we treat the constraints as emerging properties of the lexical distribution – not the lexical distribution as an emerging property of the constraints. Nothing prevents us from taking the alternative route of a grammatical constraints system. In other words, the issue is independent of the discussion at hand – as well as having implications that far exceed it. Therefore, having duly noted our (present) choice, we proceed to dismiss it[14].

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[14] The double Q constraint (also evoking mutual exclusion of the OCP/ Minimality type, cf. Manzini to appear b), is pointed out by one of our anonymous reviewers, who also asks about "concrete formalisms (derivational rules, constraints, lexical entries, meaning postulates, etc.)"

Let us then restate the basic points of our discussion one final time. From a syntactic point of view we intended to show that indeed ÷caseø, or cases like ÷nominativeø, ÷accusativeø, ÷dativeøare not primitives of grammar. Contrary to current trends in minimalism however, our idea was not to derive them via their uninterpretable status (Chomsky 2001, 2008. Pesetsky and Torrego 2004, 2007). Rather we have now shown that the descriptive generalization captured in traditional terms by reference to case, can be equally captured by imputing to ÷caseø terminals interpretable properties. From a morphological point of view we have shown that the fully fledged case system Albanian (three cases considered so far, number, definiteness, declension classes) can be accounted for without having recourse to a specialized morphological component. In other words, syntax alone suffices to partition the lexical space (Table 3). We are not even interested in claiming at this early stage that our system is better than extant alternatives in accounting for ÷caseø, either from a descriptive or from an explanatory point of view. We are satisfied with claiming that it is no worse. If this is granted, then what we have shown is that neither syntactic uninterpretability nor for Late Insertion (and attendant notions, optimization, etc.) are necessary to account for ÷caseø ó which in these respects is like many complex morphosyntactic phenomena studied in our previous work (cf. the brief discussion of agreement in section 1.3).

3.   *Further refinements*

3.1   *The genitive*

In presenting the major case configurations in (1)-(8), we omitted the genitive on purpose, for two reasons. On the one hand, genitive morphology overlaps with the morphology we have exemplified for dative contexts; in other words, there is a single oblique Case, which covers both dative environments and genitive ones. On the other hand, genitive contexts are distinguished from other oblique contexts in that the genitive is introduced by an article agreeing in number, gender and Case with the noun that the genitive is a complement of.

These properties are illustrated by the data in (34)-(38). In all examples the genitive noun, can be seen to bear the same inflection as the dative. Thus if definite, it has *-s* in the feminine

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The implications of the issue raised can perhaps best be gauged by considering the reverse position to the one adopted in the text, held by Optimality Theory. On OT (if on nothing else), we tend to agree with Evans and Levinson (2009: 474) õIn the OT (Optimality Theory) framework ... ÷the grammar of one language inevitably incorporates claims about the grammars of all languages (McCarthy2002, p. 1)ø...OT effectively burdens each individual mind with a precis of the functional history of all known human languages, and loads the entire optimization process onto on-line grammatical computation. This is ... cognitively unrealistic ...ø

singular, *-t* in the masculine singular and *-vɛ* in the plural; the indefinite inflections are *-ɛ, -i* and *vɛ* respectively. The article that introduces the genitive in turn agrees with the head noun in phi-features and case. In nominative contexts, *i* is the pregenitival article when the head noun is masculine singular, as in (34a), *ɛ* when the head noun is feminine singular, as in (34b), or plural, as in (37). When the head noun is accusative, the pregenitival article is *ɛ*, as in (35) and in (37). When the head noun is oblique, the pregenitival article is *t*, as in (36) and (38). The article does not vary depending on the definiteness of the head noun.

(34)   *Nominative singular - genitive*

    a.   libr-i/   ɲi libər   i   msus-ɛ-s/   ɲi vɑiz-ɛ

        book-ms.Nom.def   a book   the   teacher-fs-Obl.def/ a girl-fs.Obl

        =the/a book of the teacherø

    b.   kɑ:m-a/   ɲi kɑ:m   ɛ   tʃɛn-i-t/   ɲi tʃɛn-i

        paw-fs.Nom.def a leg   the   dog-ms-Obl.def/ a dog-ms.Obl

        =the paw of the dogø

    c.   libri   i   diɛm-vɛ/   i   vɑiz-a-vɛ

        book-ms.Nom.def   the   boy-Obl.pl/   the   girl-pl-Obl

        =the book of (the) boys/ girlsø

(35)   *Accusative singular - genitive*

    a.   libr-i-n   ɛ   msus-ɛ-s

        book-ms-Acc.def the   teacher-fs-Obl.def

        =the book of the teacherø

    b.   kɑ:m-ɛ-n   ɛ   tʃɛn-i-t

        paw-fs-Acc.def   the   dog-ms-Obl.def

        =the paw of the dogø

(36)   *Oblique singular - genitive*

    paɾa   libr-i-t   t   msus-ɛ-s

    before   book-ms-Obl.def the   teacher-fs-Obl.def

    =in front of the book of the teacherø

(37)   *Non-oblique plural - genitive*

    a.   libr-a-t   ɛ   msus-ɛ-s

book-pl- def   the   teacher-fs-Obl.def

꞊the books of the teacher꞊

b.   kɑm-t   ɛ   tʃɛn-i-t

paw-pl-def   the   dog-ms-Obl.def

꞊the paws of the dog꞊

(38)   *Oblique plural - genitive*

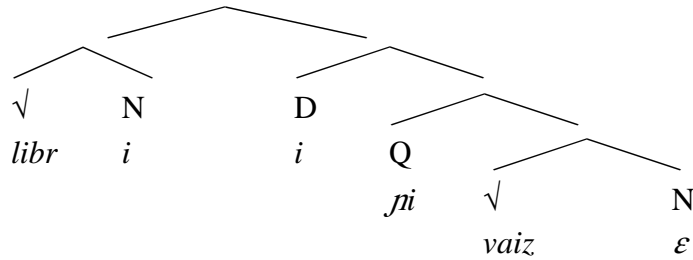tʃɛj-vɛ   t   vɑiz-ə-s

dog-Obl.pl   the   brother-ms-Obl.def

꞊to the dogs of the girl꞊

We can associate phrases like (34a) with structures of the type in (39). In (39a) the head noun *libri* selects a determiner which in turn takes the genitive noun (phrase) *msusɛs* as its complement. The fact that the embedded determiner does not agree with the genitive noun shows that it cannot be the determiner of the noun itself. The strongest confirmation of this comes from the indefinite genitives. These are preceded by their own indefinite quantifier, as in (39b), providing obvious grounds for the conclusion that the definite article does not belong to the internal structure of the oblique. Rather the genitive, instead of being inserted directly as the complement of the head noun is construed as the complement of a determiner head picking up the same referent as the head noun, as if in English one was to introduce genitives by saying ꞊the book, that of the teacher꞊ and so on. As discussed by Manzini and Savoia (2011b), Albanian adjectives are characterized by a configuration similar to that of genitives, in which the adjective (like the genitive) is preceded by an article agreeing with the head noun. We conclude that in Albanian genitives, like adjectives, are introduced as predications.

(39)   a.

b.

```
              _____
             /                      \
            /\                       \
           /  \                 _____/\_____
          /    \               /            \
         √      N             D              \
        libr    i             i      _____/_____
                                    Q         /\
                                    ɲi        /  \
                                             √    N
                                            vaiz   ε
```
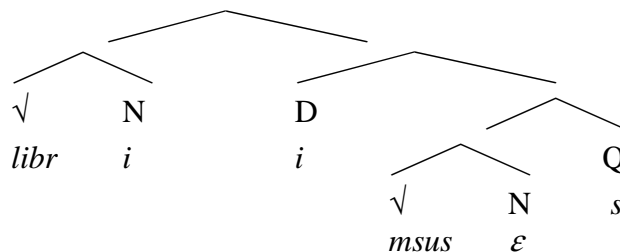
In section 2.2. we argued that what in traditional terms would be described as the syncretism of the genitive inflection with the dative is based on the fact that the relevant Q morphology has ⊆zonal inclusion denotation. Thus the second internal argument of ⊆giveø, i.e. the traditional dative, in present terms concurs in fixing the reference of the first internal argument, i.e. the accusative, by denoting a superset including it. Similarly, the traditional genitive specifies a superset in terms of which the reference of the head noun is fixed[15]. The difference between datives and genitives is a matter of points of merger/ scope. In dative environments, the oblique takes scope over the complements of a verb; in genitive environments it takes scope over the head noun, establishing a $Q(\subseteq)$ relation between the head noun itself and the genitive noun. Equivalently, since the pre-genitival determiner contains all relevant referential properties of the head noun, the scope of the $Q(\subseteq)$ operator can be just the embedded Determiner phrase. In any event, the different scope properties form the basis for different lexicalizations of genitive and dative in languages without the relevant syncretism.

As for the pre-genitival articles, i, ε and t, we have already characterized t as a $Q(\subseteq)$ morpheme in considering its occurrence as an inflection; the same characterization can fairly obviously be maintained for t as an article. We explained the fact that the $-t$ inflection appears in the oblique singular and in the non-oblique plural by assuming that the plural reading depends on $-t$ taking scope over the nominal base, while the oblique reading depends on it taking phrasal scope. It is natural to assume that only this second possibility is available to a phrasal level constituent such

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[15] An interesting issue that we leave aside here concerns eventive nouns. The potential problem is that the genitive in this case lexicalizes not only the possessor, with a notoriously loose relation with the head noun, but also what appears to be internal argument of the eventive noun, with a much stricter relation to it, as illustrated for the *ne* clitic of Italian in (i).

(i)   Ne   ho   disapprovato   il furto
        of.it   I.have disapproved   the theft
   'I disapproved the theft of it'

Despite what appear to be interpretive differences, we provisionally maintain the same characterization for the genitives in (i) as we have provided here for partitives/ possessors. It looks like the genitive is the all-purpose shape of a nominal complement -- though its interpretation is restricted when it satisfies certain argument slots of eventive nouns, as in (i).

as the article, explaining the fact that article *t* is restricted to the oblique (plurality will have to be independently provided).

The *i* and *ε* morphemes also appear both as inflections and as articles. In section 2 we have characterized them as lexicalizations of nominal class; there is no reason why this characterization should not be maintained for their occurrence as articles. In particular, the article is lexicalized by *ε* in all accusative contexts; this is consistent with the conclusion that accusative is satisfied by nominal class properties N in the inflectional domain as well. In the nominative, article *ε* occurs with plural and feminine head nouns, while the masculine requires *i*. Evidently when the article concurs to the lexicalization of the EPP (D) argument of the sentence, specialized nominal class morphology (*i* for the masculine, and *ε* for the feminine) is required at least in the singular.

3.2   *Prepositional contexts and the ablative*

We turn next to prepositional contexts. Chomsky (1995) simply states that prepositions assign Oblique case. Pesetsky and Torrego (2004) identify prepositions with an aspectual category õa species of T merged below D and above NPö to which their model of case in section 1.2 can be applied, as in (40). In (40) the preposition T_{prep}, endowed with an interpretable *i*T feature checks the uninterpretable *u*T features associated with the D head of the noun phrase, by taking scope over it.

(40)   TP (=PP)
          ╱   ╲
    T_{prep} DP
    [*i*T]   ╱   ╲
             D   TP
            [*u*T]   ╱   ╲
                  t_{prep} NP
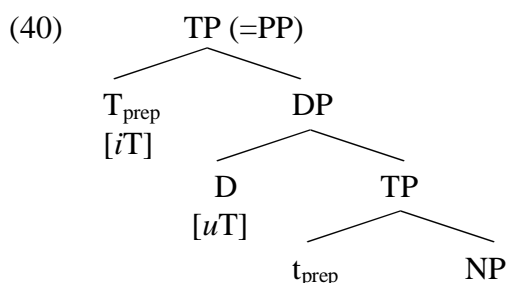
Now, prepositional contexts, no less than verbal ones, are not restricted to a single (morphological) case. Rather, to take a couple of well-known languages, in German prepositions select either accusative or dative; in Latin they select accusative or ablative. In Albanian, prepositions assign all the cases that are independently found in sentential contexts. In (4) and (8) above, we used prepositional contexts to illustrate ablative case. As we have already noted, in the singular definite the ablative ending *-t* for the feminine is restricted to a set of locative nouns, besides being found with 1st/2nd person pronouns, as in (44a). Similarly in the plural the specialized *-ʃ* ablative ending occurs only with 1st/2nd person in (44b) or as the indefinite form in generic contexts, as in (44bø). The same prepositions that select the ablative in these instances, otherwise

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combine with oblique morphology, as in (43). Furthermore, prepositions can select accusative, as in (42), or nominative, as in (41).

(41) *Preposition - Nominative*

    a.   ai   ʃkan tɛ   vɑjz-a/   diɑl-i

            he   goes   to   girl-Nom   boy-Nom

            =He goes (close) to the boy/ the girlø

    b.   ai vien   tɛ   un/   ti/   ai

            he comes   to   me.Nom/ you.Nom/ he.-Nom

            =He comes (close) to me/ you/ himø

(42) *Preposition - Accusative*

    a.   ɛ   vuna mi/ nɛn   kmiʃ-ɛ-n/   kmiʃ-a-t

            it   I.put on/under   shirt-fs-Acc.def shirt-pl-Acc.def

            =I put it on/under the shirt/ shirtsø

    b.   ai   vien mɛ   mu/   ty/   atɛ

            he   comes with   me.Acc/ you.Acc/ him. Acc

            =He comes with me/ you/ himø

(43) *Preposition - Oblique*

    a.   ɐʃt   bɐ: pɾej diɑl-i-t/   diɛm-vɛ

            it.is   done   by   boy-ms-Obl   boys-Obl

            =It has been done by the boy/boysø

    b.   ɛ   kam vu: paɾa/ poʃt/ sipəɾ   libr-i-t/   karig-ɛ-s

            it   I.have put   before/behind/ on   book-ms-Obl.def/   chair-fs-Obl.def

            =I have put it before/ behind/ on the book/ chairø
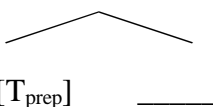
(44) *Preposition - Ablative*

    a.   pɾei/ poʃt/ paɾa   ʃpi-ɛ-t/   ðɔm-ɛ-t/   tɛ-jɛ-t

            from/ behind/ before   house-fs-Abl.def   room-fs-Abl.def   you-NC-Abl.def

            =from/ behind/ before the house/ the room/ youø

    b.   pɾei/ poʃt/ paɾa   nɛ-ʃ

            from/ behind/ before us-Abl

            =from/ behind/ before usø

bø   pun   pɾej   gɾɑː-ʃ

     job   for   women

    =a womenøs jobø

One can object that the incompatibility of data such as (41)-(44) with the Oblique case proposal of Chomsky (1995) disappears if the morphological component is taken into account. In the framework of Distributed Morphology it could be assumed for instance that an Impoverishment rule deletes Oblique case from the prepositional contexts overtly combining with the accusative, as in (45a). Suppose then that the accusative morphology for the plural, namely *-t*, in reality is only a definite plural (a rough translation of what we have concluded in section 2). If so, *-t* becomes insertable in the relevant prepositional contexts, as in (45b); in fact it becomes the only insertable element if other endings are specified for case.

(45)   a.   [oblique]   → $\varnothing$ / [$_P$ nɛn, mi] _____

        b.   [plural, definite] → -t /

                         [T_{prep}]   _____

As already stressed in section 1, the abstract functional structures to which morphological Impoverishment rules apply not only raise questions about restrictiveness, but also lead to descriptive problems. Specifically, prepositions in Albanian can select not just accusative, but also nominative, i.e. they can select not one, but two different non-oblique cases. In the nominative context, we can postulate a rule of oblique Impoverishment parallel to that formulated in (45a). We can further attribute to the nominative morphology an underspecified entry which allows it to be inserted under an impoverished node. But the problem is that the system now has two different underspecified entries, i.e. the nominative and the accusative, whose distribution in prepositional contexts can no longer be described.

Needless to say, the fact that the nominative is selected by prepositions is equally problematic for syntactic level models that construe nominative as a reflex of agreement with the finite verb (Chomsky 2001, 2008). Would they need to postulate empty T/agreement properties on prepositions, absent from the overt morphology of Albanian? As for Pesetsky and Torrego (2004, 2008), they suggest that the selection of certain cases by certain subsets of prepositions, i.e. T_{prep} under the schema in (40), is connected with the particular features associated with the varying properties of the event. Yet it is far from clear that T_{prep} in (40), can instantiate properties parallel to

those of sentential T, so as to justify nominative; indeed a stipulation with the effect of conflating the aspect of T_{prep} and the actual tense of sentences would seem not to be supported by semantic considerations.

Let us then consider what can be said about cases selected by prepositions within the present approach. Consider prepositional contexts requiring the so-called accusative, as in (42). Prepositions are always two place predicates whose internal argument is their complement, while the external argument is controlled by some argument of the matrix predicate. For instance in (42a), the external argument of ʽonʼ ʽunderʼ is controlled by matrix accusative clitic ʽitʼ, what ʽonʼ ʽunderʼ denote is a spatial relation between ʽitʼ and ʽthe shirt(s)ʼ. In present terms then prepositional contexts behave like those defined by transitive active verbs, in that the internal argument is satisfied, if definite, by the specialized N morphology *-n* in the singular and by the nominal class + quantificational inflection *-t* in the plural. In the indefinite, it is sufficient to have nominal class morphology in the plural or a bare nominal base in the singular, both quantificationally closed[16].

Consider next prepositional contexts requiring the so-called nominative. The gist of the present framework is that there are no case inflections, nominative or other, but only inflections corresponding to denotational properties, capable of fixing argument reference. What singles out $t\varepsilon$ in (41) from other prepositions is that its complement is satisfied by the same denotational content as EPP contexts. The relevant inflections include the nominal class endings *-a* for the feminine and *-i* for the masculine in the singular definite, *-ε* and *-a* nominal class endings in the indefinite singular and/or plural, and *-t* in the definite plural. In other words, $t\varepsilon$ is satisfied by ordinary nominal class inflections without need for either Q(⊆)/ oblique specifications or the specialized N morphology supplied by *-n*. In classical terms, ʽnominativeʼ is characterized in terms of the EPP context that it satisfies; the appearance of the same morphology as the complement of prepositions, leads therefore to a somewhat mysterious link of those with the EPP. In present terms, the EPP context is satisfied by nominal class inflections, which are compatible with agreement with D; the fact that the same nominal class inflections satisfy the complement of $t\varepsilon$ does not imply any connection of the latter with the EPP context. Much simpler mechanisms, for instance the l-

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[16] An anonymous reviewer suggests that claiming that accusative governed by *me* `with´ is due to the satisfaction of the internal argument relation ʽsounds plausible for comitatives, but raises doubts about instrument phrases (*write with a/the pen*), or `material´ phrases (*fill with something*)ʼ. If we understand correctly, the idea is that instrumentals or ʽmaterialʼ specifications are arguments not of the preposition but of the superordinate verb. Our analysis is not necessarily at odds with this intuition. Specifically we could assume that the two predicates involved in *write with*, namely *write* and *with*, each taking their internal argument, undergo some forms of ʽrestructuringʼ, i.e. complex predicate formation.

selection of Pesetsky (1991), are sufficient to insure the relevant restriction.

We then come to prepositional contexts selecting ablative. As noted in introducing the data in (44), the specialized *-t* ablative morphology for the feminine singular definite is found only on a subset of nouns denoting locations. In (44a) we exemplified 'house', 'room', other relevant nouns include 'door', 'chair' etc. It is also interesting to note that the same specialized morphology appears on the $1^{st}/2^{nd}$ person singular pronouns, as again illustrated in (44a). We may begin by considering what 1st and 2nd person singular referents, i.e. speaker and hearer, have in common with nominal basis denoting locations. It is generally agreed that speaker and hearer are two necessary coordinates of the universe of discourse; a locative specification, roughly 'here' must also be one of the coordinates, so as to allow for instance the fixing of the denotation of demonstratives. We propose therefore that 1st and 2nd person have in common with locative nouns this connection with the universe of discourse. In other words, the specialized 'ablative' morphology in reality is locative/ deictic.

Now, the conceptual closeness of the notions of location and of possessor (genitive/ dative, here 'zonal inclusion') is well-known in the typological literature. Thus cross-linguistically possessive constructions can involve a descriptive genitive, or a descriptive dative, or a descriptive locative (Freeze 1992). Morphologically, the syncretism of oblique and locative seen in Albanian *-t* is independently documented for instance in the I and II class of Latin (with names of city and small island). In present terms, this conceptual closeness, and the corresponding syncretic realizations, can be taken to correspond precisely to 'zonal inclusion', which yields either the possessive (genitive/ dative, as in sections 2.2, 3.1), or, when it is spatially defined, the locative, as in (44a).

With the relevant class of Albanian nominal bases, the two readings are distinguished in that the possessor (non-locative) reading is introduced by the $Q(\subseteq)$ morphology *-s*, as opposed to the specialized locative reading introduced by the $Q(\subseteq)$ morphology *-t* in prepositional contexts. On the other hand, the same prepositional contexts select ordinary oblique inflections with other nominal classes – as we expect given the $Q(\subseteq)$ specifications of so-called oblique[17].

It is worth noting that the set of lexical nouns relevant for the specialized ablative in Albanian is also significant cross-linguistically. For instance, in Italian singular count nouns must generally be preceded by determiners (as in English). This is not true for nouns denoting locations

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[17] Note that there is evidence that prepositions cross-linguistically select superset-of (possessor) specifications, even in non-case marking languages. Thus in Italian and in many Romance languages (or in English) several prepositions cannot directly embed their complement but must select *di* 'of', e.g. *prima di* 'before (of)', or by *a* 'to', e.g. *davanti a* 'in front of (lit: to)'.

(roughly the same subset as in Albanian) introduced by locative prepositions, which can appear without determiner, as in (46). This lack of determiner seems to correspond to the fact that the locative noun is controlled by some other argument. In particular in (46a) -houseø or -bagø tend to be interpreted as -possessedø by the matrix subject, while in (46b), -homeø may also be interpreted as possessed by the internal argument of the verb. In turn -groundø in (46a) is interpreted as simply being -close toøthe agent[18].

(46) a.   Lø   ha   messo in   casa/ borsa/ terra
           it   he.has put   in   house/ bag/   ground
           -He put it in the house/ in the bag/ on the groundø
      b.   Lø   ha   portata   a   casa
           her/it he.has brought   to   house
           -He has brought her/it homeø

We finally come to the -ʃ inflection. (44b) shows that in -ablativeø (i.e. locative/ deictic) prepositional contexts, -ʃ associates with so-called 1ˢᵗ and 2ⁿᵈ person plural, namely with pronouns denoting a set including the speaker or the hearer. On the other hand, the same morphology characterizes indefinite plural contexts as in (44bø). As can be seen from the English translation of (44bø), -a job for womenø or indeed a -womenøs jobø, the reference of the indefinite plural -womenø is generic, i.e. close to a universal, roughly -a job for any woman/ all womenø Once again, therefore, it is natural to construe -ʃ as a quantificational Q element. Specifically, the quantificational properties it is associated with, are generic; therefore we suggest that the generic operator Q(G) represents the core of the interpretation contributed by -ʃ to examples like (44bø).

Against this background, it might appear problematic that -ʃ also combines with 1ˢᵗ and 2ⁿᵈ person bases for -weø and -you(plural)ø In reality, generic uses at least of -weø are independently attested as in *we are on earth for a brief time* (referred to the human species of which the speaker is part) and similar utterances. In other words, as far as -weø is concerned, the generic interpretation coexists in natural languages with the deictic (-here and nowø) interpretation ó which would go some way in explaining why both indefinite plurals and -weø combine with the same quantificational -ʃ specification. Chierchia (1995), Manzini and Savoia (2005, 2007) discuss in some detail the coincidence of the same two referential values on the Italian *si* clitic, namely the

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[18] As far as we can tell, there is no formal literature on this topic, with the exception perhaps of Longobardiøs (2001) work on the peculiar properties of a noun like -homeø with respect to the distribution of determiners.

generic (universal) reading proper and what Chierchia (1995) calls the ⸗episodicø (also ⸗weø) reading.

Recall that the traditional notion of case is replaced here by reference to a set of denotational primitives (here the generic Q(G)) and to the syntactic contexts they satisfy. The fact that overt generic morphology is required to lexicalize plurality can be expressed as a selectional requirement of the relevant prepositions (l-selection in the sense of Pesetsky (1991)). At the same time, we may expect that the distribution of the singular definite ⸗ablativeø *ót* and of the plural indefinite ablative -∫ do not coincide, since they respond to different categories. Indeed -∫ occurs in purely generic contexts like (47), where Q(⊆) (oblique/ locative) does not occur. This confirms (if confirmation was needed) that there is no clear unified content (even at a descriptive level) beyond the traditional notion of ablative.

(47) ɲi   dʒɐ   burr-a-∫
      a   thing   men-pl-Abl
      ⸗A menøs thingø

3.3   *Conclusions*

Our starting point was represented by current discussions on case, both as a syntactic and as a morphological category. We saw that works such as Chomsky (2001, 2008), Pesetsky and Torrego (2004, 2008) reach the conclusion that case is not a primitive of syntax, but rather the descriptive reflex of more fundamental relations (agreement, temporal checking, or other). At the morphological level, what are descriptively known as case inflections often only contain number, gender and other non-case information; this conclusion is forced for so-called case syncretisms even within traditional models like Distributed Morphology. On the other hand Distributed Morphology reconstructs traditional case systems at the level of abstract feature clusters in syntax; the fact that case is not part of a terminal depends on the Impoverishment of these feature clusters by morphological rules. In turn, syntactic approaches to case while denying that there is a primitive notion of case, aim at reconstituting the traditional unity of case phenomena as agreement phenomena, etc.. Both approaches require the deployment of one or more layers of abstract functional structure that find no overt realization by lexical entries.

The aim of this paper was to account for traditional case phenomena by assuming that syntactic structures are projected entirely from actual lexical entries, conceived as functions from sound to interpretation (and vice versa). So-called case inflections therefore consist entirely of denotational properties, including nominal class, definiteness, quantification (plurality and other),

and it is these properties that enter into syntactic structures. The traditional notion of case corresponds simply to the fact that different subsets of denotational properties satisfy different syntactic environments. The latter are defined by agreement, theta-assignment, predication and in general the primitive relations of minimalist theory. Our approach is therefore consistent with current aims of linguistic theory, specifically the minimalist program. We would argue further that by cutting away a lot of (bad) abstractness, it ends up being simpler than other possible solutions to the commonly perceived problems. As for the crucial issue of empirical adequacy, we have illustrated how our approach accounts for a fairly complex nominal inflection system, such as the one found in Albanian (cf. the overview in section 2.5).

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