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*Program in Linguistics  
University of Michigan  
Ann Arbor, Michigan 48109-1285  
san.duanmu@um.cc.umich.edu*

Giuseppe  
Longobardi

## Reference and Proper Names: A Theory of N-Movement in Syntax and Logical Form

In recent years, formal syntactic theory has broadened its scope and has come to interact more and more closely with parallel domains of study, in particular with such well-established traditions of inquiry as comparative dialectology, language typology, and analytic philosophy, fruitfully exchanging insights and research techniques. As a result, it has become possible to raise and solve new, meaningful problems, which would have hardly been conceivable as recently as twenty years ago, and to sharpen the formulation of more traditional questions so as to provide them with adequate empirical answers.

Within such an enlarged framework of interests and methods, this article will consider evidence from Romance and Germanic suggesting the following theoretical conclusions:

- There exist instances of N-movement to D in the syntax of Western Romance, implying the correctness for such languages of the so-called DP analysis.
- The same type of movement is likely to take place only in LF in English and German.
- Head-to-head dependencies fall into essentially the same categories as those between maximal projections: they define chains or CHAINS (in Chomsky's (1986b)

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Despite the similarity of the titles, this article does not reach the same conclusions as Burge's (1973) and actually appears to be more compatible with Higginbotham's (1988) criticism of it.

The English glosses of the examples are often as literal as is convenient for the understanding of the non-English structures.

terms), and chains are created either by substitution or by adjunction, with distinct properties.

- Various semantic types of articleless nominals (proper names, existentials, definite and indefinite generics, nonargument nominal phrases) are distinguishable by their syntactic behavior at PF and LF, and a plausible theory of the semantic licensing of NPs and DPs can be envisaged: proper names and generics are thus also distinguished from definite descriptions, suggesting a possible syntactic answer (in the spirit of Kripke 1980 or Neale 1990) to long-standing philosophical questions.
- The definite article of many European languages can be shown to have two different functions, a substantive and an expletive one, a distinction morphologically manifested in some varieties.<sup>1</sup>
- Finally, some empirical advantages of adopting certain basic tenets of Chomsky's (1993) minimalist program for explaining the generalizations reached in this article are suggested in the appendix.

## 1 DPs and NPs

To begin with, consider that in light of the generalization of X-bar theory to all lexical and nonlexical categories, two positions have recently emerged about the structure to be assigned to projections of determiners: one view locates Determiner Phrases inside Noun Phrases, in particular in their specifier position; the other, originally stemming from an intuition of Szabolcsi (1983/84 and subsequent work), conceives of the whole nominal construction as coinciding with DP and of NP as a complement of the head D (see in particular Abney 1986, 1987). Schematically, the two hypotheses can best be summarized as in (1) and (2), respectively.

- (1) [NP DP [N'N]]
- (2) [DP[D' D NP]]

Although the problem of choosing between the two views has proved not to be easy to solve on empirical grounds, one line of argument in favor of the structure advocated by Szabolcsi and Abney appears to be especially promising and has been explored in order to try to decide the issue conclusively in certain languages. Consider that, if movement can be argued to apply in some language from inside NP to a position inside DP (e.g., from specifier position to specifier position or from the position of N<sup>0</sup> to that of D<sup>0</sup>), then the structure in (1) will immediately be discarded, under any current theoretical approach, by the ban against movement to a non-c-commanding position. Movement from Spec NP to Spec DP might be instantiated in English, if the pair in (3) is to be related transformationally.<sup>2</sup>

<sup>1</sup> This notion of expletive article appears to be the syntactic and morphological parallel of the analogous concept elaborated on semantic grounds by Vergnaud and Zubizarreta (1990, 1992a).

<sup>2</sup> On this construction, also see Hendrick 1989.

- (3) a. a very strange man
- b. how strange a man

Head-to-head movement from N<sup>0</sup> to a higher functional head that may, at least in some cases, be identified with D<sup>0</sup> has been tentatively argued to apply in Semitic (see Ritter 1986, 1989, Ouhalla 1988, Fassi Fehri 1989, Siloni 1989, 1990, and references cited there) and Scandinavian (see Delsing 1988, Taraldsen 1990, Holmberg 1992). Taraldsen (1990), for instance, analyzes the following Norwegian paradigm in terms of N-raising:

- (4) a. hans bøker om syntaks  
his books about syntax
- b. bøkene hans om syntaks  
book-s the his about syntax

(4a) shows the normal SNO structure of Germanic NPs (see Giorgi and Longobardi 1991), where the subject can be independently argued to asymmetrically c-command the object. (4b) instantiates an alternative N-initial order in which the subject can still be shown to asymmetrically c-command the object; thus, Taraldsen rejects the possibility of its being base-generated and proposes to derive it from (4a) by means of N-raising, thus supporting a DP analysis for Norwegian nominals.<sup>3</sup> In fact, the head N appears in (4b) to be morphologically adjoined to the article.

It may also be possible to extend Taraldsen's analysis to all cases of so-called suffixed articles in Scandinavian, accounting for such common alternations as the following:

- (5) a. en bok  
a book
- b. boken  
book-the

A similar approach was also successfully taken in the study of suffixed definite articles in Romanian (Grosu 1988, Dobrovie-Sorin 1987).

However, evidence of this sort, as well as of other types discussed particularly by Abney (1987), can hardly be reproduced in the Western Romance languages (but see Bernstein 1991a), for which the choice between (1) and (2) has so far remained more undetermined (although the DP analysis has occasionally been employed to treat aspects of Romance nominal syntax; see, e.g., Torrego 1988, Battye 1989, Brito 1990). In what follows we will examine evidence of a completely different nature, suggesting even more directly that instances of N-to-D movement must be postulated in Western Romance as well and thus further supporting the structure in (2) and the theory of head movement. Before looking at this evidence, however, we must analyze certain semantic and distributional properties of Ns and Ds.

<sup>3</sup> It remains undetermined within the analysis so far provided whether the typical Germanic (so-called Saxon) prenominal genitive, like *hans* of (4a), occurs in Spec NP or in Spec DP. For some suggestions on this point, however, see footnote 25 below and especially Longobardi 1994a.

## 2 Bare Nouns

Let us begin by noticing that a singular countable head noun may not occur in Italian in any of the major positions suitable for arguments (e.g., subject, direct object, prepositional object, inverted subject of either ergative or unergative predicates) without being introduced by an overt determiner, most usually a definite or indefinite article, a quantifier, or a demonstrative.<sup>4</sup>

- (6) a. \*(Un/I1) grande amico di Maria mi ha telefonato.  
(a/the) great friend of Maria called me up
- b. Ho incontrato \*(un/il) grande amico di Maria ieri.  
I met (a/the) great friend of Maria yesterday
- c. Ho parlato con \*(un/il) grande amico di Maria ieri.  
I spoke with (a/the) great friend of Maria yesterday
- d. Ha telefonato/E' venuto \*(un/il) grande amico di Maria.  
called up/came (a/the) great friend of Maria

The constraint in question does not hold for nominals in typical nonargument function, as in vocative, predicative, or exclamatory contexts.

- (7) a. Caro amico, vieni a trovarmi.  
dear friend come to visit me
- b. Tenente, esegua l'ordine!  
lieutenant perform the command
- (8) a. Gianni è tenente.  
Gianni is lieutenant
- b. Gianni è amico di Maria.  
Gianni is friend of Maria
- c. L'ho promosso tenente.  
I promoted him lieutenant
- d. Ti credevo amico di Maria.  
I believed you friend of Maria
- (9) a. Diavolo!  
devil
- b. Maledetto tenente!  
damn' lieutenant

There are also some kinds of PPs that allow articleless singular nouns; but, pending further study, it is not implausible to assimilate them to predicative expressions on semantic grounds.<sup>5</sup>

<sup>4</sup> For this purpose I will classify cardinals and certain quantity expressions (e.g., *molto* 'much', *poco* 'little', or *abbastanza* 'enough') as determiners. For some discussion of the issue and further distinctions, see the approach taken by Giusti (1993).

<sup>5</sup> However, the wide variety of determinerless nominals occurring within PPs can hardly be satisfactorily explained away by similar considerations, and the whole problem deserves much more detailed analysis.

- (10) a. in abito lungo  
in long dress
- b. di buona famiglia  
of good family

On the basis of these observations, we may tentatively propose the following principle of Italian grammar:

- (11) A "nominal expression" is an argument only if it is introduced by a lexically filled D position.

Although plausible and basically correct in spirit, (11) has two shortcomings, one conceptual and one empirical. First, reference to the lexical (i.e., phonetic) content of the category D seems to be inappropriate and unparalleled in an essentially semantic licensing condition. Second, (11) appears to be simply too strong under this formulation. In fact, as noted also by Benincà (1980), three types of bare nouns occur in Italian in argument function: singular mass nouns, plural count nouns (bare plurals), and even some rarer cases of singular count nouns in the scope of a sentential negation, although it is not clear whether the latter are to be considered real arguments or rather quasi-idiomatic expressions.<sup>6</sup> Consider the following examples:

- (12) a. Bevo sempre vino.  
I always drink wine
- b. Mangio patate.  
I eat/am eating potatoes
- c. Non c'era studente in giro. (from Benincà 1980)  
there wasn't student around

In all these cases the interpretation of the nominal seems to be roughly similar to that of an indefinite, existentially quantified NP. In this sense, bare nouns appear to bear some semantic similarity to the so-called partitive article (formed by *di* 'of' + a definite determiner) of Italian (and French); also the latter in fact is limited to mass head nouns

<sup>6</sup> In fact, most structures of this type are found in idioms or fixed expressions.

- (i) a. Non ha proferito verbo.  
he didn't utter word  
'He didn't say anything.'
- b. Non ha battuto ciglio.  
he didn't shake eyelash  
'He didn't flinch at all.'

In addition, many lexical choices of verbs and objects turn out to be quite marginal or even impossible in such a construction.

- (ii) a. ?Non ha dipinto quadro.  
she didn't paint picture
- b. \*Non ha danneggiato scrivania.  
she didn't damage desk

Such observations appear to confirm the less fully productive nature of this construction, with respect to, say, the French *pas... de* NP construction studied by Kayne (1981).

and to plurals, for which it seems to represent the intuitive counterpart of the singular indefinite article.<sup>7</sup>

There are also some differences, however, which limit the analogy and prevent us from simply stating that bare nouns instantiate the phonetically "null" version of the partitive article. An interesting peculiarity, for example, is that the number specification (i.e., the semantic distinction between singular and plural) may sometimes be irrelevant. Number is obviously irrelevant in the case of mass nouns and of negated existentials, which have null designation, but as convincingly argued by Benincà (1980), bare plurals are often allowed to be neutral between the singular/plural distinction. For example,

<sup>7</sup> Semantically, the partitive article distinguishes itself from "classical" existential quantifiers like *alcuni* or *qualche* 'some', because in some positions and with certain predicates it may easily assume a sort of generic interpretation.

- (i) a. Dei cani grossi creano sempre questi problemi.  
PARTIT ART large dogs always raise such problems
- b. Alcuni cani grossi creano sempre questi problemi.  
some large dogs always raise such problems

As the English gloss should clarify, this kind of generic (which I will refer to as *indefinite generic* to distinguish it from the more typical generic structures expressed in Romance by means of the singular or plural definite article) reading is hardly acceptable in (ib). Thus, in a sentence like (ia) the partitive article appears once again to act as the plural (or mass) counterpart of the singular indefinite one, which does allow a similar generic interpretation.

- (ii) Un cane grosso crea sempre questi problemi.  
a large dog always raises such problems

The same is true of other indefinite determiners usually existentially interpreted, like cardinality expressions (numerals and *molti* 'many', *pochi* 'few', etc.).

- (iii) Tre/Molti cani grossi creano sempre questi problemi.  
three/many large dogs always create such problems

In this example the subject is easily understood as generic, in the sense of designating every group of three/many normal large dogs. This observation may also help clarify the semantic status of the indefinite generic reading displayed by (ia) and (ii): it is likely to designate every set of an indefinite number of normal dogs or of just one normal dog, respectively. It is thus plausible to postulate the logical relevance of a *Gen* operator, of the type proposed under various forms in much of the recent literature (see, for instance, Heim 1982, Kratzer 1988, Diesing 1988, 1989), quantifying here over sets (also see section 7).

The generic reading seems to have some marked status with respect to the more usual existential interpretation of indefinite nominals, as witnessed by its unavailability in a number of contexts, first of all with stage-level predicates (in the sense inaugurated in Carlson 1977a).

- (iv) a. Dei dinosauri furono uccisi da cause misteriose.  
PARTIT ART dinosaurs were killed by mysterious causes
- b. Un dinosauro fu ucciso da cause misteriose.  
a dinosaur was killed by mysterious causes

Here the subjects can only be existentially interpreted, whereas (other things being equal) the generic reading is available with definite nominals.

- (v) a. I dinosauri furono uccisi da cause misteriose.  
the dinosaurs were killed by mysterious causes
- b. Il dinosauro fu ucciso da cause misteriose.  
the dinosaur was killed by mysterious causes

The other environments in which such a generic reading of indefinites is unavailable are roughly nonsubject positions and subject positions of so-called kind-level predicates (in the sense of Carlson 1977b; i.e., predicates

consider the following paradigm:

- (13) a. Ogni giorno mangia patate.  
every day he eats potatoes
- b. Ogni giorno mangia alcune/delle patate.  
every day he eats some/PARTIT ART potatoes

In uttering (13b), which contains an overt existential quantifier or the partitive indefinite article (here formed by contraction of *di* 'of' + *le* 'the' fem. pl.), we commit ourselves to the claim that the person in question eats more than a single potato per day, whereas in uttering (13a), we make no such plurality commitment. Another peculiarity concerns scopal phenomena: unlike all overt existential determiners, including the singular indefinite article and the partitive one, determinerless nominals in both English and Italian are subject to an obligatory narrow scope constraint. This applies with respect to negation, quantifiers, and intensional contexts (thus producing a necessarily opaque or *de dicto* reading), as discussed by Carlson (1977a,b) precisely in order to distinguish between the indefinite article and bare plurals.

Therefore, a plausible observational generalization appears to be that existential quantification can be expressed using a bare noun under certain special conditions. Now, is this existential interpretation of Italian bare nouns the consequence of an absolute lack of the category "Determiner" in these constructions or is it assigned as the default semantic option to an empty category syntactically present in the D position?<sup>8</sup> One fact

requiring a collective interpretation of one of their arguments necessarily encompassing the whole kind designated by it).

- (vi) a. Studio dei dinosauri/un dinosauro.  
I study PARTIT ART dinosaurs/a dinosaur
- b. Dei dinosauri sono estinti.  
PARTIT ART dinosaurs are extinct
- c. Un dinosauro è estinto.  
a dinosaur is extinct

Again, in such environments indefinites can only be existentially understood and the generic reading is possible only for definite nominals.

- (vii) a. Studio i dinosauri/il dinosauro.  
I study the dinosaurs/the dinosaur
- b. I dinosauri sono estinti.  
the dinosaurs are extinct
- c. Il dinosauro è estinto.  
the dinosaur is extinct

This is not surprising if *Gen* is supposed to be (like, e.g., *every* or *each*) an intrinsically distributive quantifier, thus inappropriate for usage with necessarily collective predicates.

<sup>8</sup> The choice of this numberless existential reading (essentially, 'there exists at least one x') as the default value for Ds deprived of lexical content is perhaps due to its semantically unmarked (least informative) character. Notice, in fact, that such a notion can be construed precisely enough for such an operator according to criteria of difficulty of falsification in a finite domain: for it is less easily falsifiable (given a finite set of objects as a model, it always requires observation of the totality of them) than operators like 'there exist at least  $n$  x (for  $n > 1$ )', 'there exist at most  $n$  x', 'there exist exactly  $n$  x', or 'for every x'. All of these may actually require a smaller number of observations than the totality in order to be falsified.

suggests the plausibility of the latter solution: the distribution of such bare nouns in Italian, as well as in other Romance languages, seems to be subject to a sort of lexical government requirement, similar to that constraining empty categories in general and empty functional heads in particular (e.g., empty Cs of finite clauses in English; see Stowell 1981). In other words, Romance bare nouns are usually excluded from preverbal subject position, but admitted in internal argument position and, to a certain extent, also as inverted subjects of unergative predicates.<sup>9</sup>

- (14) a. \*Acqua viene giù dalle colline.  
water comes down from the hills

- b. Viene giù acqua dalle colline.  
comes down water from the hills  
c. Ho preso acqua dalla sorgente.  
I took water from the spring

- (15) a. \*In questo ufficio marocchini telefonano sempre.  
in this office Moroccans always call up  
b. In questo ufficio telefonano sempre marocchini. (from Brugger 1990)  
in this office always call up Moroccans  
c. In questo ufficio incontro sempre marocchini.  
in this office I always meet Moroccans<sup>10</sup>

Similarly impossible is a determinerless noun in another position analyzed at length and argued to be non-lexically governed in Longobardi 1980, 1994b, that of postcopular argument expressions (also see Higgins 1973, Ruwet 1975, and Moro 1993).

<sup>9</sup> The latter case is considered less acceptable in the current literature on the closely corresponding structures of Spanish; see Contreras 1986, Lois 1986, and Torrego 1989. Modern French, instead, does not seem to accept bare nouns (in the sense discussed here) at all. An extremely intriguing line of explanation, relating the phenomenon to the poverty of number inflectional morphology of French nouns, has been proposed by Delfitto and Schroten (1991). Their proposal is actually supported by a diachronic correlation between the loss of bare nouns and the impoverishment of the declension in the history of French.

<sup>10</sup> Sentences like (14a) and (15a) become more acceptable if the determinerless subject is phonologically and semantically focused. An obvious suggestion is that under this interpretation the subject may occur in a left-peripheral position as the result of a topicalization transformation. Assuming that the lexical government requirement may be satisfied by the supposed empty head under "reconstruction" of the whole topicalized constituent, the acceptability of the focused version of the two sentences in question would be due to the postverbal source of subject *wh*-movement in Italian (see Rizzi 1982); thus, the "reconstructed" analysis of such examples would be analogous to that of the grammatical (14b) and (15b). The hypothesis that a "reconstructed" satisfaction of the lexical government requirement is possible is independently suggested by the acceptability of topicalizing a bare noun from object position.

- (i) a. ACQUA ho preso dalla sorgente!  
WATER I took from the spring  
b. MAROCCINI incontro sempre, in quest'ufficio!  
MOROCCANS I always meet in this office

If, instead, "reconstructed" satisfaction of the lexical government requirement were not possible (see Rizzi 1990 for some discussion), an alternative explanation, suggested by Luigi Rizzi (personal communication), might still rely on the existence of a postverbal source for the bare nominals of (14a) and (15a), as well as for those of (ia) and (ib), hypothesizing however that only NP has been moved out of DP, as is likely to occur in certain cases of *ne*-extraction. Therefore, the empty D would have remained in its base position, locally satisfying its government requirements.

- (16) \*La causa delle rivolte sono spesso marocchini.  
the cause of the riots are often Moroccans

On the contrary, no violation arises if a nonargument expression such as a predicative NP, even with a singular count head, occurs in a non-lexically governed position, as is shown by the acceptability of (17), whose relevance was originally pointed out by Luigi Burzio (personal communication).

- (17) Amico di Maria sembra essere Gianni.  
friend of Maria seems to be Gianni

These observations may be taken to suggest that an empty category in need of some kind of lexical government is necessarily present in (12)–(16) but not in (17); if such a category is actually a head D, its presence may also suffice to explain the otherwise unmotivated restrictions to plural/mass nouns and to the existential reading, which do not arise in the case of sentences like (17) or other nonargument (e.g., vocative) usages. In fact, the empty D could instantiate some sort of existential operator and as such impose constraints regarding the count/mass interpretation of the head nouns it quantifies over (see section 5 for discussion): the behavior of certain overt existential determiners, such as the above-mentioned partitive article, is, after all, analogous.

On the basis of these observations, and abstracting away from the marginal and peculiar cases like (12c), we will make the following assumptions:

- (18) Empty determiners may occur at S-Structure in Italian only under the following conditions:  
a. They are restricted to plural or mass head nouns like several other determiners.  
b. They are subject to a lexical government requirement like other empty heads.<sup>11</sup>

<sup>11</sup> We assume, by analogy with the mentioned conditions on the distribution of null Cs, that such a government requirement on the empty head D is satisfied by lexically governing its whole maximal projection, provided that specifiers and heads of phrases are accessible to external governors (see Chomsky 1986b among others). It must be noticed that the required relationship with a head seems stronger than many usual definitions of government, since it does not allow an empty D to be licensed by a verb across small clause boundaries, as noted by Belletti (1988) and also by Contreras (1986) for Spanish.

- (i) \*Consideravo studenti intelligenti.  
I considered students intelligent

Again, this fact reinforces the parallelism with the behavior of empty C, which cannot introduce subjects of small clauses or of complements to exceptional Case-marking verbs.

- (ii) I expected \*(that) John is intelligent (to be) an obvious truth.

It appears that the correct condition requires a selectional head-to-complement relation between the licensing head and the licensed one. Furthermore, it is possible that in addition to such lexical head government, the licensing of empty Ds is subject, as other categories are, to an identification requirement that could only be satisfied under a local relation with a number agreement morpheme. Since, according to Delfitto and Schroten (1991), such a morpheme would not be available in Modern French, this hypothesis would be one possible way to build their insights about the lack of bare nouns in French into the present framework.

- c. They receive an indefinite interpretation corresponding to an existential quantifier unspecified for number and taking the narrowest possible scope (default existential).<sup>12</sup>

Further support for the existence of an empty D is provided by the following considerations. According to the analysis in Longobardi 1980, 1994b, the postcopular predicative position is always lexically governed, so it could in principle contain a predicate nominal introduced by an empty determiner. In fact, even if determinerless predicative expressions are exempted from the need for a phonetically null D, there seems to be some evidence that they can be introduced by such an empty category at least with mass and plural heads.

- (19) a. Gianni è medico.  
Gianni is doctor  
b. Gianni è un medico.  
Gianni is a doctor

<sup>12</sup> Even the generalizations stated in (18) are not immune from relevant exceptions, which essentially fall into two categories. First, there are determinerless nouns occurring with a modifier (usually an AP, on either side of the N, a PP, or a relative clause) that are able, at a narrative stylistic level, to violate (18b)—that is, to surface in preverbal subject position.

- (i) a. Meravigliose foreste/Foreste meravigliose si aprivano davanti ai nostri occhi.  
beautiful forests opened in front of our eyes  
b. Ragazze delle più varie origini affollavano i marciapiedi  
girls of the most varied origins crowded the sidewalks  
tra Rue St. Denis e Boulevard Sébastopole.  
between Rue St. Denis and Boulevard Sébastopole  
c. Ragazze che Gianni non aveva mai visto affollavano i marciapiedi tra...  
girls that Gianni had never seen crowded the sidewalks between...

Similarly, modified bare plurals may become acceptable in postcopular argument position.

- (ii) La causa delle rivolte sono spesso marocchini che non vogliono tornare a casa.  
the cause of the riots are often Moroccans who don't want to go back home

It must be clearly noted, however, that such expressions never violate generalizations (18a) and (18c): they cannot occur with a singular count head or receive the equivalent of the definite generic interpretation, that is, the one compatible with a kind or stage-level predicate and with occurrence in object position (see footnote 7).

- (iii) a. \*Meravigliosa foresta si apriva davanti ai nostri occhi.  
beautiful forest opened in front of our eyes  
b. \*Foreste tropicali sono estinte.  
tropical forests are extinct  
c. Vaste foreste tropicali furono distrutte dal cataclisma.  
large tropical forests were destroyed by the cataclysm  
d. Ho sempre studiato foreste tropicali.  
I have always studied tropical forests

(iiic) and (iid) are grammatical but tolerate only an existential interpretation, the generic one being attainable solely through the occurrence of a definite subject phrase.

- (iv) a. Le vaste foreste tropicali furono distrutte dal cataclisma.  
the large tropical forests were destroyed by the cataclysm  
b. Ho sempre studiato le foreste tropicali.  
I have always studied the tropical forests

Instead, like the other indefinite determiners discussed in footnote 7 (e.g., the singular indefinite article and

- c. \*Gianni è medico che si cura davvero dei suoi pazienti.  
Gianni is doctor who really cares for his patients  
d. Gianni è un medico che si cura davvero dei suoi pazienti.  
Gianni is a doctor who really cares for his patients  
e. Noi siamo medici che ci curiamo davvero dei nostri pazienti.  
we are doctors who really care for our patients  
f. Noi siamo dei medici che ci curiamo davvero dei nostri pazienti.  
we are PARTIT ART doctors who really care for our patients  
g. Questa è acqua.  
this is water  
h. Questa è dell'acqua.  
this is PARTIT ART water  
i. Questa è acqua che è stata presa dalla sorgente.  
this is water which was taken from the spring  
j. Questa è dell'acqua che è stata presa dalla sorgente.  
this is PARTIT ART water which was taken from the spring

The fact that relativization on a predicative head is only possible either with an overt determiner or with a plural/mass noun may suggest that the presence of a D position (subject to generalization (18a), if empty) is required in order to license a relative clause. If this line of reasoning is correct, (19c) will be ruled out since an empty D with a nonmass

the partitive one), in subject position of noncollective individual-level predicates, the empty D of such bare nouns may assume what was referred to there as the indefinite generic reading.

- (v) Foreste di tali dimensioni sono ormai difficili da trovare.  
forests of that size are now hard to find

On the other hand, there also exists a class of more radical exceptions to (18) as a whole, thus violating all the generalizations stated in the text—namely, coordinate conjoined nouns.

- (vi) a. Cane e gatto si erano già addormentati.  
dog and cat had already fallen asleep  
b. Cane e gatto sono sempre nemici.  
dog and cat are always enemies

In cases of disjunctive coordination the judgment is roughly similar.

- (vii) O cane o gatto dovranno essere messi in isolamento.  
either dog or cat will have to be put in isolation

In (via) and (vii) a definite specific reading is readily available for the coordinated nouns; in (vib) the generic reading is perfectly acceptable.

As for the first class of exceptions, namely, those violating only (18b), one possibility is that the presence of a modifier on the head noun suffices to supply some abstract features into the empty D position, which enable it to escape from the lexical government requirement, roughly in the same sense as pronominal empty categories (PRO/pro) do, according to Chomsky (1981, 1982). This possibility appears to be independently necessary to account for other structures, at least in English, which will be mentioned in footnote 25. Although several variants of this idea and other potential solutions are conceivable and worth exploring, I cannot discuss them here (also see Delfitto and Schröter 1991). The second type of exception is more mysterious and is likely to presuppose a deeper structural analysis of coordinate constructions; however, a possible line of explanation might suggest that, if what is required in order to turn a nominal phrase into an argument is a functional head position saturating the NP in some sense, such a position can be provided not only by a D but also by coordinating elements, understood essentially as quasi operators giving rise to a quantificational structure.

singular would violate (18a); (19e) and (19i) will certainly contain such a null determiner, and (19g) will contain it optionally. Similar conclusions about the possibility of empty Ds with predicates can be drawn from the following sentences:

- (20) a. Ritengo Mario \*(un) bravo medico.  
I believe Mario (a) good doctor
- b. Ritengo Gianni e Mario (dei) bravi medici.  
I believe Gianni and Mario (PARTIT ART) good doctors

With certain adjectivally modified predicates headed by count nouns, an overt determiner is sometimes obligatory in the singular, but not in the plural, suggesting that a D category may always be required, remaining empty just in the plural, as expected given (18a).<sup>13</sup>

The assumptions made in (18) finally allow us to revise (11) as follows:

- (21) A "nominal expression" is an argument only if it is introduced by a category D.

It is obvious how (21) also overcomes the conceptual shortcoming of (11) noted earlier, by eliminating reference to the content of the D position.

The crucial nature of the category D for argumenthood seems to be independently manifested by the fact that certain designation properties typical of arguments, such as the semantic import of grammatical number, lie precisely in the D position. Actually, we have already observed that an empty D (therefore, one morphologically unspecified for number) may yield semantic indeterminacy between singular and plural designation despite the plurality of the head noun. But stronger evidence for this point is provided by pairs of subject phrases like the following:

- (22) a. La mia segretaria e tua collaboratrice sta/\*stanno uscendo.  
the my secretary and your collaborator is/are going out
- b. La mia segretaria e la tua collaboratrice stanno/\*sta uscendo.  
the my secretary and the your collaborator are/is going out<sup>14</sup>

<sup>13</sup> If the ability of negation to license an empty D at least with certain lexical choices, as observed in (12c), carries over to predicative expressions, we may correctly predict that a bare singular count noun predicate modified by a relative clause will be more acceptable under negation; see, in fact, the following paradigm:

- (i) a. Gianni è un uomo che tutti possono apprezzare.  
Gianni is a man that everyone may appreciate
- b. ?\*Gianni è uomo che tutti possono apprezzare.  
Gianni is man that everyone may appreciate
- c. Gianni non è uomo che tutti possano apprezzare.  
Gianni is not man that everyone may appreciate

<sup>14</sup> It is still necessary to rule out structures with one plural determiner and several singular coordinated head nouns.

- (i) \*le mia segretaria e tua collaboratrice  
the(PL) my secretary and your collaborator

Rather than by a theory of argumenthood, we may suggest that such examples can be excluded by a condition requiring morphological agreement between the features of the determiner and those of each of the head nouns. On certain properties of this condition and its cross-linguistic generality, also see footnote 24.

In (22a) two morphologically singular nominal projections are coordinated, excluding the determiner, which remains unique and is also morphologically singular; here the whole subject argument of the clause is understood as designating a single individual, as is clarified by the verbal agreement. By contrast, in (22b) the coordination includes the determiners, one for each conjunct, and the designation of the argument is obligatorily understood as plural. In other words, irrespective of the cardinality of head nouns present, a single singular determiner is sufficient to impose singular designation on the entire nominal expression, whereas the sum of two singular determiners automatically imposes plural designation. When occurring as a predicate, however, the phrase in (22b) is not required to be interpreted as plural.

- (23) Maria è la mia segretaria e la tua collaboratrice.  
Maria is the my secretary and the your collaborator

Thus, arguments but not predicates crucially rely on the D position in order to define their meaning with respect to number.

### 3 Proper Names

If it is really the D position that turns a nominal expression into an argument, an obvious question arises concerning those proper names (in particular, names of individuals, cities, certain "small" islands,<sup>15</sup> companies, days, and months) that are allowed in Italian to occur freely in argument function without any determiner; it is rather clear that they cannot be introduced by an empty D, since the properties of the latter, as identified in (18), seem to be inapplicable in the case of proper names. For example, a proper name like *Gianni* in (24a) is not understood as designating a mass, is not plural, does not receive an indefinite interpretation, and may occur in a lexically ungoverned position.<sup>16</sup>

<sup>15</sup> That such "smallness" is a cultural, rather than purely geographic, concept is argued in Longobardi 1987, where it is claimed that names of cities and "small" islands, as opposed, say, to countries and "large" islands, form a natural syntactic class from another point of view as well. In fact, even though the need for the article that characterizes names of countries and "large" islands in argument position disappears for unclear reasons in locative and motional PPs, the choice of the head P is different in such cases for cities and "small" islands (for data and details, see Longobardi 1987, 1994a).

<sup>16</sup> Another sharp semantic difference between bare (common) nouns and proper names arises in the domain of scope facts. I have briefly mentioned Carlson's observation, reproducible in Italian, that bare nouns are forced to take the narrowest possible scope, in particular with respect to negation and intensional contexts (i.e., in traditional terms, they are read *de dicto*).

- (i) a. Non ho incontrato studenti.  
I did not meet students  
'There are no students such that I met them.'  
b: Vorrei incontrare studenti.  
I would like to meet students  
'I would like for there to be some students such that I could meet them.'  
\*There are some students such that I would like to meet them.'

In the same contexts, however, proper names do not obey any narrow scope restriction: actually, they always

The theoretical framework so far defined provides a restrictive and almost inescapable answer to this problem: a D position introducing the subject argument must be syntactically present in a sentence like (24a) and cannot be empty; thus, the only possible element that can occupy such a D position is the proper name itself. Yet another way to formulate essentially the same problem involves recalling that several varieties of Romance display free or stylistically conditioned alternations between the presence and the absence of the article with proper (first or last) names of human beings.

- (24) a. Gianni mi ha telefonato.  
Gianni called me up
- b. Il Gianni mi ha telefonato.  
the Gianni called me up

In some cases the alternation is also semantically conditioned; for instance, with last names of female human beings the article in standard Italian is virtually obligatory.

- (25) La Callas/\*Callas ha cantato.  
the Callas/Callas sang

The natural question that arises here, although it has so far never been raised, is whether *Gianni* in (24a) occupies the same S-Structure position as *Gianni* in (24b) or rather the position of *il* in (24b). As noted earlier, the assumptions motivated in section 2 force us to adopt the latter hypothesis and suggest the existence of a transformational relation between the pair of sentences in (24), established through movement of *Gianni* in (24a). In fact, now it becomes necessary to assume that such Ns as those proper names that occur in argument function without any overt determiner have undergone raising from  $N^0$  to  $D^0$ , in order for the structure to comply with (18) and (21). This is so because they must be base-generated in the  $N^0$  position and optionally allowed to remain there, to account for those cases in which they occur introduced by an article. This hypothesis, put forth on theoretical grounds, turns out to receive straightforward empirical confirmation from a curious and subtle paradigm of certain varieties of Romance, which it contributes to explaining.

To determine the exact location of a lexical item that can occupy either of two structural positions in the tree, it is often useful to insert some visible material between the positions in order to visualize the abstract linear order; for example, Emonds (1978) and Pollock (1989) rely on interpolation of adverbs and negation to establish that the

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display a scope-insensitive (essentially *de re*) existential reading. The actual existence of Maria seems in fact to be implied by the utterance of either sentence of (ii).

- (ii) a. Non ho incontrato Maria.  
I did not meet Maria
- b. Vorrei incontrare Maria.  
I would like to meet Maria

For further remarks on this crucial property of proper names, see section 5.

tensed lexical verb *parle* of (26b) in French occupies the same position as the inflected auxiliary *a* and not the same position as the past participle *parlé* in (26a).

- (26) a. Il n'a pas parlé.  
he did not speak
- b. Il ne parle pas.  
he does not speak

I will try to reproduce an argument in the same vein for the positions N and D. First, notice that Italian adjectives, both possessive and nonpossessive, may occur in prenominal position between D and N, or in postnominal position, but never before D with either common or proper nouns.<sup>17</sup>

- (27) a. \*mio il Gianni  
my the Gianni
- b. \*vecchio il tavolo  
old the table

Now consider the following paradigm:

- (28) a. Il mio Gianni ha finalmente telefonato.  
the my Gianni finally called up
- b. \*Mio Gianni ha finalmente telefonato.  
my Gianni finally called up
- c. Gianni mio ha finalmente telefonato.  
Gianni my finally called up
- d. Il Gianni mio ha finalmente telefonato.  
the Gianni my finally called up

The two surface order possibilities (A N and N A) are preserved when the proper name, here in a typical argument position, is introduced by the determiner, but an unexpected gap in the paradigm appears with articleless names: although many varieties, especially in central and southern Italy, accept (28c), none accepts the severely ungrammatical (28b). The generalization appears to be that the lack of the article forces an N-initial order. This otherwise surprising idiosyncrasy immediately becomes understandable assuming that the proper name needs to move from  $N^0$  in order to fill in the empty  $D^0$  position, thus crossing over the adjective presumably lying in its specifier position. There is also an interesting piece of semantic evidence in favor of this hypothesis—in particular, in favor of the assumption that the possessive AP of (28c) does not follow the  $N^0$  position and has become postnominal only as the result of an N-preposing process. Normal postnominal possessives tend to be strongly contrastive in Italian, as is the case for *mio* in (28d), which can only be interpreted with contrastive reference to the existence of another salient Gianni in the domain of discourse who is not “mine” (i.e., is related to someone-

<sup>17</sup> In Italian the distributional properties of possessives are essentially those of (nonargument) adjectives. For a discussion, see Cinque 1990, 1993, Crisma 1990, and Giorgi and Longobardi 1991:chap. 3.

else). This interpretation is not required by prenominal possessives, like the one in (28a), which can be perfectly understood as an affective expression in an environment where no other Gianni's existence is presupposed. Now, the interpretation of *mio* in (28c) does not need to be contrastive, exactly like that in (28a) and contrary to that in (28d). This may be explained on the basis of the general fact that contrastiveness is uniformly required of posthead possessives but not of those in Spec NP and of the crucial hypothesis that it is *Gianni* that moved in (28c), crossing over *mio*.

The above paradigm can be reproduced with certain nonpossessive adjectives.<sup>18</sup> Here are two examples with a family name and a city name as raising heads:

- (29) a. E' venuto il vecchio Cameresi.

came the older Cameresi

- b. \*E' venuto vecchio Cameresi.

came older Cameresi

- c. E' venuto Cameresi vecchio.

came Cameresi older

- d. E' venuto il Cameresi vecchio.

came the Cameresi older

- (30) a. L'antica Roma fu la città più importante del Mediterraneo.

the ancient Rome was the most important city of the Mediterranean

- b. \*Antica Roma fu la città più importante del Mediterraneo.

ancient Rome was the most important city of the Mediterranean

- c. Roma antica fu la città più importante del Mediterraneo.

Rome ancient was the most important city of the Mediterranean

- d. La Roma antica fu la città più importante del Mediterraneo.

the Rome ancient was the most important city of the Mediterranean

<sup>18</sup> Even in the "liberal" varieties of central and southern Italy not all adjectives allow the raising of the head noun: indeed, modification by most types of adjectives blocks movement and imposes the use of the article with proper names as well. Actually, it seems that the adjectives that best tolerate the raising of their head nouns are those few that are able to receive a restrictive interpretation even in prenominal position (a possibility usually barred for the majority of Italian adjectives): namely, possessives, adjectives like *vecchio* 'old', *giovane* 'young', *antico* 'ancient', and *solo* 'only', and numeral ordinal adjectives. Thus, it is plausible that an idiomatized version of N-raising lies at the basis of the usage of names of monarchs and popes followed by an ordinal adjective; for ordinal adjectives, apart from a few lexical exceptions, obligatorily occur in prenominal position except with such nouns when articleless. Consider, for example, the alternation in the following pair:

- (i) a. Napoleone terzo fu l'ultimo Imperatore dei Francesi.  
Napoleon third was the last emperor of the French people  
b. Il terzo Napoleone/\*Il Napoleone terzo computato nella dinastia  
the third Napoleon/the Napoleon third numbered in the dynasty  
si chiamava in realtà Luigi Bonaparte.  
was actually named Luigi Bonaparte

More generally, it appears that with all other adjectives raising of the head noun is totally incompatible with any appositive reading and can only be marginally tolerated even with a restrictive and sharply contrastive interpretation of the adjective itself; for example, *Gianni simpatico* 'Gianni nice' can be very marginally accepted only in a sort of D-linked reading, namely, if the speaker and hearer agree in advance to define the individual referred to that way in contrast to another, less nice, Gianni.

Names of months and days also exhibit an analogous pattern of behavior.

- (31) a. Lo scorso giovedì/Natale/maggio è stato un giorno/mese terribile.  
the last Thursday/Christmas/May was a terrible day/month  
b. \*Scorso giovedì/Natale/maggio è stato un giorno/mese terribile.  
last Thursday/Christmas/May was a terrible day/month  
c. Giovedì/Natale/maggio scorso è stato un giorno/mese terribile.  
Thursday/Christmas/May last was a terrible day/month  
d. Il giovedì/Natale/maggio scorso è stato un giorno/mese terribile.  
the Thursday/Christmas/May last was a terrible day/month<sup>19</sup>

In one of its readings (i.e., when equivalent to 'only, unique'; in the other reading it means 'alone'), the adjective *solo* (masc. sg., but regularly inflected for gender and number—*sola*, *-i*, *-e*)—and not to be confused with the homophonous but uninflected adverb meaning 'only, just'; see Longobardi 1986 for some remarks) provides a further strong argument for N-raising. In fact, when used with a proper name introduced by an article, an inflected form of *solo* can only occur prenominally, since a postnominal occurrence is marginal in any event and necessarily displays the distinguishable 'alone' meaning.

- (32) a. La sola Maria si è presentata.  
the only Maria showed up  
'Only Maria showed up.'  
b. ?La Maria sola si è presentata.  
the Maria alone showed up  
'The Maria who is (notoriously) alone showed up.'

Certain constructions with common nouns also display this behavior.

- (33) a. La sola ragazza presente era antipatica.  
the only girl present was dislikeable  
b. La ragazza sola presente era antipatica.  
the girl alone present was dislikeable

Now, if the article is removed from the proper name, the order A + N becomes totally impossible and the order N + A comes to display the same meaning as (32a) and not as (32b).

<sup>19</sup> The paradigms in (30)–(34) are particularly important since the judgments on them are shared by speakers of all varieties of Italian, not just by speakers of the central and southern ones, and some can also be reproduced in other Romance languages such as French, Catalan, and Spanish. This confirms the plausibility of a raising analysis of determinerless proper names throughout Western Romania. In any event, it seems that in Italian the phenomenon of raising to D involves, in addition to many proper names, a few special common nouns as well, namely, a subset of kinship names and a couple of others. The behavior of such nouns directly reinforces the raising analysis presented here, but their further extremely intriguing properties deserve an article of their own and are studied in depth in Longobardi 1994a.

- (34) a. \**Sola Maria si è presentata.*  
only(FEM) Maria showed up  
b. *Maria sola si è presentata.*  
Maria only(FEM) showed up

Thus, this can be taken as a typical manifestation of the raising paradigm discussed so far. Notice, finally, that, were *sola* not inflected for feminine gender in (34a), the structure would be irrelevantly grammatical, since, as noted, the masculine singular form *solo* is homophonous with the adverbial form, which can always be prefixed (or suffixed) to any DP.

The fact that the same paradigms appear in both lexically governed and non-lexically governed positions (cf., e.g., (29) and (30)) confirms that filling the empty D by means of the raised proper name is necessary not just for syntactic reasons but also and primarily for semantic ones, namely, to avoid an inappropriate quantified interpretation of the latter position (which would result in a mass and indefinite reading for the whole nominal).

Thus, if my explanation for the paradigms discussed above is correct, the N-initial order in the articleless examples is obligatory because argument nominals need to be introduced by a D position and because such a position cannot be left empty at S-Structure, if we do not want to derive the existential interpretation mentioned above, which would be incorrect here and anyway would not be compatible with a singular nonmass noun like *Gianni*. As a result, the framework developed here makes another prediction about the behavior of adjectives and proper names, specifically, that the obligatoriness of the N-initial order may disappear with nominals in nonargument (e.g., vocative or predicative) functions, which can be realized by means of a bare NP and not necessarily by means of a DP.

- (35) a. *Mio caro Gianni, vieni qui!*  
my dear Gianni come here  
b. *Gianni mio caro, vieni qui!*  
Gianni my dear come here<sup>20</sup>

<sup>20</sup> Whereas (35a) is likely to contain just a bare NP, the structure of (35b) is potentially ambiguous between an NP with postnominal APs and a DP with prenominal APs and raising of *Gianni*. If DPs are really allowed to occur as vocatives, the question arises of how to exclude the use of the definite article in vocative DPs, even in dialects accepting *il Gianni* in argument function.

- (i) a. \**Il Gianni, vieni qui!*  
the Gianni come(IMP) here  
b. ??*I ragazzi, venite qui!*  
the boys come(IMP) here

Given that at least the Tuscan variety and literary Italian accept vocatives introduced by a demonstrative determiner or by the special particle *o* (cf. also *a* in the dialect of Rome), it is conceivable that these elements are realizations of vocative Case in the D position.

- (ii) a. *Quei ragazzi, venite qui!*  
those boys come(IMP) here  
b. *O Gianni, vieni qui!*  
VOC PART Gianni come(IMP) here

Accordingly, other determiners (*il*, *un*, etc.) would not be endowed with any form realizing vocative Case. Of

- (36) a. *Si è mascherato da vecchio Cameresi.*  
he disguised himself as old Cameresi  
b. *Si è mascherato da Cameresi vecchio.*  
he disguised himself as Cameresi old<sup>21</sup>

As suggested by these data, the prediction turns out to be correct, supporting the entire framework and explaining phenomena that would be hard to capture in an equally principled way by means of alternative approaches.

The evidence of this section thus argues for the existence of N-movement to D, and consequently in favor of the structure (2), in Italian and probably in other Western Romance languages as well.<sup>22</sup> Once we adopt (2), the natural way of reformulating the

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course, such an idiosyncratic account of the ungrammaticality of (i) leaves open the theoretical possibility that similar structures may turn out to be acceptable in some other Romance variety, which seems correct given examples such as (iii) in French.

- (iii) *Les enfants, venez ici!*  
the kids come(IMP) here

It seems, however, to be more generally the case that indefinite determiners cannot be used in the vocative.

- (iv) a. \**Un/Qualche ragazzo, vieni qui!*  
a/some boy come(IMP) here  
b. \**Dei/Alcuni ragazzi, venite qui!*  
PARTIT ART/some boys come(IMP) here

Also compare (v), minimally contrasting with (iii).

- (v) \**Des enfants, venez ici!*  
PARTIT ART kids come(IMP) here

Pending further typological investigation, it may be suggested that the highly individualizing function of the vocative (creating a direct relation between the speaker and the hearer) is semantically incompatible with indefiniteness.

<sup>21</sup> As was the case for the pair in (35), (36a) may only contain an NP, whereas in (36b) the predicate may be either a DP or an NP. Correspondingly, a difference in interpretation arises. The predicate in (36a) may have only a *de dicto* or opaque reading: it cannot imply the existence of any specific old man of the Cameresi family, but simply expresses the concept of what any male member of the family might look like as an old man. By contrast, in addition to having this reading, (36b) may be used to convey the meaning that there exists a specific old man of the Cameresi family and that the subject was trying to disguise himself precisely as this man: this is a *de re* or transparent reading. In fact, it appears more generally that the possibility of displaying a transparent reading in intensional contexts is normal for DP predicates and excluded for bare NPs.

- (i) a. *Gianni vorrebbe essere il figlio di Maria.*  
Gianni would like to be the son of Maria  
b. *Gianni vorrebbe essere figlio di Maria.*  
Gianni would like to be son of Maria

(ia) may imply that there does exist one (and only one, in the relevant domain of discourse) son of Maria, with his specific other properties that Gianni would like to enjoy; whereas (ib) seems to convey only the meaning that Gianni would like to have Maria as his own mother. For instance, if *Paolo* is the name of Maria's actual son, then, in one reading, (ia), but not (ib), could imply (ii).

- (ii) *Gianni vorrebbe essere Paolo.*  
Gianni would like to be Paolo

<sup>22</sup> For the sake of simplicity, I present a structure where D takes NP as its direct complement. However, the analysis proposed here is perfectly compatible with (and, in a sense, can be viewed as an abstraction from) more complex structures such as those proposed by Cinque (1990, 1993), Crisma (1990, 1993), and Picallo (1991), and advocated also by Valois (1991) and Bernstein (1991b), in which intermediate functional heads with their projections occur between D and N (see also Battye 1989 for an analogous structure in Italian). In

content of principle (21) becomes the following, as also pointed out by Stowell (1989):

- (21') DP can be an argument, NP cannot.

Consider in this light the syntactic licensing of NPs. Having distinguished between NPs and DPs and having argued for the structure in (2), we must now provide for the licensing of such categories under Chomsky's (1986b) principle of Full Interpretation. According to Chomsky, who follows Rothstein (1983) (also see Rothstein 1990), maximal projections, apart from operators, can be licensed either as arguments or as predicates. DP can certainly be licensed as an argument in most cases, as we have seen, or as a predicate in others (e.g., many copular or small clause constructions).<sup>23</sup> By contrast, NP was shown not to be able to assume argument function unless introduced by an overt or empty determiner (i.e., unless the complement of a D position). This fact suggests that in a structured utterance (i.e., unless used in isolation, as in vocative and exclamatory expressions) NP can only be licensed through a predicative interpretation. I propose, then, to enlarge the notion of predication so that NP can be syntactically predicated of the head selecting it, namely, of a D.

With these conclusions in mind, let us now consider certain properties of the corresponding structures in English.

#### 4 Italian and English

The surprising patterns of the preceding section and some of their semantic properties can thus be shown to follow with no additional stipulation from the head-raising hypothesis alone. The latter, however, cannot be immediately extended to proper names in English, since they, even occurring without an article, may be modified by a prenominal adjective but not by a postnominal one.

- (37) a. Old John came in.  
b. \*John old came in.

In this case it is likely that raising of N to D must take place in obligatory successive-cyclic steps, observing Travis's (1984) Head Movement Constraint, and, as a consequence, that languages lacking evidence for visible movement of N to such intermediate heads should also be expected to lack evidence of visible raising to D. For instance, this will appear to be the case in English and the other Germanic languages, according to the analysis I propose in section 6.

<sup>23</sup> In Italian there are also some environments in which predicates can be realized only as bare NPs, not as DPs. In apposition to an argument and in primary predication both options are often available,

- (i) a. Maria è (la) figlia di un generale.  
Maria is (the) daughter of a general  
b. Gianni, (il) nostro ex professore di linguistica, è diventato (il) preside della facoltà.  
Gianni (the) our former professor of linguistics became (the) dean of the faculty  
but in secondary predication and in a dislocated position only NP is possible.
- (ii) a. Gianni è tornato a casa (\*il) preside della facoltà.  
Gianni went back home (the) dean of the faculty  
b. (\*La) figlia di un generale, Maria riusciva solo a innamorarsi di uomini in divisa.  
(the) daughter of a general Maria could only fall in love with men in uniform

The rationale for such a distribution and the numerous differences with English that arise in these paradigms are in special need of future investigation.

Is it conceivable that structures like English (37a) do not contain any D or DP? In other words, is it possible that English lacks (21')? This conclusion appears to be rather odd, since it would suggest a deep interpretive difference between Italian and English nominal constructions, despite their wide range of syntactic and semantic similarities. Furthermore, Stowell (1989) arrived at a formulation similar to (21') precisely from the study of English. Finally, it seems that the consequences of (21) for the interpretation of coordinated structures can be detected in English in a way partly analogous to the way they can be detected in Italian. In fact, Carlson (1977a) had already made, for English, remarks similar to the ones made by Benincà (1980) for Italian about the neutrality of bare plurals with respect to singular/plural designation; moreover, the facts presented in (22) can be reproduced in English, although their analysis presents some independent complications.

- (38) a. The secretary and friend of John Smith is/?are coming.  
b. That secretary and friend of John Smith is/\*are coming.

For some speakers of English, both versions of (38a) are acceptable, although the second seems to be more marginal. We may propose that such extended acceptance on the part of many speakers (i.e., such ambiguity of the subject phrase) is to be attributed precisely to the fact that, unlike the Italian one, the English definite article is a determiner morphologically neutral between singular and plural:<sup>24</sup> in fact, when an unambiguously singular determiner is used, as in (38b), the expected "Italian" pattern tends to emerge more clearly. Thus, (38a–b) seem to provide a certain support for some version of (21), suggesting its validity in English as well.<sup>25</sup>

Given such results, it appears more promising to assume that, as a consequence of (21), an empty determiner is present in English (37a) and that it is then (18a–c), the

<sup>24</sup> This account of the marked acceptability of the plural reading of (38a) supposes that the agreement requirement between D and each head N, mentioned in footnote 14, is satisfied by merely formal nondistinctness of the morphological features of the article and the nouns, always leaving the possibility of being assigned a plural semantic content.

<sup>25</sup> A wide class of apparently determinerless nominal arguments is represented in English and other Germanic languages by nouns introduced by a genitive phrase 's (on whose nature in the different Germanic languages see Giorgi and Longobardi 1991). The fact that these genitive phrases are always absolutely initial in the nominal construction (in particular, they precede all adjectives) and mutually exclusive with essentially every determiner leads to the hypothesis that they surface in Spec DP and impose their own features on D via spec-head agreement. Such features on D should suffice to license a definite interpretation, preventing lexical insertion of a real determiner and freeing the empty position from the effect of any government requirement (see Longobardi 1994a for a more detailed discussion). Perhaps the same structure and similar effects can be attributed to possessive pronouns of the determiner-like type discussed by Giorgi and Longobardi (1991), such as are found not only in Germanic but also in French and Spanish. In fact, all these genitive phrases are essentially maximal projections θ-related to the head noun. Therefore, they must originate within the NP and cannot raise to an X<sup>0</sup> position like D; instead, they can only raise to an XP position such as Spec DP.

The important correlation between raising of the genitive phrase to an initial position (Spec DP, I have argued) and the genitive phrase's ability to assume a determiner function is also suggested by some diachronic data, studied by Marzolla (1991). She shows that, unlike modern Germanic languages, Old High German had AP modifiers precede genitive phrases in pre-N position and that correspondingly the latter did not assume determiner function, cooccurring with overt determiners.

licensing conditions for null Ds, that are apparently relaxed in English.<sup>26</sup> Before we consider why this should be so, let us notice that a number of other constructions in English involve superficially determinerless nominals that are unacceptable in the closely corresponding Romance examples.

First, in English many proper names that require the article in Romance occur with no surface determiner, yet the position of adjectives indicates that no head raising has taken place.

- (39) a. Amo \*(la) dolce Francia.  
I love (the) sweet France
- b. I love sweet France.
- c. \*I love France sweet.

Second, in English bare plurals and bare mass nouns are syntactically and semantically rather unrestricted, but in Romance, when possible at all (French essentially does not allow them), they may survive only in lexically governed contexts and may have only the existential reading (and not the generic one). As an illustration of the first point, consider the following contrasts:

- (40) a. \*Castori costruiscono dighe.  
Beavers build dams.
- b. \*Cani stavano seduti sul mio prato.  
Dogs were sitting on my lawn.

As an illustration of the second point, notice that the English sentence (41a) ambiguously corresponds to two distinct translations in Italian, (41b) and (41c).

- (41) a. I only excluded old ladies.
- b. Ho escluso solo vecchie signore.
- c. Ho escluso solo le vecchie signore.  
I have excluded only the old ladies

The translation (41b), which is literal (i.e., with no article), has only an existential reading (some old ladies have been excluded, but some can have been admitted), whereas (41b), with the definite article, is specialized for the generic one (in principle, all old ladies have been excluded). (Of course, (41c) also displays the definite *specific* reading, not

<sup>26</sup> A sophisticated but convincing argument for the existence of more empty Ds in English than are possible in Italian comes from the semantic analysis of the gloss of (36a), repeated here as (i).

(i) He disguised himself as old Cameresi.

Not only is this sentence grammatical in English, but it also displays a transparent reading of the predicate. Provided that the English pair (iia-b)

(ii) a. John would like to be professor of mathematics at Yale.  
b. John would like to be the professor of mathematics at Yale.

reproduces the same contrast found in the corresponding Italian structures of footnote 21, we may conclude that in English as well the transparent reading is limited to DP predicates; therefore, *old Cameresi* in (i) must be a DP and, since the head D cannot be occupied by raised *Cameresi*, it must be empty.

relevant here.) Such examples as English (41a) are important since they suggest that it is not the case that the existential and generic readings of bare nouns *always* occur in complementary distribution (also see Diesing 1989). However, in some cases they actually do. Accordingly, the following contrast in Italian (and the lack of a corresponding contrast in English) appears to descend from the same distinction:

- (42) Ho trovato/\*Amo buon vino e arance fresche.  
I found/I love good wine and fresh oranges

The single event verb *found* (essentially a stage-level predicate in the sense of Carlson 1977a, Kratzer 1988, Diesing 1988, 1989) favors an existential reading of the object, whereas the permanent state verb *love* (an individual-level predicate) forces the generic one, incompatible with bare nouns in Italian. In fact, restoration of the article also restores grammaticality, along with the generic reading, in the second Italian example.<sup>27</sup>

As a further difference, recall that not only *may* English drop the article in constructions where the Romance languages may not (generics and certain proper names), but indeed it *must*.

- (43) a. \*I love the France.<sup>28</sup>
- b. \*The beavers are mammals.
- c. \*The wine is made out of grapes.

Finally, strikingly enough, English turns out to be exactly like Romance (i.e., to

<sup>27</sup> Given the discussion in footnotes 7 and 12, it follows that in subject position of an individual non-kind-level predicate, the bare noun of a language such as English neutralizes two generic interpretations, the definite and indefinite ones, which are overtly distinct in Romance (and in principle this may also be the case in other Germanic varieties; see fn. 51).

(i) a. Beavers of this type never build dams.  
b. Water of that color can rarely be drunk.

One interpretation should result from the conversion of the normally existential reading of certain indefinite structures into generic quantification over sets, as in Italian (see fn. 7).

(ii) a. (Dei) castori di questo tipo non costruiscono mai dighe.  
(PARTIT ART) beavers of this sort never build dams  
b. (Dell') acqua di quel colore raramente può essere bevuta.  
(PARTIT ART) water of that color can rarely be drunk

The other interpretation, hardly distinguishable from the first, should correspond to the Italian form with the definite article.

(iii) a. I castori di questo tipo non costruiscono mai dighe.  
the beavers of this sort never build dams  
b. L'acqua di quel colore raramente può essere bevuta.  
the water of that color can rarely be drunk

The English structure corresponding to the latter Italian forms is the one that is likely to underlie the generic usage of bare nouns in object position and in subject position of kind-level and stage-level predicates, that is, in the environments where the generic conversion of indefinite structures such as those of (ii) is not acceptable in Italian.

<sup>28</sup> Although an independent, lexicosemantic definition of *proper name* is not obvious (see Longobardi 1994a), it would be desirable to be able to claim that all proper names of English, apart from the plural ones (which will be dealt with in section 5), drop the article. This is especially true in light of the consideration that no proper name of an individual ever takes the article; in other words, no dialect of English appears to admit

require the article) in the case of generic "substantivized adjectives," that is, arguments consisting of an adjective without an overt nominal head.

- (44) a. The rich are becoming even richer.
- b. \*Rich are becoming even richer.  
 (cf. *Rich people are becoming even richer.*)

On the basis of these paradigms we must conclude that English both allows and requires the occurrence at S-Structure of empty determiners with properties radically different from those of the Italian one. Although correct, this stipulation is, as such, highly unsatisfactory: the parametric variation is stated in a rather idiosyncratic way, it forces us to give up any possible claim to the generality of the default existential interpretation for null Ds, and it leaves unexplained the absence of lexical government effects in English and the apparently exceptional behavior of generic substantivized adjectives. In the next sections I will develop a more principled parametric account of these phenomena. First, however, I must provide a theoretical answer to some questions that are raised by the pattern of nouns and determiners in all the Romance and Germanic languages.

## 5 Some Cross-Linguistic Generalizations

The first question to be raised stems naturally from recognizing the following generalization, which appears to hold very extensively, perhaps generally, across Romance and Germanic: the only nouns in argument function that are allowed to appear at PF without any overt determiner are proper names, pronouns, plurals, and singular mass nouns. In other words, singular count nouns are always excluded.

- (45) a. Ho trovato Gianni.  
 I found Gianni
- b. Ho trovato lui.  
 I found him
- (46) a. Ho trovato amici.  
 I found friends

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anything like *il Gianni*. However, some exceptions arise at least in the case of geographical names—for example, all names of rivers and a few names of countries.

- (i) a. the Potomac  
 b. the Sudan

In the case of river names the use of the article is both possible and required. A possible speculation about the contrast between such names and the names of cities and of most countries, like *Paris* or *France*, may rely on the fact that it is always possible to add the corresponding common noun to the former, but not to the latter.

- (ii) a. the Potomac river  
 b. \*the city Paris/the Paris city

Thus, perhaps, at least cases like (ia) could be thought of as containing a sort of understood common noun licensing the article.

- b. Ho trovato acqua.  
 I found water
- c. \*Ho trovato amico.  
 I found friend

Why should this be so? Actually, it is not the case that all singular nouns that allow a count interpretation are literally excluded from the articleless construction: they are acceptable if their intrinsic meaning and the lexical environment tolerate a mass interpretation. Thus, the difference in interpretation between the following sentences

- (47) a. I ate lion.
- b. I ate a lion.
- c. I ate lions.

is that in (47a) the object nominal quantifies over the potentially infinite set of subparts of the mass "lion meat," singling out an indefinite number of them, whereas in (47b) and (47c) it quantifies over the set of individuals who are "lions," singling out just one or again an indefinite number of them, respectively. In other words, unlike articles, demonstratives, and such determiners as *every* and *each*, the empty determiner of the Romance and Germanic languages seems to impose quantification over subparts and exclude quantification over individuals whenever the head noun following it is in the singular. As we have anticipated, this property of the empty determiner is not isolated in the class of determiners, but is shared by many of the overt ones, most importantly by its closest correspondent, the partitive article "*di + definite determiner*" of Italian; but consider also, for example, the behavior of Italian *molto/-al/-il-e* 'a lot of' (inflected for gender and number in agreement with the head noun).

- (48) a. Ho trovato molti amici.  
 I found a lot of friends
- b. Ho trovato molta acqua.  
 I found a lot of water
- c. \*Ho trovato molto amico.  
 I found a lot of friend

Therefore, the situation can be described as follows. Determiners are semantically understood as operators binding a variable, whose range is always the extension of the natural kind referred to by the head noun: in the plural form of common nouns such a range is constituted by members of the extension; in the singular it is the choice of the determiner that decides whether the range is constituted by members of the extension of the kind (count interpretation) or by parts of its members (mass interpretation). Actually, the empty determiner in the Romance and Germanic languages always selects the latter option. If head nouns in the N position always refer to kinds, whose extensions are potentially infinite sets, it is not unreasonable to view their plural form or mass interpretation (where a mass is considered as a potentially infinite set of subparts) as the

unmarked realization. A singular non-mass-interpreted common noun, as in *a girl*, would then be morphologically ‘‘disguised’’ as singular just as a consequence of syntactic agreement with its determiner, which is singular because a single entity is designated. This property of agreement that ‘‘singularizes’’ head nouns should be regarded as a marked lexical peculiarity of certain determiners. In this light it is not surprising that the empty determiner, being deprived of lexical content, fails to display such a peculiarity and resorts in all the Romance and Germanic languages to the unmarked option.

The pattern of common nouns occurring with empty Ds can thus be accounted for by the suggestion just made, which crucially relies on what may be called a *denotational* interpretation of the DP structure: it takes the D position to host an operator and the common noun to define a range (i.e., a restrictive clause) for its variable. Therefore, we assume that the logical translation of a syntactic formula like (49),

- (49) [D [N]]

where D is a lexical or empty determiner and N a common noun, will be similar to (50),

- (50) Dx, such that  $x$  belongs to the class of Ns

so that (51) is to be understood as (52).

- (51) the/every table

- (52) the/ $\forall x$ , such that  $x$  belongs to the class of tables<sup>29</sup>

Thus, this approach espouses and substantiates an essentially Russellian view of definite and indefinite descriptions (see Russell 1905, 1919, and the accurate discussion in Neale 1990).

The restriction of bare common nouns to a plural or mass interpretation may therefore be considered a reflex of their kind-referring nature, which must be crucially exploited in order to provide a range to the variable bound by an operator.

Now, the fact that the other two previously mentioned types of nouns, proper names and pronouns, occur without an overt determiner but are not constrained by this plural/

<sup>29</sup> As for the question of exactly which type of operator the definite article represents in its specific usages, I will follow Russell (1905, 1919) and Neale (1990), among others, in taking an utterance of ‘the F is G’ as meaning the same as the conjunction of

(i)  $\exists$  exactly one  $x$  Fx

and

(ii)  $\forall x$  (Fx  $\supset$  Gx)

Correspondingly, an utterance of ‘the Fs are Gs’ will mean

(iii)  $\exists$  at least two  $x$  Fx

and

(iv)  $\forall x$  (Fx  $\supset$  Gx)

In the spirit of the suggestion made by Chomsky (1975), we may suppose that the particular meaning expressed by the definite article is essentially the second conjunct of the preceding formulae. The first part could be the consequence of a more general existential interpretation assigned by default to determiners and manifested most clearly in the case of the empty one.

mass restriction suggests that they are likely to undergo a radically different interpretive process. They seem to be able to dispense completely with the denotational interpretation; in other words, unlike common nouns, they need not refer to a kind and so provide a range to an operator-bound variable. That no empty determiner plays any role in the interpretation of pronouns and bare proper names is also suggested by another consideration: they surface articleless with a specific definite reading, that is, without having to display either the indefinite (existential) reading or the generic one, a restriction we have seen to necessarily constrain the interpretation of argument common nouns without an overt determiner.

In other words, a DP like *John* or *he* will not normally be understood as in (53).

- (53) Dx, such that  $x$  belongs to the class of Johns/he’s

Rather, such an expression can be thought of as directly designating the entity referred to by the pronoun or name. This semantic property of pronouns and proper names is likely to be responsible in turn for a syntactic generalization that singles out exactly the same two classes of elements. The relevant observation can be first formulated as a question internal to Romance syntax and then translated into a wider cross-linguistic generalization. The question is why only proper names and not common ones, in any possible reading, may undergo movement to D, giving rise to alternations of the sort exemplified in (22) and (27)–(29). But this problem, as just noted, has a broader typological scope. Of all kinds of head nouns throughout the Romance and Germanic languages, only two can apparently be argued to occupy the D position at PF: certain proper names in Romance, as demonstrated above, and pronouns more generally, as we will see directly. In fact, the lack of contrast between Italian and English with respect to the structure in (54)

- (54) a. Noi ricchi stiamo diventando ancora più ricchi.  
b. We rich are becoming even richer.

suggests that personal pronouns, unlike proper names, do not differ in surface distribution in the two languages and that they are likely to occur uniformly at PF in the D position, hence always preadjectively.<sup>30</sup> The fact that forms like (54a–b) never alternate with determined ones like (55a–b)

<sup>30</sup> Although the test provided in the text is of limited scope, because normal adjectives can modify only first and second person plural pronouns in this way, its result can be reinforced and extended to the whole paradigm by means of the other test, based on the inflected forms of *solo* ‘only’, introduced earlier.

(i) a. io/tu/lei sola  
I/you/she only(FEM SG)  
b. \*sola io/tu/lei  
only(FEM SG) I/you/she  
c. noi/voi/loro soli  
we/you/they only(MASC PL)  
d. \*soli noi/voi/loro  
only(MASC PL) we/you/they

- (55) a. \*I ricchi noi...  
       b. \*The rich we...

induces us to believe further that pronouns may already occupy the D position in D-Structure, thus resurrecting Postal's (1969) original theory and confirming that no N-raising process applies in the syntax of English.<sup>31</sup> Another, similar reason to suppose that pronouns, unlike proper names, are base-generated in D and not in N comes from the well-known fact that proper names can (and actually must) be treated as common nouns under restrictive relative modification and stay in N, whereas this option is normally unavailable to pronouns.

- (56) a. Il (simpatico) Gianni che conoscevo non esiste più.  
          the (nice) Gianni   that I used to know no longer exists  
       b. \*Gianni (simpatico) che conoscevo non esiste più.  
          Gianni (nice)   that I used to know no longer exists  
       c. \*Il (simpatico) lui che conoscevo non esiste più.  
          the (nice) he   that I used to know no longer exists

More generally, it seems that proper names differ from pronouns in that they may, under a relatively marked interpretation, provide a range satisfying essentially all kinds of overt or empty determiners that end up quantifying over different individuals (or stages of the same individual as in (56)).

- (57) a. I met a (certain) Mary.  
       b. I visited the (two) Marys yesterday.  
       c. every Mary I met in my life  
       d. Marys are usually nice girls, according to my experience. (generic reading)  
       e. During my visit to the U.S. I met Marys everywhere. (existential reading)

It is easy to check that replacing *Mary* by *she* in (57) yields ungrammaticality in all cases. The same results are reproducible in Italian, the only predictable difference being that the definite article is required in the generic example (57d). The rough cross-linguistic generalization appears to be the following: *Common nouns* must always be used to refer to a kind and thus may provide a range to a (lexical or overt) determiner understood as an operator, *pronouns* can never be interpreted this way, and *proper names* can, at least in marked cases, but need not. When proper names do acquire the interpretation in question, they obviously resort to their (impoverished) descriptive content, namely, they

<sup>31</sup> In fact, Postal's analysis also allows a natural treatment of phrases like (ia–b)

- (i) a. noi medici  
       we doctors  
       b. voi avvocati  
       you lawyers

as regular D + N structures, with the pronoun base-generated in D and the N position occupied by the lexical head noun at all levels of representation.

define as a range for the variable the kind of all possible individuals named that way (or the kind of all possible stages of the relevant individual named that way).

It is plausible that this postulated semantic tripartition of nominals is related to the independently attested differences among the positions that the items in question may occupy. We have recognized, in fact, that *pronouns*, being base-generated in D, never appear in the N position, that *proper names* occur in D at least in some languages, like Italian, and that *common nouns* do not normally raise to D at S-Structure, even in languages like Italian. Why should pronouns and proper names be cross-linguistically peculiar and different from other nouns with respect to their S-Structure distribution? In this framework a temporary answer may be provided by stipulating a generalization like the following, whose effects will be deduced in the appendix from deeper and more plausible properties of an updated theory of grammar:

- (58) In order to refer to a kind (in the sense specified above), a noun must head the N projections at S-Structure.

If common nouns are the ones always understood as kind-referring, it will follow that they will not be allowed to raise to D at S-Structure in any Romance or Germanic language, including those where proper names are allowed to do so. It is again the suggested irrelevance of the operator-variable interpretation for pronouns and proper names, then, that determines their peculiar distributional possibilities. Of course, the noted syntactic and semantic differences between the two latter categories must follow from the additional assumption that pronouns are not lexical nouns at all, in the sense that they are generated as the spelling out of certain person (and other) features of the head D, whereas proper names, forming a potentially open class, seem to instantiate a more lexical category naturally generated under the N position.

Such a theory explains why, in Italian, raising to D is essentially confined to proper names and does not involve, say, bare plurals, as is made clear both by their distribution, which is apparently constrained by the lexical government condition on their empty determiner, and by the possibility of the A N order:

- (59) Ci sono belle ragazze.  
          there are pretty girls

Thus, the proposed general framework of hypotheses draws a major line of separation between definite descriptions on one side and proper names on the other, practically supporting the semantic distinction between these two categories made by Kripke (1971, 1972, 1980) and assumed by Neale (1990). Accordingly, such a framework is much less compatible with the view Russell eventually ended up holding, namely, that classical proper names are just "disguised" descriptions.

As a matter of fact, the distinction postulated here between denotational (descriptions) and referential (names) interpretation correlates precisely with the results of at least two independent semantic contrasts opposing definite descriptions and proper names. First, as already noted in footnote 16, the existential import of proper names

seems never to be affected by negation or intensional predicates (i.e., names always have a *transparent*, or *de re*, reading), whereas descriptions instead give rise to frequent scope ambiguities. Compare, for instance, the unambiguous (60a) with the fully ambiguous (*de re/de dicto*) (60b).

- (60) a. Gianni vorrebbe sposare Maria.  
Gianni would like to marry Maria
- b. Gianni vorrebbe sposare la sua vicina di casa.  
Gianni would like to marry his neighbor

Correspondingly, (61a) sounds like a straight contradiction, whereas (61b) can be non-contradictory if *la sua vicina di casa* ‘his neighbor’ is read with different existential scopes in the two clauses.

- (61) a. Gianni vorrebbe sposare Maria, ma non vorrebbe sposare Maria.  
Gianni would like to marry Maria but would not like to marry Maria
- b. Gianni vorrebbe sposare la sua vicina di casa,  
Gianni would like to marry his neighbor (in principle)  
ma non vorrebbe sposare la sua vicina di casa.  
but would not like to marry his neighbor (the actual one)

Such implication of unconditioned existence of the *designatum* borne by DPs headed by proper names might follow from their referential interpretation in conjunction with one natural assumption, apparently also shared by Russell’s theory of reference and descriptions (see Neale 1990:19), namely, that an utterance of a sentence containing a genuine referring expression expresses a meaningful proposition only if that expression has a referent.<sup>32</sup>

<sup>32</sup> A potential problem for the generalization in question might be represented by fictional names, the apparently most plausible candidates for Russell’s analysis of names as “disguised” or “abbreviated” descriptions. In fact, it might seem that such names are not read *de re* in intensional contexts, although they display exactly the same syntax as nonfictional proper names.

(i) Mary would like to marry Hamlet.

However, it is doubtful that in sentences like these the fictional name is really understood *de dicto*. Consider, for instance, the following situation: John is a pagan who strongly believes in the existence of the classical Olympic gods and further believes that sometimes they marry mortals. In such a situation, we might truly say of him

(ii) John wants to marry Aphrodite.

Now, since John is a sincere and persuaded believer, it seems that the *de dicto* informal representation in (iii)

(iii) John wants there to exist  $x$ , such that  $x =$  Aphrodite and he may marry  $x$ .

does not capture our semantic intuitions about (ii), which are better approximated instead by (iv).

(iv) there exists  $x$ , such that  $x =$  Aphrodite and John wants to marry  $x$

Of course, in order to adopt this *de re* representation, making it compatible with our being nonpagans, it is necessary to relativize existence, in such cases, to particular worlds that are fictional but whose essential structure is well known among the speakers involved: such could be the world of the classical pantheon, of the Shakespearean tragedies, and so on (on this point, see also a parallel remark in Bonomi 1975:51–52).

Another counterargument to a *de dicto* representation of fictional names may come from the behavior of analogous definite descriptions. Let us imagine a domain of discourse involving a particular literary (say,

Another peculiarity of proper names has been pointed out by Kripke (1971, 1972, 1980) under the label of *rigid designation*. Kripke remarks that proper names, unlike allegedly equivalent descriptions, appear to designate the *same* object throughout all possible worlds (i.e., also in counterfactual situations). Compare the following two sentences:

- (62) a. Anselm was born in Aosta and became archbishop of Canterbury.
- b. The discoverer of the ontological proof was born in Aosta and became archbishop of Canterbury.

In the actual world these two propositions are both true, and their truth can be ascertained by inspecting the biography of one and the same person. But let us imagine a counterfactual world in which the ontological proof was discovered by Albert of Saxony: in such a world the truth of (62a) would depend on the biography of the same character as before, namely, Saint Anselm, but the truth of (62b) would now be contingent on the biography of a totally different person. As Kripke notes, it seems impossible to imagine any world where the truth of examples such as (62a) depends on something other than the biography of Anselm himself. It is in this sense that proper names can be said to designate the same object *rigidly*, that is, in all possible worlds.

The articleless occurrence of proper names appears in many cases to be crucial in order for them to display both the properties in question (transparency and rigidity), as suggested by examples like (63a–b).

- (63) a. John would like to marry *a* Mary.
- b. *The/An* Anselm I met yesterday was born in Aosta.

In (63a) *a* Mary can easily be read *de dicto* (opaquely), and in (63b) it is possible to imagine different designations in different conceivable worlds, according to which particular Anselm I met in each of them (on these problems, however, see also the end of section 7).

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dramatic) genre, where one of the fixed fictional characters is normally termed *the woman next door*. Suppose now that within such a context the following sentence is uttered:

- (v) John would like to marry the woman next door.

It is clear that such a sentence would be at least three-ways ambiguous: in addition to the classical *de re/de dicto* ambiguity with reference to the normal world of everyday life, a reading in which the definite description denotes in the aforementioned fictional world must be considered. This reading, which would be exactly analogous to that of (i), must thus be distinguished from both readings concerning the normal world. Once such a move is made, one way or the other, it becomes clear that the *de re/de dicto* distinction is incapable of capturing the semantic contrast between fictional and nonfictional readings of (v) and, by analogy, of sentences like (i). It is then plausible that fictional nominals must be interpreted with reference to a fictional (e.g., literary) world of their own and that in such a world they may assume the *de re* reading. If this approach is correct, we will be naturally led to the prediction that the latter reading will be obligatory in the case of a proper name like *Hamlet*, but will potentially alternate with the *de dicto* interpretation in the case of a description. Although subtle, it seems that the prediction is correct: in fact, *Hamlet* is likely to make no sense unless used in a well-defined literary context where such a character has already been invented, whereas *the woman next door* might be employed just to propose the invention of a new character, say, on the analogy of similar, already established ones (*the old man upstairs*, *the janitor*, etc.).

Of course, the present proposal crucially presupposes that substitution of N into the D position does not allow any “reconstructed” analysis at S-Structure, at least with respect to the principles of interpretation above: the noun itself and not its trace must head the NP at S-Structure to satisfy the requirement for a kind-referring interpretation.<sup>33</sup> Intuitively speaking, it seems that the D position (the operator) and the N position (the range) must count as two separate entities and not as members of the same chain in order to trigger the operator-variable interpretation. This way of formulating the problem leads us, in turn, to capture another cross-linguistic subgeneralization: among the Romance and Germanic languages we have noted cases where raising to D can be argued to apply quite widely, also affecting common nouns—namely, in Romanian and Scandinavian (see, e.g., the Norwegian examples in (4)–(5)). At first sight, this should not be tolerated according to the principles as formulated; but notice that if the relevant requirement is understood in the sense just explained, the Romanian and Scandinavian cases fail to violate it, because in the latter languages raising to D does not obliterate the determiner, as in Italian, but incorporates it into the noun. I believe that this is not due to chance but reflects a significant typological generalization holding throughout Romance and Germanic, which would be a correct consequence of the irrelevance of the interpretive strategy (50) for proper names.

#### (64) *N-Raising Generalization*

In languages and constructions where raising of the head noun to the D position substitutes it for the article, only proper names are allowed to raise; in languages and constructions where raising adjoins (prefixes) the noun to the article, common nouns also may be allowed to raise to D.

It thus appears that for head movement, two subcases with distinct properties must be defined, exactly as for movement of maximal projections: substitution, which exhaustively occupies the landing head position, and adjunction, which preserves the independent content of the landing position and, in our specific case, allows the trace of the raised N to provide the required quantificational range to the now surviving D position.<sup>34</sup>

In this section I have provided a preliminary explanation for a number of striking and so far poorly studied generalizations that characterize determiners and nouns throughout most Western European languages. Although still refinable in various ways, this proposal also serves as a basis on which to attempt a nonstipulative approach to the cluster of Italian/English contrasts described in section 4.

## 6 The Parametric Proposal

In this section I hypothesize the existence of a parameter distinguishing Italian from English (and more generally Romance from Germanic) with respect to the differences

<sup>33</sup> This generalization tolerates a few apparent exceptions in the case of the raised common nouns of Italian briefly mentioned in footnote 19; for discussion, see Longobardi 1994a.

<sup>34</sup> For the idea that substitution and adjunction must be crucially distinguished in the theory of head movement, also see Rizzi and Roberts 1989 and especially Roberts 1991, 1992.

listed in section 4 and displaying the following theoretically desirable properties: it will have a form similar to that of other well-established syntactic parameters, it will be able to explain the unexpected lack of contrast between the two languages concerning examples (44a–b) (substantivized adjectives), and it will be compatible with the plausible assumption that both the lexical government requirement and the default existential interpretation are universal constraints on empty determiners and not marked idiosyncrasies of Italian syntax.

Let us assume, therefore, that both (65) and (66) are universal principles.<sup>35</sup>

(65)  $[_D e] = \text{default existential interpretation}$

(66) An empty head must be lexically governed.

Imagining, especially on the grounds of the discussion in section 5, that  $[Dx: NP(x)]$  is a rough logical translation for D-NP structures, (65) amounts to saying that a D devoid of overt lexical content is always translated into the formula above as a pure existential operator, perhaps the semantically unmarked option, as giving rise in many cases to the least easily falsifiable statements. (66), in turn, is likely to be just one consequence of the general proper government condition requiring a lexical or coindexed head governor for every nonpronominal empty category.

The following parameter can now be proposed:

(67) *Parameter*

N raises to D (by substitution) in the Syntax in Italian but not in English.

This parameter appears to be a plausible instantiation of the well-known parameter schema first proposed by Huang (1982): some languages perform only in LF the same movement operations that other languages already perform in the Syntax. If this is the general pattern, we may expect English to be able to substitute N for D as Italian does, but only as an instance of LF movement.

Let us now consider how this parametric hypothesis can account for the basic properties of English determiners and nouns noted in section 4. In its essentials, the solution will consist first of transposing the well-motivated raising analysis of Italian proper names to English proper names and then of applying it to the problem of English bare nouns more generally.

Suppose, thus, that the principles in (65)–(66) are checked at the level of LF: the status of (37), repeated here, now becomes unproblematic.

- (37) a. Old John came in.
- b. \*John old came in.

In fact, (37b) is immediately ruled out by the formulation of (67) (lack of visible N-raising

<sup>35</sup> It would probably be surprising if (65) and (66) were not part of English grammar and UG as well, for independent reasons: (65) because of the unmarked nature of the interpretation it imposes, as discussed in footnote 8, and (66) as a consequence of some version of the head government condition on empty categories, which is visibly active in English to similarly constrain the distribution of heads like empty C.

in English), whereas (37a) is neither excluded by a head government violation nor ruled semantically inappropriate by the existential reading imposed on the empty D if LF raising to fill in the latter has taken place before the application of (65)–(66).

The logical form of (37a), then, unlike its S-Structure representation, will not contain an empty D but rather a trace of N and will look like (68), mirroring the S-Structure representation of a corresponding Italian sentence.

- (68) [John [old e]] came in<sup>36</sup>

Recall now that we saw evidence in section 5 that the predicative licensing of NPs must be satisfied at S-Structure, universally preventing bare common nouns from substituting into D before such a level. This leaves open the possibility that as a result of LF movement not only proper names but also determinerless common nouns may undergo raising to D, once they have satisfied the predicative licensing in the N position at S-Structure. In this sense, we can expect LF movement to raise even more types of head nouns to D than the syntactic movement visible in Italian. Hence, it comes as no surprise that English bare plurals and mass nouns may occur in non-lexically governed positions and are not necessarily confined to the existential interpretation imposed by principle (65). In fact, in (69a–b)

- (69) a. Big beavers build dams.
- b. Fresh water is often drinkable.

the nouns *beavers* and *water* can be assumed to substitute in LF for the empty D to prevent a proper government violation, and the above-mentioned ambiguity of (41a)

- (41) a. I only excluded old ladies.

will be due to the fact that *ladies* is allowed to LF-raise to fill in the empty D position before the application of principle (65) assigns it the existential interpretation. If the noun actually raises, the structure may receive the generic reading.

Now, why does Italian differ from the English pattern in the way outlined throughout this article? Recall that I have pretheoretically acknowledged, in my formulation of generalization (18), that it is the visible, S-Structure distribution of the empty determiner that is constrained by the lexical government requirement and by the default existential interpretation in Italian. The fact that Italian apparently cannot escape the strictures of principles (65)–(66) exploiting N-raising in LF in the same way as English does thus

<sup>36</sup> The same LF raising analysis would be assigned to the English geographic names whose Italian correspondents require the article (e.g., (39)). If the Italian side of the parameter is representative of the whole *Romania*, as I believe, it is then necessary to analyze the articleless occurrences of names of countries found in Spanish or Catalan (and Old Italian) as cases of syntactic N-raising to D. The apparently correct prediction of this analysis is that the formal resemblance of such structures to the English ones should break down when an adjective precedes the head noun: in fact, in this situation Spanish and Catalan country names cannot remain articleless. In Italian such names, as well as last names referring to women (e.g., (25)) and certain other names (e.g., those of firms, associations, and sports teams), should be lexically marked as nonraising precisely on the basis of their belonging to these semantic classes.

seems to follow from one of two possibilities: either Italian lacks LF raising of nouns altogether or (65)–(66) apply at S-Structure and cannot be delayed until LF, in Italian, so that any application of LF movement would be irrelevant.

The first solution appears less plausible from a theoretical and typological point of view. It is often claimed that the canonical situation is that core movement rules are the same for all languages in LF and that some parameterization applies to their availability before S-Structure; this view is supported by the fact that in the well-studied case of the *wh*-movement parameter (Huang 1982 and subsequent work) languages that display movement in the Syntax, like English and French, can all be claimed to allow instances of the same movement in LF.

The second solution looks more promising, especially if we can show that it need not be stated as a separate parameter independent of the one in (67). Consider that, in the spirit of Pesetsky's (1989) Earliness Principle, we might formulate a general cross-linguistic condition on the level of application of (65) and (66) in the following way:

- (70) The default existential interpretation is assigned to DPs as early as possible (S-Structure or LF, depending on the movement parameter) and cannot be changed in the course of the derivation.
- (71) Condition (66) on empty Ds is also checked as early as possible.

The plausibility of this approach is suggested by its similarity to the one that seems to be required by certain contrasts between a language with both syntactic and LF *wh*-movement, like French, and Oriental languages without syntactic *wh*-movement (see Pesetsky 1989).<sup>37</sup>

It is now clear that the assumption that the application of (65)–(66) already takes place at S-Structure in Italian but may be delayed until LF in English can plausibly be considered as an indirect consequence of parameter (67), which then explains all the major differences between the two languages in the distribution and interpretation of

<sup>37</sup> In French, question *wh*-phrases can be left in situ, but when embedded in a subordinate clause, they are unambiguously construed as having “root” scope; that is, the matrix sentence is always a direct question and the embedded one a declarative. The reverse interpretation, which should be produced by the *wh*-phrase taking narrow scope over the subordinate clause and turning it into an embedded question, is impossible even when the matrix predicate could select a +*wh* complement (i.e., an indirect question), as in (i).

(i) Tu sais que Marie est allée où?  
you know that Marie went where

Now, it seems to be a fact that analogous sentences are ambiguous in Chinese and Japanese, allowing the *wh*-phrase to take both “root” and embedded scope (again, see Huang 1982, Lasnik and Saito 1984 and subsequent work). An immediate interpretation of this contrast is that in languages with the syntactic movement option the declarative or interrogative status of a complement CP must already be decided at S-Structure, depending on whether a *wh*-phrase has been moved into its specifier position or not, whereas if no such movement is allowed before the LF component, the same decision (or checking) may be delayed until the LF level. The idea is summarized in (ii), whose formal resemblance to (70) is apparent.

(ii) ±*wh* status is assigned to embedded CPs as early as possible (S-Structure or LF, depending on the movement parameter) and cannot be changed in the course of the derivation.

The same insight is rephrased in a sort of complementary way by Chomsky (1993), whose suggestions are developed and applied to the present case in the appendix at the end of this article.

empty determiners. However, two more questions remain to be addressed concerning the application of the proposed account to the patterns noted in section 4. First, we must explain the surprising convergence between English and Romance in the case of generic substantivized adjectives. The fact that English requires the definite article even in the plural interpretation, as exemplified in (44), repeated here,

- (44) a. The rich are becoming even richer.
- b. \*Rich are becoming even richer.

is so striking and pretheoretically unexpected, in the light of the rest of the paradigm, that being able to account for this property can be regarded as a very strong test for a successful parametric theory of English and Romance generics. In the framework proposed here this peculiarity of the English pattern appears to be theoretically predictable on the basis of independent assumptions. In fact, I have claimed that articleless generics in English are made possible by raising of the lexical head noun to fill the D position in LF. But, if no overt noun is present, as in the case of substantivized adjectives, this strategy cannot be invoked. *A priori*, another option remains, namely, raising the adjectival head; however, a visible movement of A to D seems not to be attested in the syntax of any Romance or Germanic language. Supposing that substantivized adjectives are actually regular NPs with a null head and the AP occurring in their specifier position, then raising from A to D is likely to be ruled out in principle as a violation of Travis's (1984) Head Movement Constraint, essentially since A is not the head of the direct complement of D.<sup>38</sup> If LF movement obeys at least those conditions that constrain visible movement, as appears to be true in many cases (cf. the Correspondence Hypothesis proposed in Longobardi 1986), it follows that no movement of A to D will be possible in English LF, reproducing for substantivized adjectives a situation essentially analogous to that typical of Romance. Thus, this framework of hypotheses correctly predicts that the pattern of English substantivized adjectives will reproduce that of Italian: for the generic reading, an article must be inserted just in order to prevent the D position from being empty at LF and falling under the strictures of (65)–(66); the bare form is at best very marginal, heavily depending on the lexical choice of the adjective, and whenever interpretable at all, it seems subject to the existential interpretation and to the lexical government constraint, like bare nouns in Romance.

- (72) a. ??There were homeless everywhere.
- b. \*Homeless were everywhere.

The second problem to be addressed concerns, instead, how a bare noun is sometimes allowed to achieve an existential interpretation in one non-lexically governed environment in English, namely, in subject position of stage-level predicates like those in (73).

<sup>38</sup> The same reasoning remains true if APs are taken to occur in the specifier position of some intermediate functional phrase appearing between D and NP, as proposed by Cinque (1990, 1993) and in some of the other references cited in footnote 22.

- (73) a. Dogs were sitting on my lawn.
- b. Dogs were everywhere.

Since we have proposed to address the problem of English bare nouns along the lines of the solution provided for proper names—the latter are taken, by means of one and the same device, namely, raising to D (visible in Italian, abstract in English), to escape both the existential interpretation and the strictures of the lexical government requirement—we are induced to predict the existential reading of bare nouns as in (73) to be ruled out in non-lexically governed positions. Actually, according to various authors (see Diesing 1988, 1989, Kratzer 1988, Brugger 1990), it appears that this prediction is essentially correct in so closely related a language as German. Furthermore, similar data arise in Scandinavian, according to Tarald Taraldsen (personal communication). Thus, the basic typological generalization is likely to be not just that a language's ability to license bare nouns surfacing outside VP correlates with its ability to have generically interpreted bare nouns but also that, in the unmarked case, bare nouns outside VP can only be generically interpreted. At least, this appears to be the situation in all the Continental Germanic languages.<sup>39</sup> Therefore, it seems correct for the proposed framework to regard the acceptability of (73) in English as a marked phenomenon. Such predicted markedness of the existential interpretation of bare noun subjects appears to be empirically reflected by the influence that different lexical choices in the predicate have on it.

Next let us consider which particular mechanisms could account for (73) in the system presented here. One possible proposal might crucially exploit the derivational properties of grammar in order to derive (73) and to express its marked character. Consider, in fact, that nothing so far prevents the default existential rule (65) from optionally applying at S-Structure in English, while the proper government requirement (66) may continue to be checked at LF. Suppose that this is actually what happens in (73): default existential closure determines the interpretation of the empty D introducing *dogs* as early as S-Structure, but later LF raising of the head noun itself fills this position, preventing a violation of (66) at LF. The critical role played by N-raising to D in avoiding a proper government violation in this case as well is strongly suggested by the unacceptability of the same construction with substantivized adjectives (see (72)), that is, precisely in the one structure where movement to D has been argued to be inapplicable. The marked flavor of the construction (essentially its restriction to stage-level predicates) may conceivably be related in some way to the fact that in the presence of the obvious mismatch between the appearance of S-Structure and that of LF it is the former that determines the quantificational interpretation of this construction. As noted, other languages seem

<sup>39</sup> Since such languages are all V2 languages in the matrix clause, the relevant position external to VP is that of subjects of subordinate clauses introduced by an overt complementizer. In the latter clauses it is clear that the subject position outside VP is Spec IP, as in English, and that it is not lexically governed (see Diesing 1989). The position of Spec CP, often moved into by subjects in main clauses as a result of the V2 constraint, is likely to be irrelevant to the present discussion, since it seems to allow reconstruction of the interpretive properties of the moved item into its base position (like topicalization in Italian; cf. fn. 10), which is likely to coincide with a VP-internal extraction site.

not to accept this peculiar strategy, limiting the existential interpretation to LF formulae or "freezing" already interpreted S-Structure representations.

However, an appealing alternative approach is also conceivable. Kratzer (1988) and Diesing (1988 and especially 1989) have already independently proposed that in English the subjects of stage-level predicates (i.e., exactly those allowing the existential interpretation found in cases like (73)) can be reconstructed into a VP-internal position at LF, even though occurring in Spec IP at S-Structure. This position, probably identifiable with Spec VP, is likely to satisfy the lexical government conditions for empty categories either by virtue of the head V, a lexical governor, or of the head I: the latter could probably govern under coindexing a subject phrase lying in the specifier position of its complement VP. In fact, it is suggestive that in German, where a comparable VP-internal position can be occupied by subjects at S-Structure as well, extraction of proper subparts of such subjects is grammatical, though still excluded for subparts of subject phrases lying in Spec IP (see Diesing 1989). This could be attributed to a difference in L-marking (in Chomsky's (1986a) terms) between the two positions, obviously correlated with a difference in "proper" or "lexical" government of the kind relevant for the licensing of empty heads. Therefore, the independent assumptions made by Kratzer and by Diesing, in interaction with the framework proposed here, seem to lead to exactly the (correct) prediction we were aiming at: the empty D of (73) will be in a properly governed position at the relevant level of representation (LF) in English; it will not need to be filled by N-raising and will receive a default existential interpretation. This possibility of lowering the subject into VP at LF being restricted to English, as claimed in the references cited, it is also correctly predicted that in other Germanic languages no existential bare noun will ever arise in Spec IP.

## 7 The Concept of Expletive Article

Now consider the interpretation of generic DPs in English. We have seen that such constructions might exemplify a case of N-raising to D in LF. Thus, the LF structure of (69a–b), for example, should look like (74a–b),

- (74) a. [beavers [big e]] build dams
- b. [water [fresh e]] is often drinkable

whose resemblance to the assumed LF structure of singular proper names, as was exemplified in (68), repeated here, is obvious.

- (68) [John [old e]] came in

Since LF was shown to be the interpretively most relevant level for Ds and Ns at least in English, it is plausible that this formal similarity between the LF structures of generics and proper names corresponds to some similarity of interpretation. The hypothesis is quite appealing, though it faces some difficulties that must be removed. In particular, we have seen that although the syntax of these two types of expressions could be virtually

identical in English (they would both stay in N at S-Structure and raise to D in LF), it differs in Italian: generics must remain in N at S-Structure, whereas many proper names can raise (and actually must if no determiner is inserted).

This appears to suggest that generics have some properties of proper names and other properties of the normal specific usages of common nouns. In fact, like proper names, generics in English leave no place in D for an overt empty operator (a lexical determiner or a default existential); this excludes for them the possibility of a DP-internal quantification, suggesting the existence of some sort of barely referential interpretation. On the other hand, given the interpretation advocated in section 5 for the N position (i.e., that a head noun in such a position at S-Structure refers to a natural kind), it is obvious that generically interpreted nouns, being expressions for kinds, must occur in N at that level, even if, in this case, the extensions of such kinds will not necessarily provide the range of an operator-bound variable. Hence, combining these two insights, we may conclude that the syntactic evidence provided by the proposed analysis supports, for generics, a definition originally proposed by Carlson (1977b) for all English bare plurals: that they are names for kinds. Thus, they designate the whole kind referred to by the head noun.<sup>40</sup>

The difference between generics and real proper names is that the latter, in their specific articleless usage, instead seem to always refer to an entity intrinsically conceptualized as unique in the domain of discourse. This interpretive property of proper names is independently suggested by the fact that whenever they occur in the plural, they lose their peculiarities and behave like common nouns. In particular, in a paradigm like (57), reproduced here,

- (57) a. I met a (certain) Mary.
- b. I visited the (two) Marys yesterday.
- c. every Mary I met in my life
- d. Marys are usually nice girls, according to my experience.  
(generic reading)
- e. During my visit to the U.S. I met Marys everywhere.  
(existential reading)

the bare occurrences of plural proper names ((57d) and (57e)) can only have the generic or existential reading; the only way they can acquire a definite specific reading is by taking the article as in (57b). This behavior is not peculiar to English but also holds of the Romance languages, with the predictable difference that the generic reading requires the definite article, bare nouns being interpreted only existentially.

<sup>40</sup> It is not empirically clear whether generic phrases display the transparency and rigidity properties typical of raised proper names. However, it is not implausible that in sentences like (i)

(i) A friend of mine would like to study dinosaurs.

dinosaurs is necessarily *de re* and rigid. For proposals that simple generic nominals designating natural kinds are actually rigid designators, see Putnam 1970 and Kripke 1972, 1980.

- (75) a. Ho telefonato alle (due) Marie.  
I called up the (two) Marias  
b. Le Marie di solito sono brave ragazze.  
Marias usually are good girls  
c. Ho incontrato Marie dappertutto.  
I met Marias everywhere

In fact, English and Romance notoriously cease to contrast also with respect to plural family or geographic names, as in the following case:

- (76) a. I visited \*(the) United States.  
b. Ho visitato \*(gli) Stati Uniti.

This domain of facts is likely to suggest that a crucial empirical property of the ontology supposed by the semantics of natural language is that, abstracting away from events and states, it contains only two types of entities: single individual objects (sometimes conceived of as consisting of stages or material subparts) and whole kinds, but no subsets of the extensions of such kinds. Therefore, the only entities that may be referred to by nominals are exactly these, producing the two basic cases of directly referential expressions: singular proper names and (some) generics.<sup>41</sup> All plural specific readings of DPs must thus be attained through an operator (determiner)-variable structure.<sup>42</sup>

Thus, let us reformulate and clarify the semantic assumptions that the proposed syntactic analysis of nominals seems to lead to. We can affirm that the N position is interpreted as referring to universal concepts, that is, to kinds; the D position, instead, determines the particular designation of the whole DP, either directly, by being assigned reference to a single individual object, or indirectly, by hosting the operator of a denotational (operator-variable) structure. The specific readings of common nouns are all obtained by letting the variable bound by the operator (whether lexically present or understood) in the D position range over the extension of the kind referred to by the N position. The specific definite reading of determinerless proper names is obtained by raising the head noun to D at some level of representation and leaving the foot of the chain (i.e., the N position) *uninterpreted*. In this technical respect, DPs headed by proper names can be correctly claimed not to resort to any denotational structure (i.e., kind-referring content) to be interpreted, but just to directly designate the individual object the name

<sup>41</sup> Pronouns appear to differ from proper names in that they exhibit plural forms occurring in D (see section 5). Although we will not be concerned with that problem here, it is interesting to note that at least in the first and second person the so-called plural pronouns do not seem to exactly represent the plural of the supposed corresponding singular: for example, *we* does not mean *several I's* but rather *I and someone else*. This is also reflected in the lack of morphological correlation between singular and plural forms of first and second person pronouns in many languages. Therefore, the very notion of plurality might be inappropriate for such expressions. A similar line of reasoning cannot, however, be easily applied to the problem of third person pronouns (also see Benveniste 1966). It is also possible that pronouns and indexicals more generally are outside the core ontology system sketched in the text.

<sup>42</sup> This means that collective readings of plural DPs will have to be regarded as derivative effects, that is, as being formed by constructing the set of the values assigned to the variable in the relevant quantificational interpretation.

refers to. The ontology hypothesized earlier restricts this possibility to singular names. Now, the interpretation of generics can be clarified in a much better way, particularly on the basis of the assumed syntactic behavior of the English ones. They also create a chain at LF between D and N, but only the latter is interpreted; therefore, in this case it is D, the head of the chain, that is left uninterpreted.<sup>43</sup> The argument status of such expressions requires a DP (recall (21')), but the semantic content of the latter amounts just to the designation of the kind referred to by the noun.

It is worth stressing that this analysis, in addition to capturing the essentially *referential* function of many generics, does not exclude another type of generic interpretation, the *quantificational* one, along the lines of a distinction identified by Gerstner and Krifka (1987) and Wilkinson (1988). So conceived, generic DPs can, as a whole, provide the quantificational range to the special invisible operator *Gen* or to Lewis's (1975) adverbs of quantification, as often proposed in the literature (see, among others, Diesing 1989).<sup>44</sup> Indeed, such abstract operators could quantify over a full DP without heading it, in a way similar to *all*, which in fact introduces generic DPs as well as specific DPs and proper names (also see Giusti 1993).

- (77) a. all men  
b. all the men in this class  
c. all of John, Mary, and Bill  
d. all of Italy

External quantification over DPs by *Gen* or by an adverb appears to be independently motivated. It is likely to take place obligatorily with singular and plural indefinite generics in subject position of individual non-kind-level predicates (see fns. 7 and 27).

- (78) a. A large dog is (often) hard to raise.  
b. Three large dogs are (often) hard to raise.

Therefore, it is plausible to extend the possibility of its application to generically understood English bare nouns and Romance definite DPs in the same environment.

- (79) a. Large dogs are (often) hard to raise.  
b. I cani grossi sono (spesso) difficili da allevare.  
the large dogs are (often) hard to raise

<sup>43</sup> This interpretive difference that I postulate between two supposedly similar LF structures, those of English proper names and generics (see (74)), is likely to be empirically manifested by a difference in the reading of adjectives modifying them. Whereas predicative APs modifying articleless proper names can only be read appositively (unless they are taken to "quantify" not over individuals but over subparts of the designated individual; for example, *southern France* but *the southern France* if there were, say, two Frances, one of which was in the Southern Hemisphere), those modifying generics can be restrictive.

- (i) a. Old John is nice.  
b. Old ladies are often nice.

Although theoretically poorly understood, the generalization seems to correlate in an interesting way with the interpretive distinction proposed here.

<sup>44</sup> The presence of such operators might also contribute to explaining in part the distribution of two formally distinct generic nominals in the Continental Germanic languages (see fn. 51) and the scopal effects noticed for bare nouns by Delfitto and Schroten (1991) and apparently overlooked by Carlson (1977a,b).

Thus, with English generics a chain relates two differently relevant positions. Since the meaning and distribution of Italian generics appear to be the same as those of English ones, it would be implausible for Italian to resort to a radically different mechanism of interpretation. However, as we have seen, in Italian the D position cannot remain empty at S-Structure unless the existential interpretation is required, and thus, some morpheme must in any event be inserted as a determiner, namely, the definite article. The same link between D and N established in English through an LF chain must then hold in Italian generics by means of a relationship between the head noun and the overt article. By analogy with the terminology used for the closely corresponding relationships established between maximal projections, we can say that the two relevant positions are related by a CHAIN (Chomsky 1986b) in Italian and that the overt definite article heading generic DPs is an *expletive* one. Consider also that it is not the case that expletive articles in this sense are exclusive to Romance generics. We have seen that if a head noun is in the singular, the nonmass interpretation can never be expressed through the empty determiner; therefore, there are independent reasons to expect singular generics to be necessarily introduced by an article in English as well whenever they express the count reading.<sup>45</sup> This prediction is obviously correct.

- (80) a. The lion has four legs.  
       b. \*Lion has four legs.  
       c. Lion is not good to eat.

The notion of expletive article just introduced significantly converges, apart from minor differences, with the analogous one independently reached, as the result of an articulated semantic analysis, by Vergnaud and Zubizarreta (1990, 1992a) and can also be constructed from a slightly different perspective.<sup>46</sup> Recall that proper names have been shown to be universally able to achieve their specific definite reading without resorting to the operator-variable structure that requires the D position to have substantive semantic content. Thus, those instances of the definite article sometimes employed to introduce certain unmodified proper names, as in Italian, need not be considered as having substantive semantic content but can rather be regarded as other instances of expletive articles, heading a CHAIN that alternates in some cases with the corresponding chain.<sup>47</sup> Therefore, the alternations displayed in (24), reproduced here,

<sup>45</sup> In this sense, imposing the mass reading on singular head nouns must be a property of determiners that are empty at S-Structure, a property that becomes operative whenever the N itself is semantically interpreted (i.e., whenever such a position is used to refer to a kind and to provide a *potential* range). In other words, the restriction is active with generic expressions as well, where the D does not function as an operator and therefore the range is not *actually* used. Only proper names, leaving the N position uninterpreted, can escape the constraint.

<sup>46</sup> The intuition that the article employed in sentences like (80a) actually has no real semantic content is anticipated by Ramat (1985:sec. 3,4).

<sup>47</sup> Correspondingly, the interpretation of such DPs does not differ from that of bare proper names; for instance, the semantic properties noted in section 5 as opposing names to real descriptions (obligatory transparency and rigidity) can be exactly reproduced for such proper names introduced by the article in Romance. It is not obvious, however, that this constitutes a genuine additional argument for the expletive nature of that article, since the same properties seem to hold for plural proper names, such as those of (76), where the article will be argued in section 8 to be nonexpletive.

- (24) a. Gianni mi ha telefonato.  
           Gianni called me up  
       b. Il Gianni mi ha telefonato.  
           the Gianni called me up

can be viewed as analogous to the well-known ones exemplified in English structures like the following:

- (81) a. Many people were killed.  
       b. There were killed many people.<sup>48</sup>

There is even a piece of evidence suggesting that the article introducing simple, unmodified proper names not only *can* but actually *must* always be understood as expletive. Such evidence can be constructed in Italian, on the basis of an original observation by Guglielmo Cinque (personal communication). He points out that coordination of two NPs, one headed by an unmodified proper name and the other by a common noun, excluding the definite article, turns out to be sharply impossible in all dialects, thus contrasting with the results of (22a).

- (82) \*La Maria e (mia) segretaria è arrivata in ritardo.  
           the Maria and (my) secretary arrived late

The otherwise surprising ungrammaticality of this coordination can be immediately explained by the assumption that the two NPs do not meet the requirement of identity in interpretation that seems to be necessary for coordination; in fact, according to the proposed analysis, *segretaria* must be a predicate instantiating a range for the article understood as an operator, whereas *Maria* need not do so. The case in (82) suggests an even stronger conclusion, namely, that it is never allowed to do so.<sup>49</sup> In fact, singular proper names seem more generally to be intrinsically object-referring expressions and

<sup>48</sup> It is conceivable that (24b) and similar sentences come to display the same logical form as (24a) through an LF rule of "expletive replacement" substituting *Gianni* for *il*. The rule would be analogous to the one sometimes proposed to unify the logical forms of pairs like (81) (cf., e.g., Chomsky 1986a).

<sup>49</sup> It should be easier to coordinate a common noun with a proper name clearly used as a predicative expression providing the quantificational range to a nonexpletive article. Though somewhat marginal and emphatic in style, some sentences appear to fulfill this prediction, since they sharply contrast anyway with the completely ungrammatical example (82).

- (i) a. ?A quell'epoca la Roma dei Cesari e urbe dell'orbe  
           by that period the Rome of the Caesars and the capital city of the world  
           già non esisteva più.  
           already no longer existed  
       b. ?A quell'epoca la Parigi di Saussure, di Bréal e di Meillet  
           by that time the Paris of Saussure, Bréal, Meillet  
           e città guida della comparatistica europea era ormai solo un ricordo del passato.  
           and leading city of European comparative philology was nothing but a memory of the past  
       c. ?Il Dante della Commedia e massimo poeta italiano  
           the Dante of the *Commedia* and greatest Italian poet  
           non è sempre facilmente reconoscibile nei versi della *Vita nova*.  
           is not always easily recognizable in the poems of the *Vita Nova*  
       d. Questo Cicerone o Tullio, che dir si voglia, fu il più famoso avvocato romano.  
           this Cicero or Tully as you prefer was the best-known Roman attorney

to resort to a kind-referring interpretation as rarely as possible, that is, only when introduced by a lexical determiner that can only be interpreted as an operator or when occurring in the scope of a restrictive modifier. This exclusively non-kind-referring nature of singular proper names in the unmarked case is independently manifested by their contrast with common nouns with respect to the generic interpretation. Although we have seen that such an interpretation is readily available for plural proper names, it is straightforwardly impossible for singular ones, both with and without the definite article.

- (83) a. A me piacciono molto le Marie.  
to me please much the Marias  
'I like the Marias a lot.'
- b. A me piace molto la Maria.  
to me pleases much the Maria
- c. A me piace molto Maria.  
to me pleases much Maria

Only (83a) can be generically interpreted, (83b) and (83c) being confined to the object-referring (i.e., specific) reading. As we might expect, the kind-referring interpretation emerges again with a singular proper name introduced by the indefinite article, since the latter can only be understood as a lexical operator, not as an expletive, giving rise, in the appropriate environments (see fn. 7), to indefinite generic readings as well.

- (84) Una Maria di solito è una brava ragazza.  
a Maria usually is a good girl

Therefore, the expletive function of the article in such examples as (24b) appears to be a consequence of the marked, essentially "last resort" nature of the kind-referring interpretation for proper names.

Some comparative evidence corroborating the introduction of such a notion of expletive article, on both syntactic and morphological grounds, will constitute the main subject of the next section.

## 8 Typological Evidence

There is one property of the English cluster discussed in section 5 that has not yet been explained and apparently cannot be reduced to parameter (67): namely, that English never tolerates the use of the definite article with plural and mass generics or, essentially, with singular proper names, as exemplified in (43). Notice that such cases are exactly those that, in languages like Italian, were taken to display expletive occurrences of the article. The residual difference between the two languages could then be dealt with by the claim that English does not allow expletive occurrences of the article. However, as noted earlier, there is at least one case in which an article can be regarded as expletive in English as well, namely, with singular nonmass generics such as that of (80a). To this may be added the case of generic substantivized adjectives, discussed in section 6.

Therefore, the previous proposal appears too strong, but can be adequately weakened as in (85),

- (85) Expletive articles are licensed only as a last resort.

where *as a last resort* essentially means 'if no synonymous raising derivation is available'.

Even rephrased in this weaker form, which seems to be correct for English, such a principle can hardly be regarded as universal and thus extended to Romance, at least to the varieties that accept structures like (24b). In order to do so, it should be assumed that pairs like (24a–b) represent, not real language-internal alternations, but sentences from distinct and complementary dialects, idiolects, or styles (i.e., briefly, from two different competences). Whatever solution is eventually chosen, mainly on metatheoretical grounds, it must be recalled that it is in any event unavoidable to postulate some independent parameterization or complications of (85) in order to account for the distribution of expletive articles in various Germanic languages and dialects.

In many varieties of German, for instance, it is normally possible to use both plural and mass generics and proper personal names with or without the definite article, so that either variant of (86)–(87) appears to be acceptable, with essentially the same generic interpretation. The same is true of pairs like those in (88).

- (86) a. Biber bauen Dämme.  
beavers build dams
- b. Die Biber bauen Dämme.  
the beavers build dams
- (87) a. Milch ist weiß.  
milk is white
- b. Die Milch ist weiß.  
the milk is white
- (88) a. Hans ist angekommen.  
Hans has arrived
- b. Der Hans ist angekommen.  
the Hans has arrived<sup>50</sup>

<sup>50</sup> All varieties of German also seem to differ from English in that any type of adjectival modification prevents proper personal names from occurring without an article. Compare, for instance, (ia) and (ib).

- (i) a. \*Alter Hans ist angekommen.  
old Hans arrived
- b. Der alte Hans ist angekommen.  
the old Hans arrived

However, a few constructions more directly arguing for N-raising not before LF can be found in German as well.

- (ii) a. Trotz dreckiger Donau sind die Wiener noch glücklich.  
despite dirty Danube the Viennese are still happy
- b. \*Trotz Donau dreckig(er)...  
despite Danube dirty...

What is remarkable, from the standpoint of my suggestion that a concept of expletive article be introduced in UG, is that the optionality of the definite article arises precisely in the two cases, generics and proper names, where such an article was predicted to be expletive. In addition, it seems that the same cluster of properties (the article is possible with generics and there are at least some dialects using it before proper names) can also be found in Scandinavian (e.g., in Norwegian), as pointed out by Tarald Taraldsen (personal communication). Therefore, the behavior of these other Germanic languages can easily be captured by parameterizing (85) in such a way as to allow optional licensing of expletive articles even in some languages and constructions that might dispense with them. In fact, as far as I know, no Germanic variety accepts any of the data that motivate an N-raising analysis in the Syntax; in other words, they all choose the "English" value of parameter (67) (see fn. 50). This fact illustrates the independence of the two parameters from each other: English and German are both opposed to Italian with respect to raising of N in the Syntax, but they differ with respect to the option of using expletive articles, which are allowed in some varieties of the latter language.<sup>51</sup> In the framework of this analysis, the fact that no variety of English seems to ever admit a singular unmodified proper name introduced by the article turns out to be significantly related to the fact that no variety of English allows the article with plural or mass generics either.<sup>52</sup>

Elaborating on work by Vergnaud and Zubizarreta (1992b), Gerhard Brugger (personal communication) observes that, typologically, this peculiarity that English displays in limiting the use of expletive articles as described might significantly correlate with the lack of morphological expression of gender and number on the article. The rest of Germanic and all of Romance, as well as Modern Greek, appear both to have some inflection for gender and number on the definite article and to display freer use of its expletive occurrences, in particular with proper names. If this generalization is correct, it must follow from some more general principle. Let us suppose, for example, that when not required as a "last resort" in the sense specified above, an expletive article is always ungrammatical (i.e., (85), the supposed English value of the parameter, is universal) unless licensed by the need to spell out some abstract morphological content (e.g., gender or number features present in D as a result of (optional) agreement with the head noun). In more accurate terms, (85) should be replaced by a principle of UG like the following:

- (89) The phonetic realization of the D position is licensed only if it expresses semantic content or grammatical features, or as a last resort.

<sup>51</sup> See Brugger 1993 for an analysis attempting to characterize exactly the distribution of the two types in German, mainly on the basis of the distinctions alluded to in footnotes 27 and 44 and in Gerstner and Krifka 1987 and Wilkinson 1988.

<sup>52</sup> German, instead, in addition to having varieties that employ the article with generics and proper personal names, uses the definite article to introduce many more names of countries (*die Schweiz* 'Switzerland', *die Türkei* 'Turkey', etc.) in the standard language. A similar situation with respect to this cluster of properties seems to hold in Norwegian. It is still unclear—and constitutes an important research objective—whether this new difference between English and Continental Germanic can be typologically and theoretically related to the other one discussed at the end of section 6 concerning the marked acceptability of an existential reading of bare nouns in Spec IP.

The last two cases are those instantiated by the expletive occurrences of the article. By means of this hypothesis, the distributional restrictions on the use of the article found in English but not in other Germanic languages (or in Romance) could be made to follow from independent morphological properties of the language.

In any event, what is clear is that crucial reference to this special expletive status of the definite article is needed to account for the typology of its distribution in the languages so far examined; this fact already reinforces the proposal of introducing such a notion. However, some of the most interesting evidence supporting the introduction of the concept of expletive article comes from the morphology of determiners in certain Romance and Germanic varieties. Consider, in fact, that we have implicitly assumed so far that the traditional definite article of English and Italian is actually a morphological neutralization of two distinct syntactic entities: an expletive and a substantive, really definite, determiner, the latter functioning as an operator. This analysis naturally leads to the expectation that there may exist languages in which the real definite article may cease to be homophonous with expletive articles. The typological evidence appears to bear out this prediction. Notice, first of all, that in principle two, slightly different, sorts of expletive article have been introduced: one occurs with proper names and the other with generic expressions. Although both are expletive in the sense of not having any substantive interpretation as semantic operators, they are still contextually distinguishable on the basis of the interpretation of the position they fill. The expletive article of proper names relates an interpretively relevant D position (the head of the CHAIN) to an interpretively irrelevant N position (the foot of the CHAIN). By contrast, the type occurring with generics simply introduces a semantically relevant N position, which refers to a kind, itself lying in an uninterpreted D. The distinction may perhaps bear some analogy to that between  $X^{\max}$  expletives occurring in  $\theta$ -marked and non- $\theta$ -marked positions.

In fact, in the case of the saturation of a VP predicate by a subject phrase, two subcases can perhaps also be distinguished: the syntactic saturation of a VP may or may not have a semantic correlate, namely,  $\theta$ -marking of the subject, according to whether or not the predicate discharges a so-called external  $\theta$ -role (see Rothstein 1983, 1990). In the latter case the subject is said to be an expletive. However, another type of expletive subject is also found, when the predicate does assign an external role but such an interpretation must be transmitted to a phrase not occupying the canonical subject position (whether this is identified with Spec IP or even with Spec VP). The two expletive cases are likely to be instantiated by the following English examples, where they also happen to be lexically distinguished:

- (90) a. *There* arrived few girls.  
b. *It* struck me that he came.

Articles can be classified like subjects, from this standpoint: they can contribute their own meaning (as operators) in the specific usages of common nouns, can be expletives

occupying an interpreted position, in the normal reading of singular proper names, and finally can instantiate the case of expletives occupying a semantically uninterpreted position with generics.

It is then plausible to expect that in addition to cases of total neutralization, as in all the relevant Italian varieties considered here, there may be languages where the three types are all distinct or languages where the so-called intermediate (i.e., generic) article neutralizes with either of the two extreme forms. It is obviously of high significance for the present theory that at least the latter two cases are actually attested among the Romance and Germanic languages. The evidence that I want to offer, which is certainly very far from being dialectologically exhaustive, concerns Catalan and the variety of Frisian described by Ebert (1970). Many varieties of Catalan distinguish between two types of definite article, one that is exclusively used with personal proper names, masc. *en*/(more rarely) fem. *na*, and one that is used in all other circumstances (i.e., with common nouns in the specific and generic readings and with nonpersonal proper names). This fact gives rise to patterns like the following:

- (91) a. el gos  
the dog
- b. en Pere  
the Peter

In the framework proposed here, this suggests that at least one subcase of what we have identified as the expletive article introducing proper names surfaces as morphologically distinct from the other expletive type (the one introducing generic expressions) and from the regular, specific definite article (as well as from further, nonpersonal subcases of the expletive article of proper names, such as the case of the names of rivers or mountains). Given the intrinsic singularity that is required for the referential interpretation of proper names (see section 7), another important prediction ensues from this analysis of the Catalan article, namely, that the same proper names that take the expletive article *en* in the singular will have to resort to the regular article *els* if used in the plural. For we have seen that if a name presupposes the possibility of nonsingular designation, it must always be interpreted quantificationally (i.e., like a common noun), and its article can no longer be expletive but must have semantic content as an operator. This crucial prediction is also correct, as pointed out by Victoria Escandell (personal communication).

- (92) a. \*ens (dos) Peres  
the(EXPL) (two) Peters
- b. els (dos) Peres  
the (two) Peters

This fact suggests that the article *en* of Catalan should not even be described as simply being "the article of proper (personal) names" but should be described as being "the article of proper (personal) names in the singular." Such an apparently complex and idiosyncratic restriction follows naturally from the analysis presented here, which relates the ungrammaticality of (92a) to that of, say, (76), repeated here.

- (76) a. I visited \*(the) United States.
- b. Ho visitato \*(gli) Stati Uniti.

An analogous prediction arises and is correctly borne out in the case of restrictive relative modification of proper names. As exemplified in the contrast of (93a–b), which exactly parallels that of (56a–b), such structures must resume the regular definite article.

- (93) a. El Joan que coneixia               ja no existeix.  
the Joan that I used to know no longer exists
- b. \*En Joan               que coneixia               ja no existeix.  
the(EXPL) Joan that I used to know no longer exists
- (56) a. Il (simpatico) Gianni che conoscevo               non esiste più.  
the (nice) Gianni   that I used to know no longer exists
- b. \*Gianni (simpatico) che conoscevo               non esiste più.  
Gianni (nice)   that I used to know no longer exists

Although such facts already provide interesting morphological support for the notion of expletive article, it turns out that the strongest evidence of this type comes from the analysis of a Germanic language, Frisian, at least the dialect spoken on the island of Föhr. In fact, Ebert's (1970) description of this dialect, although not cast in the same terminological and theoretical framework as the analysis proposed here, provides sufficient data and discussion that her generalizations can be summarized as follows. The Föhr dialect displays two different types of non-indefinite article, one occurring only with definite specific nominals in both numbers (call it the *D-article*, after its morphological form: *di*, *det*, *det* for the three genders in the singular, plural *dön* for all genders), the other systematically found with proper names and with all types of generic phrases, that is, plurals, mass singulars, count singulars, and apparently substantivized adjectives (call it the *A-article*, after its morphological form: *a*, *at*, *at* in the singular, *a* in the plural). Here is a list of examples, all provided by Ebert's work (1970, personal communication):

- (94) a. a Türkäi  
the Turkey
- b. A hünj as an guden frinj faan a mensk.  
the dog is a good friend of the man
- c. Me a deensken san wi leewen frinjer weesen.  
with the Danes we have always been friends
- d. A riken wurd               imer riker.  
the rich are becoming even richer<sup>53</sup>

<sup>53</sup> It must be recalled, however, that the use of the expletive article is overtly extended in the dialect of Föhr to certain common nouns, whose uniqueness in the domain of discourse is contextually achieved through previous unambiguous mention or is especially salient because of their semantics. Typical among these expressions, termed by Ebert (1970) *situative Unika*, are the words for 'sun', as unique in the solar system, and those for positions occupied by only one person in a relevant domain, such as the terms for 'parishioner' or 'mayor' in a village.

These cases exemplify the (obligatory)<sup>54</sup> use of the A-article with proper names, generic singulars, and generic plurals. (94d) instantiates at the same time a case of a generic plural substantivized adjective. Interestingly enough, certain restricted proper names revert to behaving like common nouns (i.e., require the D-article) and thus may be taken to suggest another overt parallel with examples like (56a).

- (95) a. det Moskau faan di tidj  
the Moscow of that time
- b. Di Hans, wat ik käänd, as'r äi muar.  
the Hans that I knew is no more there

Of course, bare mass nouns and plurals also exist in Frisian, being interpreted existentially or generically.

- (96) a. Hans foon aapler uun köögem.  
Hans found apples in kitchen
- b. Weeder as kul.  
water is cold
- c. Hünje haa fjauer bian.  
dogs have four legs

Although a few other complications intervene in this Frisian article system, the data in (94)–(96) are sufficiently clear to allow us to attempt an interpretation in the theoretical terms provided here. In fact, the Föhr situation can be exactly described as one in which the two types of expletive articles, that of proper names and that of generic expressions, are morphologically neutralized in the A-form, and the substantive definite article takes the distinct D-form, with only its specific reading remaining available.<sup>55</sup>

Thus, Frisian is likely to fulfill in the most straightforward way the second neutralization expectation sketched above. Even more remarkable is that the use of the A-article in this Frisian dialect could not be trivially described as corresponding to the English use of the empty determiner, since English fails to replace *the* in two cases where Frisian still uses *a*: the cases of generic adjectives and of singular count generics. However, I have provided independent evidence that the definite article of English is an expletive in precisely these two cases and that it occurs because these two structural configurations would disallow the count reading, were the D position empty. Now, since the Frisian

<sup>54</sup> Thus, the Föhr dialect confirms the obligatoriness of the use of the expletive article with singular unmodified proper names; as suggested at the end of section 7, the latter are *never* understood as quantified expressions of generality but *always* as referential expressions.

<sup>55</sup> Ebert (1970) also mentions the existence of other Frisian dialects where, roughly speaking, the A-article is used only with proper names and singular generics and the D-article with specific and plural generic common nouns. Perhaps these varieties reflect an intermediate situation in which the expletive article has only a singular morphological expression and in the plural is neutralized with the regular definite one. The existence of a morphologically distinct article, roughly corresponding to the Frisian A-article, has been sporadically pointed out in some German dialects (I am indebted to Irene Heim for first informing me about such phenomena). See especially Penner and Schönenberger 1992 for an analysis of Alemannic varieties adopting part of the framework developed here.

A-article is an expletive with phonetic content, the analysis developed here predicts that no problems will arise when it is used even with substantivized adjectives and with singular count nouns. Therefore, Ebert's Frisian data seem to provide one of the subtlest and most relevant sources of evidence in favor of the whole approach proposed in this article.

#### Appendix: The Advantages of a Minimalist Interpretation of N-Raising

In this appendix we will consider some empirical and conceptual advantages of recasting the above analysis of N-raising into some version of a "minimalist" program of the sort sketched by Chomsky (1993). Adopting one principle of such an approach—namely, Procrastinate—will enable us to derive on more principled grounds the generalization stipulatively captured in section 5 by essentially stating that common nouns "must head the N projections at S-Structure." The advantages of revising the analysis presented here exploiting Chomsky's (1993) other minimalist principle, Greed, are explored in Longobardi 1994a.

The minimalist framework tries to eliminate the possibility of parameters like "Move X in Syntax/LF" as primitive notions and suggests that this well-attested kind of linguistic variation be reduced to a general principle of delay in the application of movement rules, called "Procrastinate," in interaction with parameterized properties of lexical and functional units. To be more concrete, it is suggested that certain items cannot be licensed unless a particular feature they are endowed with is "checked" at some linguistic level: it is often the case that such checking is only possible as the result of the previous application of a movement process. Given that the minimalist program also aims at eliminating all linguistic levels except the two "interface" levels PF and LF, a typical remaining sort of cross-linguistic variation concerns whether a particular feature must be checked only at LF (i.e., is *weak*, in Chomsky's (1993) terms) or already at PF (i.e., is *strong*). In the latter case, if a movement rule must apply as a precondition for the feature checking, it will have to apply before the rule Spell-Out, which translates syntactic structures into phonetic forms (i.e., in the Syntax). In the former case, instead, Procrastinate will force the rule to be delayed as long as possible; that is, it will only apply after Spell-Out (in the LF component).

In this light, let us make the following assumptions:

- (97) All D positions are universally generated with an abstract feature  $\pm R$  (suggesting "referential"), which must be checked with respect to at least one of its values.
- (98) This  $\pm R$  feature is strong in Romance and weak in Germanic.
- (99)  $+R$  is universally checked iff the D is interpreted as being in a chain/CHAIN containing an object-referring expression (in the sense clarified in the text, i.e., a pronoun or a proper name).

- (100)  $-R$  is universally checked iff the D is interpreted as being in a chain/CHAIN not containing any object-referring expression.
  - (101) The lexical government requirement on empty heads universally applies at LF.
  - (102) The existential interpretation of empty Ds universally applies freely (is an "anywhere" rule). Once it is assigned, it cannot be removed, nor can the D be filled by any material.
- (98) obviously replaces parameter (67), and (101) and (102) replace statements (71) and (70), respectively.

Now consider the application of these assumptions to concrete linguistic cases. Recall that *a priori* any D can be base-generated as containing either a pronoun, according to the proposal made in the text, or a lexical determiner, or it can be left empty. Suppose first that the feature of the D position is checked via the  $+R$  value: D may basically contain a pronoun and will then trivially satisfy (99) as a single-membered object-referring chain, or it may basically contain a lexical determiner. Here there are two cases to be considered: if such a determiner can be an expletive, the  $+R$  value will be properly checked only by establishing a CHAIN with a proper name (an object-referring expression) and not with any common noun; if the determiner is not allowed to perform an expletive function, no possibility is left of meeting condition (99).

Finally, if the D is base-generated as empty, a (multimembered) object-referring chain can be created by raising a proper name from the N position; again, by contrast, no checking of  $+R$  is possible with a common noun.

As a result, the only grammatical outputs obtained through checking of  $+R$  are exemplified by the following Italian DPs:

- (103) a. noi (medici)  
we (doctors)
- b. la Maria  
the Maria
- c. Maria  
Maria

Now consider the cases in which the feature of D is checked via the value  $-R$ . If D contains an intrinsically object-referring expression like a pronoun, no such checking is ever possible.

If it contains a lexical determiner, two subcases must again be distinguished: those of expletive and nonexpletive determiners. An expletive determiner must form a CHAIN with the N position, virtually by definition. When N is occupied by an object-referring expression (a proper name), condition (100) is obviously violated. But when N is occupied by a common noun, referring to a kind,  $-R$  is checked and the structure is licensed with

the generic interpretation. A nonexpletive determiner, not forming any CHAIN with N and not being itself (object-)referring, trivially satisfies (100) via a single-membered chain; however, as an expression endowed with operator force, it requires a range for its variable, which can only be provided by a non-object-referring noun, that is, a common noun (or a proper name under very marked conditions).

Finally, let us analyze the case of a basically empty D position. If N is raised to D, then a chain is formed. With a raised object-referring proper name the structure will obviously violate (100); with a raised common noun it will straightforwardly meet (100), achieving a generic interpretation. But if the empty D is not related to N by any chain (i.e., via movement), checking of  $-R$  must still be effected by *interpreting* D, as required by (100), one way or another. This forces us to apply (102) before the feature is checked, thus freezing the D as empty throughout the derivation up to LF and making it sensitive to the strictures of the lexical government requirement in (101). The existentially interpreted empty D, counting as a single-membered chain, again trivially meets the checking conditions for  $-R$ , but, as an operator, requires reference to a kind by N in order to provide its variable with a range.

As a result, the surfacing outputs via checking of  $-R$  are the following in Italian:

- (104) a. il castoro/i castori (generic interpretation)  
the beaver/beavers
- b. il castoro/i castori/ogni castoro/alcuni castori, etc. (specific interpretation)  
the beaver/the beavers/every beaver/some beavers, etc.
- c. castori (specific existential interpretation in lexically governed positions)  
beavers

The one *a priori* grammatical case that Italian lacks, namely, the generically interpreted chain formed by a common noun raised to D, is exemplified by (the logical form of) English examples like (105).

- (105) beavers (generic interpretation)

Notice that, as a consequence of the assumptions made above, no grammatical checking of  $+R$  is ever possible if a D selects a kind-referring expression (a common noun) and, conversely, no grammatical checking of  $-R$  is possible if a D selects an object-referring one (essentially a proper name). Consider, now, that raising of an object-referring name is obligatory whenever its D position is base-generated as empty; otherwise, there would be no way for the  $\pm R$  feature of such a D to be checked. Since the feature in question is strong in Romance and weak in Germanic, raising of a proper name necessarily takes place before Spell-Out in the Romance languages, but is delayed until LF by Procrastinate in the Germanic ones. Raising of a common noun, instead, can never be forced by the checking conventions above, because a  $-R$  feature value, whether it is strong or weak, can always be checked without resorting to a movement process, namely, by interpreting

the relevant D as existentially closed via (102). In Romance this interpretation will have to apply before Spell-Out, owing to the strong nature of the  $\pm R$  feature, thus freezing any other later interpretive possibility; in Germanic Procrastinate will postpone until the LF component the choice between applying existential closure to D or filling it by raising N with the consequence of a generic interpretation. What is most relevant here is that Procrastinate obligatorily delays movement after Spell-Out whenever another (nonmovement) option to meet PF requirements is available. Since this is the case both in languages where  $\pm R$  is strong (because the existential closure option is always available to check it before PF) and in languages where it is weak (because it need not be checked at PF), it follows that raising of common nouns in the Syntax will be universally excluded as a consequence of the general principle Procrastinate. Then, a theoretical framework including such a principle and the associated machinery is able to provide a principled account for the absence of common nouns overtly raising to D by substitution in either Romance or Germanic and appears to be conceptually superior to the stipulative approach temporarily suggested with statement (58).

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- Seminario di Linguistica e di Didattica delle Lingue  
Università degli Studi di Venezia  
Ca' Garzoni-Moro  
San Marco 3417  
30124 Venezia, Italy  
longbard@unive.it*

