On the substantive primitives of morphosyntax and their parametrization: Northern Italian subject clitics

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1. The general issue

In a recent article, Evans and Levinson (2009) argue that language universals are a myth, in contrast with both typological and generative approaches to language, despite the fact that these are otherwise incompatible in fundamental respects. Generative grammar is mentalist, predicated on the idea that languages correspond to systems of mental representations/ computations. These have formal properties that can be modelled by axiomatic systems, built on a restricted set of substantive primitives and of primitive operations/ relations. A natural link between the notions of primitive of the system and that of universal is provided by what Chomsky (2002:147) calls the Uniformity thesis, namely that language ñis a system that is, as far as we know, essentially uniform. Nobody has found any genetic differences é since its emergence there has not been any significant evolution. It has stayed that wayò. Given the Uniformity thesis, the notions of linguistic primitive (i.e. primitive of the axiomatic system) and of linguistic universal are potentially identified. Interestingly, conclusions comparable to the Uniformity thesis emerge from non-mentalist typological approaches; for instance Nichols (1992:227) states that ñlanguages from typologically very different areas have the same latent structural potentialé this survey has uncovered no evidence that human language in general has changed since the earliest stage recoverable by the method used hereò.

The issue of universals and variation has been clouded over in the history of generative grammar by two logically distinct problems. One of them, i.e. the specifically linguistic nature of the relevant universals, has been considerably clarified by the introduction of minimalism. As discussed by Chomsky (2002, 2005), Hauser, Chomsky and Fitch (2002), Fitch, Hauser and Chomsky (2005), most of the concepts and principles covered by the umbrella of Universal Grammar may very well be shared with other cognitive faculties. The other relevant issue is that of innateness. The strict

connection of innatism to mentalism in Chomskyôs work has meant that critics have generally lumped them together. Again, recent work shows that holding a mentalist non-innatist position is at least logically possible (Perfors, Tenenbaum and Regier 2011).

Given this rich conceptual articulation, it is hard to evaluate statements of Evans and Levinson (2009) such as the following (found in their Abstract): ñAlthough there are significant recurrent patterns in organization, these are better explained as stable engineering solutions satisfying multiple design constraints, reflecting both cultural-historical factors and the constraints of human cognitionò. As we just saw, the idea that ñconstraints of human cognitionò, rather than specifically linguistic principles, may largely organize grammar is at the core of minimalism. So we are left with the claim that ñcultural-historical factorsò play a role in linguistic explanation, a central tenet of typological-functionalist approaches, to which Evans and Levinson fully belong in this respect.

We are interested in one particular aspect of this well-rehearsed debate ï concerning the substantive primitives of grammar, i.e. its ócategoriesô or ófeaturesô, and the way they enter into patterns of morphosyntactic variation. Our data base of Romance (specifically Italo-Romance) dialects (Manzini and Savoia 2005, 2007, 2008, 2011a) prompts some preliminary remarks. Italian dialects provide a rich and articulated picture of variation that contrasts with that of other well studied languages such as English. The view we take is that dialects exemplify the kind of variation we expect in natural languages in the absence of external constraints. It is linguistic situations such as those in Britain that represent a somewhat misleading picture of variation, reflecting not only the internal shaping forces of language development, but also external mechanisms of social and political standardization. Similar conclusions are reached by Nichols (1992: 23) from her quite different perspective: ña residual zone or a set of residual zones will contain a good deal of the worldôs possible linguistic diversity in microcosm, and both the existence of internal diversity and its actual profile are stable and obviously very natural situations. Diversity of a particular kind may even be regarded as the state to which a group of languages will naturally revert if left undisturbedé Spread zones, in contrast, are typically highly divergent from one another, but each is internally quite homogeneousé Just which language spreads in a spread zone is a matter of historical accident, and this historical accident can distort the statistical distribution of linguistic types in an areaò.

In our work, we have addressed in particular inflectional categories/ features. Standard generative treatments of inflectional morphology yield considerable opacity at the syntax- PF interface, leading to the postulation of

an autonomous morphological component such as the Distributed Morphology of Halle and Marantz (1993). The latter runs against the grain of more than one minimalist postulate; in particular Late Insertion violates Inclusiveness, while morphological repair violates no backtracking. In our previous work we have argued that reforming traditional categorizations is necessary and often sufficient to uphold bare minimalist architecture (projection from the lexicon, no backtracking)

Our take on variation depends on the Lexical Parameterization Hypothesis (Manzini and Wexler 1987, cf. Borer 1984, Chomsky 1995) to the effect that parameters are associated with lexical entries, in the presence of an invariant computational component (on the latter see Boeckx 2011). We do not share an important assumption of much current theorizing (e.g. Distributed Morphology, but also the ósilentô categories approach of Kayne (2010)), namely that there is a fundamental distinction between the substantive lexicon (lexical categories proper) and the functional lexicon (functional categories). For instance, within the Distributed Morphology framework, Embick (2000:187) assumes a ñdistinction between the *functional* and *lexical* vocabularies of a language ... functional categories merely instantiate sets of abstract syntacticosemantic featuresò. These abstract nodes yield a sort of universal structural organization with respect to which linguistic variation would appear to be mere *flatus vocis*. On the contrary, we pursue a unitary model of the lexicon ï of the type traditionally associated with the substantive lexicon: there is a conceptual and grammatical space to be lexicalized and variation results from different partitions of that space, i.e. ñlexicons are ... ways of partitioning an abstract categorial spaceò (Manzini and Savoia 2011a: 7). The so-called functional domain is just like all other conceptual space; the distinction between functional (i.e. grammatical) contents and other concepts, to the extent that it can be defined, is at best an external one.

We illustrate our general approach in relation to an apparently trivial variation problem, involving the lexicalization of subject clitic pronouns in Northern Italian varieties. We show the empirical inadequacy of views based on implicational generalizations (Renzi and Vanelli 1983) despite the fact that they are upheld by recent formal work (Cardinaletti and Repetti 2008). Empirical problems are not completely resolved under the Distributed Morphology view of Calabrese (2008b, to appear) either, involving markedness hierarchies and repairs. We argue that a simple Boolean organization of categorial (i.e. conceptual) space is best at modeling variation.

2. Case study: Subject clitic paradigms in Northern Italian varieties

Subject clitics in Northern Italian dialects display complex alternations between specialized forms, highly syncretic forms, and zero slots both in proclisis and in enclisis. We take both proclitics and enclitics to be subject clitics, following Manzini and Savoia (2002a, 2005, 2007), and more recently Cardinaletti and Repetti (2008), who present extensive arguments against the alternative view that enclitics are an inflectional paradigm. As in Manzini and Savoia (1997, 2005, 2007), Cardinaletti and Repetti (2008), we also adopt the view that varieties with only some subject clitic forms represent instances of partial pro-drop[1].

2.1 Renzi and Vanelli's (1983) generalizations; Cardinaletti and Repetti's (2008) cartographic rendering

In pioneering work, Renzi e Vanelli (1983) propose several implicational generalizations holding of Northern Italian subject clitics, including (1) and (2), which we reproduce in the rendering by Cardinaletti and Repetti (2008).

(1) a. Generalization 1: If a variety has at least one subject clitic, it is 2sg.
b. Generalization 2: If a variety has two subject clitics, they are 2sg and 3sg.
c. Generalization 3: If a variety has three subject clitics, they are 2sg, 3sg, 3pl.

(2) If interrogative sentences are formed via subject-inversion,
a. the number of enclitic pronouns found in interrogative sentences is equal to or greater than the number of proclitic pronouns found in declarative sentences, and
b. the subject pronouns found in proclitic position are also found in enclitic position.

Renzi and Vanelli's empirical base is relatively small (30 dialects), and a larger database brings out a few classes of systematic counterexamples. In particular Manzini and Savoia (2005: §2.3) have several varieties where 3rd person subject clitics are realized, but not the 2nd singular,

[1] By contrast, the large cartographic literature concerned with variation in Northern Italian dialects (e.g. Poletto 2000) follows earlier theories (e.g. Rizzi 1986) in taking subject clitic languages to be consistently pro-drop.

for instance (3), violating the generalizations in (1)[2].

(3) dɔrmi *Livo* (Trentino)
dɔrmes
el/la dɔrm
dorˈmiŋ
dorˈmio
i/le dɔrm
óI sleep, etc.ô

Things do not improve when it comes to enclisis-proclisis generalizations. A pattern representing a counterexample to (2), involves the lexicalization of 2nd person singular clitic *t-* in declaratives (proclisis) but not in questions (enclisis) (Manzini and Savoia 2005: §3.6). In a fairly large set of varieties, exemplified in (4), this may be argued to involve a phonological or morphological process of aplology (OCP-avoidance) since the verbal inflection for the 2nd singular is also ï *t*[3]. But this is not the case in varieties of the type in (5), which present a sigmatic ï *s* ending for the 2nd singular verb inflection[4]. In fact, the phenomenon is equally found in Tuscan varieties with a non-sigmatic, non-consonantal ending for the 2nd singular, as illustrated in (6)[5].

(4) a. ta dormet *Grumello* (Lombardy)
you sleep.2sg
b. dormet
sleep.2sg
óAre you sleeping?ô
(5) a. te dɔrmes *Mulegns* (Grisons)
you sleep.2sg
b. nɔwa dɔrmɛs
where sleep.2sg
óWhere are you sleeping?ô

[2] Other counterexamples include: *Stroppo/Macra, Pradleves, Acceglio, S. Pietro Val Grana, Tuenno, Vermiglio.*
[3] Other examples include: *S.Fedele Intelvi, S.Bartolomeo Cavargna, Premana, Borgo di Terzo, Cataeggio, Adrara, La Strozza Valle Imagna, Odolo, Passirano, Pozzaglio/ Cicognolo, Cevo*.
[4] Other examples include: *Montereale, Cantoira*.
[5] Other examples include: *Sillano, Dalli*

(6) a. tu maɲɲawe *Vagli* (Tuscany)
you eat.impf.past.2sg
óYou were eatingô
b. ke mmaɲɲawe
what eat.impf.past.2sg
ôWhat were you eating?ô

What is more, in many varieties, specialized proclitics alternate with syncretic subject enclitics. Hence there are proclitic forms that do not appear in enclisis, violating at least (2b). For instance, in (7a) the specialized 3rd person singular proclitic is lost in enclisis, where a clitic syncretic with the 2nd plural, as in (7b), appears instead; comparison with declarative forms is provided in (7aô-bô)[6]. Similarly, in varieties of the type in (8) a rather rich proclitic paradigm alternates with an undifferentiated *lɔ* enclitic[7].

(7) a. u/la drom-ni *Felizzano* (Piedmont)
he/she sleep-ClS
ôDoes s/he sleep?ô
aô u/la dro:m
he/she sleep-ClS
óS/he sleepsô
b. a dru'mim-ni
ClS sleep.1pl-ClS
óShall we sleep?ô
bô a drumima
ClS sleep.1pl
ôWe sleepô

(8) dyrmiu-'lɔ *Prali* (Piedmont)
ty dyrmie-'lɔ
a/i dyərmə-'lɔ
nu dyərmən-'lɔ
u dyrmie-'lɔ
i/la: dyərmən-'lɔ
óAm I sleeping?ô etc.ô

[6] Other varieties tabulated by Manzini and Savoia (2005: §3.6.4) which present an enclitic *n* form covering at least one P and one 3rd person slot include: *Viguzzolo, Casei, Castellinaldo, Cortemilia, Garessio, Fontane.*

[7] Other varieties tabulated by Manzini and Savoia (2005: §3.6.4) which present an enclitic *l-* form covering one or more P slots include: *Pamparato, Corsaglia, Mombercelli, Montaldo, Antona.*

In the spirit of Evans and Levinson (2009) one could use dialectological data like (3)-(8) not only to deny the validity of (1)-(2), but more generally to cast doubts on the existence of implicational universals. Vice versa, much theoretical ingenuity has been deployed in the strong universalist tradition of generative grammar in order to show that suitably constrained formal models actually yield implicational universals as a result (e.g. Cinque 2005). This approach characterizes Cardinaletti and Repettiôs (2008) discussion of Renzi and Vanelliôs (1983) generalizations.

In particular, Cardinaletti and Repetti (2008) argue that the implicational hierarchy 2nd singular < 3rd singular < 3rd plural that can be deduced from Renzi and Vanelliôs generalizations in (1) depends on a structural hierarchy of positions, as in (9). They propose that in (9) the 2nd singular position is licenced by verb movement to it. In turn, both the 3rd singular and the 2nd singular positions are licenced by verb movement to the 3rd singular, and so on. This means that no position can be licenced unless 2nd singular is; nor is it possible to licence, say, 2nd singular and 3rd plural to the exclusion of 3rd singular. Therefore 3rd singular can be lexicalized only if 2nd singular also is; it is not possible to lexicalize 2nd singular and 3rd plural to the exclusion of 3rd singular; and so on.

(9) [3pl [3sg [2sg

Examples like (3), showing that it is perfectly possible for 3rd person to be lexicalized when 2nd singular is not, represent a direct counterexample to the structural hierarchy in (9), or at least to Cardinaletti and Repettiôs (2008) construal of it[8]. If, on the other hand, we allow the hierarchy to vary from language to language, the analysis loses its explanatory edge over merely listing the forms available in a given language. In fact, it seems preferable to maintain a bare statement of the facts, i.e. subject clitic present in x person, absent in y person in language L ï than to translate this into a more complex stipulation, i.e. verb movement triggered by x person, not by y person in L.

Cardinaletti and Repetti also propose a structural derivation for Renzi and Vanelliôs generalizations in (2). Because by definition, enclisis is

[8] Cardinaletti and Repetti correctly quote Manzini and Savoia (2002a) as sharing the view of Poletto (2000) that there is a hierarchy of subject clitic positions, where the (1/2)P position is lower than Num (i.e. pl) and N (i.e. 3rd sg.). This conclusion is abandoned in Manzini and Savoia (2002b) and subsequent works, where object clitics enter the picture and a single subject clitic position is recognized.

created by movement of the verb to a sufficiently high position to leave all clitics to its right, all clitic positions in (9) will be licenced in enclisis, letting clitics surface. Hence enclitics are at least as many as proclitics (2a) and all proclitics are also enclitics (2b). Again the phenomena in (4)-(8) represent a direct counterexample not only to Renzi and Vanelliôs generalizations in (2), specifically to (2b), but also to their structural encoding by Cardinaletti and Repetti.

A more general point raised by this discussion is whether it is in fact expected that implicational universals should hold within the framework defined by generative grammar, and therefore be derived by the model. It seems to us that especially in the minimalist, biolinguistic perspective (Chomsky 1995, 2005), we expect to find that natural languages attest all and only the patterns allowed by the Narrow Faculty of Language (Hauser, Chomsky and Fitch 2002) and by the conceptual and motor systems aggregated around it. Given the extremely elementary content of the FLN, a considerable variation space is presumably generated by the categories of the conceptual system and their realizations by the motor (externalization) system. In this sense, a picture of language variation like that provided by our dialectal data seems to fit predictions well. In other words, it is expected that generalizations like (1)-(2) do not hold and that the admissible combinations of referential properties and overt lexicalizations are many more than (1)-(2) allow for. This is not to say that all logically possible combinations are allowed; however we expect that instances where they are excluded are more difficult to find than typological work implies. In general, a mentalist approach is not consonant with the strong functionalist bias of typological tradition. Therefore, rather than finding ways around ôexceptionsô to typological generalizations, we may welcome these exceptions as the proof that the underlying picture is altogether different.

2.2 Calabreseôs (to appear) morphological approach

Another important tradition in approaching substantive universals and variation is reflected by the treatment of Northern Italian subject clitics by Calabrese (2008b, to appear). Calabrese takes as his empirical basis the 187 varieties (his count) reported in Manzini and Savoia (2005: §2.3). Manzini and Savoia point out that there is a close correspondence between instances of partial pro-drop and instances of syncretism. By and large subject clitics are absent for a given set of person and number forms iff a syncretic realization is attested for the same set. For instance, by Calabreseôs count, more than half of the dialects in the corpus present a pattern with a syncretic

subject clitic in the 1st singular, 1st and 2nd plural (65/187); correspondingly, subject clitic drop in the same persons is fairly popular (39/187)[9]. It is syncretisms that Calabrese sets out to account for. The connection that he establishes with partial pro-drop will become evident directly below[10].

Calabreseôs analysis is again based on a person hierarchy, namely 2sg < 3sg < 3pl < 1sg < 2pl < 1pl, closely mimicking the Renzi-Vanelli and Cardinaletti-Repetti hierarchies. For Calabrese, this hierarchy corresponds to a set of constraints, each of which blocks the realization of the relevant forms, as in (10). For instance, the activation of constraint (10f) means that the feature cluster [+speak, +augm], i.e. 1st plural, is excluded. This in turn triggers morphological readjustment, in order to allow for lexicalization, yielding syncretism. For instance *[+speak, +augm] can be repaired by changing the value of the [augm] feature from positive to negative, yielding the wellformed combination [+speak, -augm]. This forms the basis for a syncretism between the 1st plural (i.e. the starred feature combination) and the 1st singular (i.e. its repair). Alternatively, the activation of a constraint can lead to ócobliterationô, i.e. lack of the relevant lexicalization, hence to partial pro-drop.

(10) In the context [[AgrS ____] + V
- a. *[+part, -speak, ï augm]
- b. *[-part, ï augm]
- c. *[-part, +augm]
- d. *[+speak, -augm]
- e. *[+part, -speak, +augm]
- f. *[+speak, +augm]

Like Cardinaletti and Repettiôs structure in (9), Calabreseôs system allows only for certain syncretisms or partial pro-drop patterns, since the constraints are forced to apply in the order given, from more marked to less marked, i.e. from bottom to top of the hierarchy in (10). Thus there can be no variety where the 3rd singular (10b) and the 1st plural (10f) are syncretic, or which have pro-drop in these persons only, to the exclusion of the forms that appear between them in the hierarchy.

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[9] These dialects have specialized subject clitics in the 2nd singular and in the 3rd person, as in Renzi and Vanelliôs generalization (1c). Of the remaining dialects about 30/187 conform to the Renzi and Vanelliôs pattern (1b) and only 3/187 have only the 2nd singular clitic, as in (1a) (Calabreseôs count). So about 50/187 dialects are out of the picture in (1).

[10] For Cardinaletti and Repetti (2008), syncretic proclitics are not subject cliticsï hence vice versa syncretism reduces to an instance of partial pro-drop.

From an empirical point of view, by imputing the person hierarchy to the morphological, rather than to the syntactic level, Calabrese reaches a better match to the data ï yet some problems remain. First, Calabrese recognizes that in enclisis the hierarchy of persons may be different, as witnessed by the drop of the 2nd singular in (4)-(6). For this reason, the hierarchy in (10) is restricted to proclitics; for enclitics, Calabrese hypothesizes that the hierarchy may need to be partially reversed to 3sg <2sg. Even allowing for this, extending the approach in (10) from proclitics to enclitics will prove less than straighforward. For instance, languages like (7) instantiate the syncretism between 3rd singular and 1st plural (to the exclusion of other forms) whose exclusion (in proclisis) Calabrese claims as an argument in favor of his approach.

Even limiting ourselves to proclisis, varieties like *Livo* in (3) require some special stipulation, since they violate the hierarchy, instantiating missing forms for 2nd singular, which precedes 3rd person in the hierarchy. Calabrese also notes that his system does not deal with the proclitics of a variety like *Prali* in (8), since only the 1st singular is missing and all other forms are specialized ï counter once more to his hierarchy. From a theoretical point of view, we already commented in section 1 on the fact that the Late Insertion and the morphological repairs of Distributed Morphology violate minimalist postulates such as Inclusiveness and no backtracking. It is possible that these hold in syntax and not in morphology, but the result is in any case an enrichment of grammar.

Summing up, syntactic hierarchies of the Cardinaletti and Repetti type are too rigid to model the variation picture attested to by Northern Italian dialects. Morphological hierarchies of the type introduced by Calabrese provide a much tighter picture of the observed data. Yet a few aspects of the variation in subject clitic paradigms still escape him and can be covered only by extra stipulations. In other words, it is not obvious that the price paid in theoretical terms by (Calabreseôs version of) Distributed Morphology pays a worthy dividend when it comes to the modelling of variation.

A possible diagnosis of what is amiss comes from the observation that Calabrese (to appear), Cardinaletti and Repetti (2008) and Renzi and Vanelli (1983) all share the assumption that a hierarchical arrangement of features (or positions) is involved in the realization of partial pro-drop and of syncretism in subject clitic paradigms. Hierarchies are at the core of the implicational approach that typological studies take to language universals. It is far from obvious that hierarchies are either the best available tool to describe language variation or that they should somehow be incorporated in (or derived by) formal models of linguistic competence, i.e. generative

grammars. Our recent work (Manzini and Savoia 2005, 2007, 2011a) argues in fact that despite the descriptive richness that they encapsulate, hierarchies typically fail in describing language variation ï where single varieties easily jump certain particular links of the hierarchy. In this spirit, Manzini and Savoia (2011a, 2011b) argue for a treatment of auxiliary choice according to person (*have* vs. *be*) that avoids hierarchies (cf. Loporcaro 2007, Legendre 2010, also Sorace 2000 for the opposite view). Similarly Manzini and Savoia (2010a, 2011a, 2011c) reject Case hierarchies (cf. Calabrese 1998, 2008a, also Caha 2009) in their approach to case syncretism. In both instances we argue that the facts can be better derived by discrete categorial splits, whose fundamental ranking is provided by the elementary Boolean logic of super- and sub-categories. In the next section, we apply the same general research strategy to the domain of Northern Italian subject clitics.

3. Manzini and Savoia (2005): spelling out the proposal

Our general framework of assumptions, as implied by the discussion in sections 1-2, involves a classical approach to lexical entries, conceived of as mappings between an LF content and a PF one. From these we project morphosyntactic structures, in keeping with minimalist postulates. On grounds of simplicity of the theory (both formal and regarding the underlying ontology of language) we further commit ourselves to positively specified properties only, i.e. privative categories.

The linguistic literature is ripe with observations as to the fact that 3rd person is in fact a non-person, and generative systems encode this typically with a negative feature value. Thus 3rd person is [-participant] for Calabrese (to appear) in (10). In underspecification systems (e.g. Harley and Ritter 2002), lack of specification for the feature ópartipantô is effectively interpreted as a negative specification for that feature. Consider however what lexical evidence tells us. The non-syncretic, singular paradigm of object clitics of Italian is summarized in (11a-b). The 1st and 2nd person forms in (11a) are each characterized by a specialized lexical base *m-/ t-*, denoting óspeakerô and óhearerô. In turn the 3rd person forms in (11b) have a recognizable lexical base *l-* followed by nominal class inflections *-o/ -a*. As is well known, the same lexical base *l-* turns up as the determiner of nouns, in which case its referential value is clearly definiteness, as in (11c); incidentally the nominal class endings ï *o/-a* are the same seen on nouns (here *zi-* óuncle/ auntô). Thus at the morphophonological interface, separate lexicalizations for óspeakerô *m-*, óhearerô *t-* and ódefinitenessô *l-* are

instantiated[11].

(11) a. mi/ ti
me/ you
b. lo/ la
him/ her
c. lo zio/ la zia
the uncle/ the aunt

On the interpretive interface, it is worth quoting Kratzer (2009: 221): ñthe alleged ó3rd personô features are in fact gender features, a variety of descriptive feature ... If [a descriptive feature] is to grow into a pronoun, it has to combine with a feature [def] that turns it into a definite description. If [def] is the familiar feature that can also be pronounced as a definite determiner in certain configurations, it should head its own functional projection, hence be a D é Descriptive features é are nominal, hence Nsò. Manzini and Savoiaôs (2002b, 2005, 2007) categorization for so-called 3rd person pronouns, largely based on the morphological interface, is essentially identical to Kratzerôs, i.e. a D category for the Definiteness morphology (*l-* in Romance) embedding an N, i.e. nominal class category, for its inflections.

In turn, a super-category participant can be defined for óspeakerô and hearerô denotations, corresponding to the P (Person, i.e. 1st/2nd Person) of Manzini and Savoia (2005). In the proposed system, reference accrues to 3rd person forms not through their lack of P categorization, but through their positive D categorization. In other words, the logical space is partitioned not into P and not-P but into P and D. No empirical advantage is gained at the lexical or semantic interface by a [ï participant] or [0participant] characterization. In this respect Kayneôs (2010) work provides an important cross-reference to ours, since it also depends on raising morphological features to syntactic (hence privative) categories (cf. Kayne (2000) on the analysis of pronouns, Manzini and Savoia (2010b, 2011d) for further discussion).

Manzini and Savoia (2005: §2.3.1) provide two separate resumptive tables for subject proclitics. One table summarizes possible patterns of syncretism and partial pro-drop in the P paradigm. The other table summarizes the same patterns over the classical 6 persons paradigm, but keeping constant what turns out to be the prevalent P system, namely a

[11] In Harley and Ritter (2002, Appendix), several languages are listed as having suppletive (demonstrative) 3rd person forms. However the Romance languages are not among them.

specialized lexicalization of the 2nd singular and a syncretic or zero lexicalization of the 1st person and 2nd plural (cf. fn. 9). Due to space limitations, and since we are interested in covering both proclitics and enclitics, here we will concentrate on variation in the P paradigm. To further simplify the discussion we concentrate on alternations between P forms and non lexicalized forms, in other words on partial pro-drop, avoiding the discussion of syncretic patterns (but see section 3.2).

3.1 The core proposal

The logical possibilities for combining four person denotations with two choices for lexicalization (P vs. zero/ syncretic form) are sixteen. In the absence of further constraints we expect to find all of them. Manzini and Savoia (2005: §2.3.1) however tabulate 6 possible proclitic patters with 1st/2nd person, which means that there is a considerable amount of missing combinatorial slots, as shown in (12). In (12) the dialect naming each existing pattern is one exemplified in the present text or else the first one found in the relevant subgroup in Manzini and Savoia (2005: §2.3). The minus sign refers to the fact that the relevant P reference is not lexicalized or not by a specialized P form.

(12)

	1st	2nd	4th	5th
1. *Prali*	-	P	P	P
2. *Sarre*	-	P	-	-
3. *Càsola*	-	P	-	P
4. *	-	P	P	-
5. *	P	-	P	P
6. *	P	-	-	-
7. *	P	-	-	P
8. *	P	-	P	-
9. *Faeto*	P	P	P	P
10. *Sillano*	P	P	-	-
11. *	P	P	-	P
12. *	P	P	P	-
13. *Livo*	-	-	-	-
14. *	-	-	P	P
15. *	-	-	-	P
16. *	-	-	P	-

Before considering the missing languages in (12) we briefly review

the enclisis data, for which Manzini and Savoia (2005: §3.1, §3.13.2), report about one hundred paradigms. Enclitic paradigms are only about half the proclitic ones partially because several subject clitic varieties form questions without subject clitic inversion. Again crossing four persons with two choices (P vs. zero/non-P form), we obtain sixteen possible combinations. Sieving through the examples of Manzini and Savoia, we can find evidence for perhaps fourteen existing varieties[12], as shown in (13). Manzini and Savoia (2005) do not provide any grouping or tabulation of the data (as we just saw, there are no major gaps). We therefore constructed the table in (13) by simply listing the first example for a given pattern found in their data set.

(13)	1st	2nd	4th	5th
1. *Villa di Chiavenna*	-	P	P	P
2. *Chioggia*	-	P	-	-
3. *Colle S.Lucia* (impf.)	-	P	-	P
4. *	-	P	P	-
5. *Tuenno* (impf.)	P	-	P	P
6. *Passirano*	P	-	-	-
7. *	P	-	-	P
8. *Vermiglio*	P	-	P	-
9. *Barcis*	P	P	P	P
10. *Comeglians*	P	P	-	-
11. *Castellazzo Bormida*	P	P	-	P
12. *Forni di Sotto*	P	P	P	-
13. *Pozzaglio*	-	-	-	-
14. *(La Strozza)*	-	-	(0)	P
15. *Odolo*	-	-	-	P
16. *Cataeggio*	-	-	P	-

[12] In line 14, we parenthesized *La Strozza*, because in this variety the 1st plural is lexicalized by an impersonal, hence by a 3rd person (*ɛn dørm-ei* lit: óone sleeps?ô for óShall we sleep?ô; cf. Italian *si va?* lit: óone goes?ô for óAre we going?ô). The question therefore is whether there could be a comparable variety with a morphologically 1st plural P enclitic. One pattern, namely that in line 10, is not instantiated under partial pro-drop. We associate it with *Comeglians* where the plural (*dur'min-o* óAre we sleeping?ô, *dur'mi:z-o* óAre you sleeping?ô *duar'min-o* óAre they sleeping?ô) involves a single syncretic ï *o* enclitic lexicalization.

Castellazzo in line 11 gives an idea of the decisions involved in segmentation. Manzini and Savoia (2005) analyze the 1st person singular *dɾwɔm-ju* óAm I sleeping?ô as involving a specialized P clitic; the superficially identical 3rd plural is analyzed as involving mesoclisis of the subject clitic *i* between the verb base and the inflectional ending ***ï u***, i.e. *dɾwɔm-j-u* óAre they sleeping?ô.

The question is whether the variation in (12)-(13), including the gaps observed in particular in (12), can be made to follow from a simple enough set of parameters, namely choices open within UG. What we are looking for is something no less restrictive than implicational scales, yet flexible enough to yield all of the observed cross-linguistic variation, as well as enclisis-proclisis variation within the same language. We assume that parametric choices involve interface properties and their interaction with the universal rules/ principles component. In particular, parametric choices are effected by the rule/ principle of Externalization in (14) pairing a conceptual cluster with a motor realization. As far as we can tell (14) is the notion of externalization intended by Berwick and Chomsky (2011).

(14) Externalization
Pair LF x with PF y

(14) is not subject to variation. Parameters are the interface choices that (14) effects. For example, a language may lexicalize (externalize) all P forms, as in line 9 of tables (12)-(13) ï or not externalize any of them, as in line 13. At the same time a language may externalize along a finer fault line, that between óspeakerô participant and óhearerô participant. This may result in the externalization of just óspeakerô reference (cf. in particular line 8 of table (13)) or of óhearerô reference (cf. in particular line 3). The óparametersô interacting with (14) are therefore the categorial splits óspeakerô vs. óhearerô, P ($1^{st}/2^{nd}$ person) vs. D (3^{rd} person), etc ï or their different externalizations.

This simple picture may be sufficient to explain table (13), where more or less all logically possible values are attested, but it is not sufficient to explain Table (12), where languages with 2^{nd} singular not lexicalized are excluded. In the terms of Manzini and Savoia (2011a), the problem is that there are not only óreversibleô parametric choices, i.e. choices yielding mirror-image languages (e.g. line 3 and line 8 of Table (13)), but also óirreversibleô ones. An example of an óirreversibleô parameter is the salience of speaker reference in (15) ï or conversely the fact that ñthe óhearerô is singled out by the lack of any referential property, including pragmatic salience, beyond mere anchoring in the discourseò (Manzini and Savoia 2011a: 212, 214).

(15) (pragmatic) salience of speaker reference

(15) is a parameter in the sense defined here, i.e. a categorial cut, but an intrinsically asymmetric one. It could equally well be expressed as a

two-members hierarchy, namely (16) (cf. Noyer 1992). Vice versa, however, a minimal hierarchy of the type in (16) can always be stated as a categorial split. The latter is intrinsically restricted to a binary choice, while a hierarchy can in principle be expanded, and in fact generally is. If one wishes one could restrict hierarchies to minimal pairs ï but the point is always the same, namely that there is no evidence for real ranking in grammar (*pace* Optimality Theory), i.e. ultimately for counting.

(16) 1 < 2/other

The asymmetry intrinsic in (15) means that its interactions with the computational component will determine surface asymmetries. In particular, we suggest that parameter (15) interacts with another rule/ principle of grammar, namely Recoverability in (17). Following Manzini and Savoia (2005), the idea is that the salience of 1st person in the reference set makes it recoverable independently of other information, while this is not the case for 2nd singular. Thus parameter (15) crossed with principle (17) yields the prevalence of 2nd person lexicalizations over 1st person ones in table (12). To be more precise, rows 1-3 are allowed because 1st person is not lexicalized and 2nd is; rows 5 to 8 are excluded because 1st person is lexicalized and not 2nd; rows 4, 12 and 16 are excluded because this latter pattern holds in the plural. In other words, we are left with just three unexplained exclusions, namely rows 11 and 14-15, to which we will return.

(17) Recoverability
Recover non-externalized LF (referential etc.) content

Recoverability is standardly conceived as a principle applying at PF, constraining the deletion operation. Equivalently one may construe it as a constraint on the enrichment of the LF interface, as in (17); in either case its content remains constant, i. e. that of licencing lack of Externalization. In previous work (Manzini and Savoia 1997, 2005, 2007) we have argued that in (partial) pro-drop there is no syntactically represented EPP position. Rather, following Manzini (2009), (partial) pro-drop amounts to the satisfaction of the EPP requirement by some variable at the LF interface. In languages where (15) is activated, 1st person content, because of its salience, is made available for the EPP variable independently of contextual recoverability. This account excludes that partial clitic drop corresponds to a syntactically represented cluster of features, i.e. to an abstract or ósilentô

clitic ï and also that the licencing of the phenomenon is syntactic[13].

Giorgi (2010) argues that ñthere is a syntactic position in the left-most periphery of the clause, and precisely in the Complementizer-layer, that encodes the temporalð and presumably spatial as wellð coordinates of the speakerò. Could lack of lexicalization for speaker reference be controlled by the functional head independently motivated by Giorgi? [14] Two observations are in order. First, Giorgiôs (2010) position cannot be identified with that controlling partial pro-drop for strictly technical reasons. Giorgi argues that the relevant position is lexicalized only in embedded indicatives and in some embedded subjunctives ï correlating with the availability of the so-called Double Access Reading (DAR) for embedded tenses. She establishes a

[13] For reasons of space, here we do not discuss verb inflections. These are potentially relevant in two respects. First, if present, they may be argued to satisfy the EPP independently of any variable inserted at the LF interface (Manzini and Savoia (1997, 2005, 2007) are in favor of this). Second, and more directly relevant for present purposes, one may wonder whether they may be sufficient to recover the content of the EPP variable, as in classical theories of null subjects (for instance Taraldsen 1978, Rizzi 1982).

Again, there are strictly empirical reasons why this latter view is insufficient. In (i) we exemplify varieties where the 1st person singular is characterized not only by the absence of a subject clitic, but also by a lexicalization of the bare verb base in the present indicative.

(i)	a.	drɔ:m	*Moncalvo*	(Piedmont)
	b.	(a) drɔ:m	*Breme*	(Lombardy)
	c.	(e) dørm	*Castellinaldo*	(Piedmont)
	d.	drɔm	*S.Bartolomeo Cavargna*	(Lombardy)
	e.	dɔrɐm	*Agazzano*	(Emilia)
	f.	duar	*Vito d'Asio/ Montereale*	(Friuli)
	g.	(ɛ) duarm	*Barcis*	(Friuli)
	h.	dyərm	*Ala di Stura*	(Piedmont)
		ðI sleepô		

Dozens more of varieties present both a syncretic clitic and a syncretic verb, where syncretisms necessarily result in the lack of person features (cf. section 3.2 below). Manzini and Savoia (2005) in particular quote examples of identical lexicalizations of both subject clitic and verb inflection for the different persons, for instance *i dɔrmi* (*Mandello*, Lombardy), *i durmi:s* (*Pinzano*, Friuli) for 1st person singular/2nd person plural. This evidence falsifies yet another implicational generalization drawn by Renzi and Vanelli (1983), namely that identical subject pronouns will correspond to differentiated inflections ï and vice versa. Given the functionalist overtones of such a generalization, there is no reason to expert that it will hold within a mentalist model. The same evidence excludes any formal syntactic encoding of the same implication.

[14] This line of thought was suggested to us by an anonymous reviewer.

connection between the absence of the speaker position and a syntactic behavior like complementizer deletion, arguing that a real position is at stake, not just interpreted content[15]. However there is no indication that partial pro-drop does in any way correlate with DAR readings (or lack of complementizer deletion).

The second observation is more general. While a structural encoding of certain conceptual properties is in principle possible in our model, we question whether such an encoding is necessary. We have no principled reason to exclude that certain conceptual primitives are mapped to invariant syntactic structures and that correspondingly variation is a mere matter of pronouncing these invariant structures differently. However we would argue that in many instance (or in all?), it is sufficient to assume that the uncontroversially invariant conceptual component is differently cut by the various lexicons. Under projection of the syntax from the lexicon, syntactic representations may then also vary from language to language. The work of Manzini and Savoia (2005, 2007, 2011a) is essentially a protracted argument to the effect that variation is best modelled under this second picture.

Neither parameter (15) nor the way it interacts with (17) hold in enclitic contexts ï whence the essentially free combination of lexicalizations in table (13). In order to explain why this happens, we must clarify first what we take the relevant notions of proclitic and enclitic pronoun to be. The traditional characterization relies on the PF interface, defining proclitics as preceding stressed material and enclitics as following it. This characterization appears to be involved for instance in the treatment by Calabrese (to appear), since (10) is a PF interface principle. Standard syntactic literature in turn defines enclitics and proclitics in terms of their position with respect to the verb. Enclitics follow the verb, proclitics precede it. Cardinaletti and Repetti (2008) are typical representatives of this approach.

Manzini and Savoia (2002a, 2005, 2007) argue that what is relevant for ôencliticô vs. ôprocliticô alternations are LF configurations. For instance, Manzini and Savoia (2005: §4.4.2) consider different series of 3rd person object clitics in Corsican varieties. As illustrated in (18), 3rd person object clitics coincide with N nominal class vowels (i.e. *u/a/i*) in positive declarative contexts, as in (18a), where they precede the verb. Following the verb, in imperatives, a fully syllabic series (*l-* + nominal class vowel *u/a/i*)

[15] In Manzini and Savoia (2011a) we suggest that the alternation between lexicalized complementizers and complementizer deletion in Romance is a variant of the alternation between two different *k-* complementizers, for which we present our own analysis. This is argued to compare favourably with Giorgi and Pianesiôs (2004), though the more recent work of Giorgi (2010) is not considered.

emerges, as in (18b). The same series is present in negative contexts, as in (18c)[16].

(18) a. u/ a/ i ˈcammani *Zonza* (Corsica)
him/her/them they.call
ǿThey call him/her/themô
b. camma- lu/-la/-li
call him/her/them
ǿCall him/her/them!ô
c. un lu/ la/ li ˈcammani
not him/her/them they.call
ǿThey donôt call him/her/themô

The traditional notions of enclitic and proclitic, characterized by the relative position of the clitic with respect to the stressed material or to the verb do not adequately describe the alternations in (18)[17]. What seems to be relevant in (18) is that œencliticô paradigms (e.g. *lu/la/li* in (18b-c)) are found in the scope of non-veridical operators, in the sense of Giannakidou (1998) (or perhaps more accurately of the lexical items carrying them). Indeed they are found in the scope of imperatives, as in (18b), and negations, as in (18c), which are typical contexts licencing (negative) polarity items, as are questions where subject enclitics occur. Thus in English, **I solved any of the problems* contrasts with *Did you solve any of the problems?* (question), *I didnôt solve any of the problems* (negation), *Solve any of the problems (and I will give you a reward)!* (imperative).

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[16] Similar paradigms are available for the Corsican varieties of *S. Nicolao, Macà, Quenza, Sartè, Munacia dôAudè.*

[17] There is an independent reason why the phonological characterization of the proclitic and enclitic series is inadequate in Romance, namely that in several varieties the post-verbal allomorphs are clearly stressed (Manzini and Savoia 2005: §7.3.1). Thus enclisis can in no way be defined in terms of prosodic dependence. One example (among many) is provided in (i), where phonological enclisis can be observed with the 1st person clitic in (ib), but the 3rd person enclitic clearly has its own stress in (ia). (ic) provides comparison with the proclitic pattern.

(i) a. cama-ˈjullə *Miglionico* (Lucania)
call him
b. ˈcamə-mə
call me
c. mə lə dɔnnə
me it they.give
ǿThey give it to meô

The claim we just put forward bears an obvious relation to the classical syntactic characterization of proclisis and enclisis as conquences of the positioning of the verb. In present terms, verb raising to C in questions or imperatives itself corresponds to the lexicalization of a non-veridical operator[18]. In languages where óprocliticô vs. óencliticô allomorphies are sensitive only to the position of the verb, they can be characterizaed directly in relation to this position, or else in relation to the non-veridical operators that triggers it. In languages like (18), it is the operators that are directly relevant, including negation that does not trigger verb movement[19].

A connection between the object clitics in (18) and the subject clitics discussed here is established by data like (19). Here *l*-less 3rd person subject clitics in declarative sentences (e.g. feminine *a/ as*), as in (19b), alternate with *l*- forms in interrogative sentences (e.g. feminine *la/ ilas*), as in (19a)[20]. It is easy to see that the *l*- vs. non *l*- allomorphy in (19) conforms to the same generalization as that in (18), since *l*- allomorphs are triggered by a non-veridical context, i.e. questions.

(19) a. du'arm- ilu/ila/iu/ilas *Forni di Sopra* (Friuli)
sleep he/she/they.m/f
ó Is s/he sleeping?ô ó Are they sleeping?ô
b. al/ a/ i/ as du'arm
he/she/they.m/f sleep
ó S/he sleepsô ó They sleepô

Let us then return to the asymmetry between table (12) and table (13). In terms of the discussion surrounding (18)-(19) this asymmetry is related neither to PF stress configurations nor even necessarily to the position of the verb. Rather notions of scope and modality (non-veridicality)

[18] Hence verb raising cannot correspond to PF movement in the sense of Chomsky (2001) (on the syntactic/LF nature of verb movement cf. Roberts 2010, Manzini and Savoia 2011d).

[19] It must be emphasized (in response to an anonymous reviewer) that in the text we are defining necessary conditions for the appearance of óencliticsô, not sufficient ones. Languages may choose to associated interrogative/ imperative operators with verb movement or not ï and they can choose or not to associate óencliticô series with negation. In other words, we are not claiming that non-veridical operators necessarily trigger enclitic series, exactly as they do not necessarily trigger verb movement.

[20] Other examples provided by Manzini and Savoia (2005: §3.6.2) in their discussion of the phenomenon are *Alfonsine, S. Pietro in Campiano, Chioggia, S. Bartolomeo Pesio, Garbagna, Margarita.*

at the LF interface are involved. Once properly construed, the question is why (15), or its interaction with (17), yields a contrast between 1st person and 2nd person when out of the scope of modal elements (óproclisisô as in (12)), but not in their scope (óenclisisô as in (13)).

We propose that (15) is only defined in non-modal (i.e. positive declarative) contexts. In general, parameters interact not only with general rules/ principles of grammar, but of course also with other parameters, as understood here, i.e. other categorial splits. One such split must involve the notion of modality. In the case at hand, we may express the interaction between (15) and modality as in (20), taking once again the formalization from Manzini and Savoia (2011a: 213). Since by (20), parameter (15) is not defined in the scope of a modal element, we derive that subject enclitics appearing in the domain of the interrogative verb will not reflect the asymmetry implied by (15) ï i.e. they will admit of roughly any distribution of speaker/ hearer externalization patterns.

(20) (15) is not defined in the scope of modals

Note that the formulation we chose for (20) blocks a potential objection, based on doubling paradigms like those in (7)-(8). Though in (7)-(8) both proclitics and their doubling enclitics are in an interrogative sentence, i.e. a modal/ non-veridical context, the effects of (15) are found only in the proclitic series. Reference to the notion of scope in (20) blocks the effects of (15) for clitics that are lower than the modal verb, hence enclitics, but not for clitics that are higher than it, hence proclitics ï though they both occur within the same sentence.

Manzini and Savoia (2005: 119-121) clarify the relation that (15) bears to the person/ animacy hierarchy of typological tradition: ñWe can think that speaker reference (1st singular) differs from hearer reference (2nd singular) in that the former is immediately inferred from the universe of discourse. This means that the independent lexicalization of its denotation is excludedò. ñIn contrast, the hearer denotation is generally lexicalized. Intuitively, therefore, the lexicalization of 2nd singular depends not on its salience, but rather on its lack of salience ... In the modal interrogative context, reference to óhearerô may be supplied directly from the universe of discourseò. For Calabrese (to appear) on the contrary the conceptual basis for lexicalizing 2nd but not 1st person is that marked forms such as 1st person ñshyò away from lexicalization. Technically, in (10), the more marked a form is, the less likely it is that the constraint blocking it will be deactivated. Therefore it is it the marked status of 1st person, i.e. its expensive status, that determines its lack of lexicalization. Manzini and Savoiaôs (2005) approach

is the reverse ï as expressed here, it is the inexpensive status of 1st person in terms of recoverability that determines its lack of lexicalization. Which approach is correct is an empirical matter; let us notice however that under the present approach there is no special 2 < 1 markedness hierarchy for Italian dialects proclitics, but only the prominent status of óspeakerô reference, corresponding to the classical 1< 2 ónimacyô ranking in (16)[21].

Recall now that there are patterns in table (12) which are excluded, even though 2nd singular is lexicalized, including row 11 (reproduced in (22)) where 2nd person is lexicalized both in the singular and in the plural. Descriptively, what seems to be relevant is that the óspeakerô vs. óhearerô split is defined in the plural but not in the singular. Singular vs. plural is of course a parameter in the sense defined here, i.e. a categorial split. We may therefore assume that (15) either applies to the singular, i.e. to óspeakerô proper, or it cannot apply at all. In other words it is possible for it to be defined in the singular of a given language, and not in the plural, as in (21) ï but not vice versa. This blocks rows 11 and 15 of table (12) (reproduced in (22)), as desired.

(21) (15) is not defined in the plural.

(22)

	1st	2nd	4th	5th
11. *	P	P	-	P
15. *	-	-	-	P

In fact, we surmise that rows 14-16 (reproduced in (23) for ease of reference) all violate (21) (non-redundantly for row 14), since in the singular, pro-drop leads to an undifferentiated treatment of 1st and 2nd person, while the treatment is differentiated in the plural.

(23)

	1st	2nd	4th	5th
14. *	-	-	P	P
15. *	-	-	-	P
16. *	-	-	P	-

Finally, generalizing from statements like (20) and (21), we may surmise that a general schema for the interaction between parameters is

[21] A related point is that while Cardinaletti and Repetti (2008), following in this Poletto (2000), postulate a lower position for 2nd person than for 3rd, much cross-linguistic evidence seems to point to the reverse structural ordering for P vs. [D-N] pronouns ï i.e. discourse anchored forms appear in higher domains than event-anchored one (cf. Bianchi 2005). Polettoôs evidence is discussed by Manzini (2008), Manzini and Savoia (2011a), who propose an alternative account for it.

provided by (24). In other words, when parameters cross, one of them may remain undefined for one value of the other. By hypothesis, more complicated interactions are not possible.

(24) Parameter (i.e. categorial split) A is not defined for value 0/1 of parameter (i.e. categorial split) B

It is interesting to note that the two missing rows of table (13) (reproduced in (25) for ease of reference) are characterized by a reversal of person splits between singular and plural (i.e. 1st lexicalized in the singular and 2nd in the plural, or vice versa). In essence, even in enclisis, where (15) is not active, if óspeakerô and óhearerô are differentiated, they must be differentiated in a homogenous way across singular and plural. In other words, categorial split A (here 1st vs. 2nd person) can be suspended in one of the values of categorial split B (here singular vs. plural) ï but not reversed. We speculate that (24), or a version of it, may be sufficient to explain this last remaining fact.

(25)

	1st	2nd	4th	5th
4. *	-	P	P	-
7. *	P	-	-	P

3.2 Some empirical and theoretical issues: conclusions

At this point many questions arise. Descriptively, the most immediate one is whether our approach to partial pro-drop (i.e. partial externalization) can be extended to syncretism as well. Syncretism in the proclitic P paradigm generally involves vocalic forms (Benincà 1994, Poletto 2000). Cardinaletti and Repetti (2008) deny that these are subject clitics and construe the relevant slots of the paradigm as involving subject drop (cf. fn. 10). For Calabrese (to appear) they are instead bona fide subject clitics. For Manzini and Savoia (2005) they are again subject clitics; specifically, they instantiate the simplest morphology that at least in Romance will satisfy an argument slot, i.e. nominal class, N. Thus the table in (12) could be rewritten by substituting N for the gaps (as in Manzini and Savoia (2005)). This approach returns an obvious basis for the equivalence between partial pro-drop and syncretism, namely that in either case no P lexicalization is involved. The same conceptualization extends to syncretisms in enclitic paradigms (Manzini and Savoia 2005: §3.6.4).

In short, everything we have proposed for partial pro-drop

automatically applies to syncretism, if we interpret the gaps in tables (12)-(13) to represent either lack of lexicalization or lexicalization by a non-P form. In either instance (lack of lexicalization or lexicalization by an N element), óspeakerô and óhearerô referential content is not externalized. We assume that insertion of an N subject clitic is sufficient to satisfy the EPP. At the same time, the contrast between 1st person lexicalized by N and 2nd person lexicalized by P depends on the same principles as the zero vs. P contrast ï i.e. the interaction of Recoverability in (17) with salience of speaker reference in (15).

Another crucial empirical issue that must be acknowledged here concerns the interaction of the patterns in (12)-(13) with 3rd person ones. This in fact encompasses more than one question, including what 3rd person paradigms are admissible (for singular, plural, masculine and feminine) and, second, whether they combine freely or not with admissible P paradigm. We leave these issues open here (but see Manzini and Savoia (2005); Calabrese (to appear) for data and discussion).

We finally come back full circle to the general issue of universals and variation. One of our guidelines was to build a system flexible enough not to exclude existing languages ï which is a problem for Cardinaletti and Repetti, and to a small extent for Calabrese. Correspondingly, our account of the data in (12)-(13) involves less idealization than in Cardinaletti and Repetti (2008) or even in Calabrese (to appear). Yet to the extent that it brings to light any universals, they seem to involve a higher level of organization than either the morphological markedness hierarchies of Calabrese or the syntactic hierarchies of Cardinaletti and Repetti. Indeed they are situated directly at the conceptual interface. In other words, the picture of variation presented here rests not on pieces of structured syntax, nor on PF filters of various sorts, but directly on the LF conceptual system. We expect that what variation there is will come out of interactions between the various categorial splits (or parameters) and a few rules/ principles (Externalization, Recoverability) like those we have proposed.

We are aware that because we do not write into the theory structural hierarchies, or markedness hierarchies, we lay open to the suspicion that we are just renouncing formal, explanatory models and retreating into mere descriptive grilles and a functionalist outlook. Now, there is nothing functionalist about our mode of thinking. In fact, our approach is distinctly anti-functionalist. The cut between óspeakerô and óhearerô implied by (15) certainly is a conceptual universal, rather than a computational one. Yet nothing forces each given lexicon or sublexicon to instantiate this cut; in other words, each language operates a purely formal choice, completely disjoined from the needs of communication. As Culicover and Jackendoff

(2005: 6) point out, formal mentalist models (i.e. generative grammars) have recently become identified with what they call Interface Uniformity, i.e. the idea that ñthe syntax-semantics interface is maximally simple, in that meaning maps transparently into syntactic structure; and it is maximally uniform, so that the same meaning always maps onto the same syntactic Structureò. In the same vein, Cinque and Rizzi (2008) speak of the ósyntacticizationô of semantics, whereby the interpretative component is largely represented through syntactic structuring. By contrast, we endorse the idea that the computational component merely restricts an interpretive component endowed with a rich independent content. This conclusion does not lead either to the denial of an autonomous computational component, nor of its role in explanation. Therefore there is nothing anti-computational, or anti-formal in the approach we are suggesting.

From an empirical point of view, we argued that approaching tables of variation like (12) or (13) by means of syntactic hierarchies yields idealizations too far from reality. We argued that even the elements of rigidity contained in morphological markedness hierarchies inevitably require ad hoc adjustments. What we are left with therefore is the lexical set itself and the conceptual space that it partitions. At least in principle nothing would prevent us from raising our parameters from lexical splits to structural ones, either in syntax or at an abstract PF interface (one of the PF óintermundiaô of Scheer (2010)). We would then end up with something in the same spirit as Cardinaletti and Repetti (2008) or Calabrese (to appear), i.e. the lexicon is essentially an emergent property of a network of constraints; the latter have computational reality, the former may be pure óexponenceô. What we are proposing is exactly the reverse, namely that the lexicon, learned on the basis of parameters (categorial splits open in UG) has computational reality as a mapping of LF and PF properties. Constraints like (20) or (21) on the contrary donôt have any reality in the computational component, but exist only as emergent properties of the lexicon. We may be wrong in this; but we are not merely inadvertent in this matter. We really mean the system the way we have been setting it up.

We believe that the view of parametrization that we are embracing has considerable affinity with the minimalist, biolinguistic framework. Effectively, the categorial splits of the conceptual component take care of language variation. The computational component need not correspondingly be burdened with unnecessary degrees of abstractness. For instance person hierarchies need not be universally encoded in the syntax or in the morphology, including languages which display no evidence for them. If we perceive the core of the minimalist, biolinguistic programme correctly, these conclusions take us even closer to it than other current models.

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