The Categorial Status of Quantified Nominals*

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Abstract

This paper focuses on the structural properties of quantified nominals and provides an analysis that can explain certain general syntactic properties, such as the order in which determiners and quantifiers appear, as well as language-specific phenomena that arise in connection with quantified nominals. It will be argued that quantified nominals are of category QP: namely that Q, on a par with D, is a functional category that selects a definite nominal (DP) or an indefinite one (NP) according to its semantic properties.

Introduction

Quantifiers have often been the object of study of the interface between syntax and semantics. Apart from the seminal work of Jackendoff (1977), only recently in connection with the renewed interest on the syntax of the noun phrase and more specifically of determiners, a certain number of studies have raised the question of the structural position of quantifiers inside the noun phrase in the attempt to explain other related problems. The result is that only a portion of the relevant facts has been taken into account, and that certain properties of quantified nominals have remained unaccounted for. The aim of this work is to provide a syntactic account of quantified nominals that can explain a wide range of phenomena such as the distribution of determiners in quantified nominals, the possibility for a certain class of quantifiers to act as adjectives in adnominal and predicative position, the different position of full nouns and pronouns with respect to the quantifier, and the phenomenon of quantifier float. Like all work in generative grammar, this proposal is intended to have universal validity. Cross-linguistic

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differences should hopefully be reduced to independent differences among languages.

The paper is organised as follows: In section 1, I will examine previous accounts in the recent framework of generative grammar, namely Abney (1987) and Szabolcsi (1987), which treat Q as a modifier of NP, Sportiche (1988), which views Q as an adjunct to NP, and Cardinaletti and Giusti (1990), which argues that Q is a functional category selecting NP. On theoretical grounds, I will try to unify the three of them under a generalised version of Cardinaletti and Giusti (1990) that views Q as a functional head and that restricts the hierarchy of the functional projections of the noun phrase on a par with those in the clause. In the rest of the paper we will see how the phenomena mentioned above provide empirical support for this hypothesis.

1 The Theory

1.1 Previous Accounts

Abney (1987), in arguing for the functional status of Determiners, investigates the distribution of Dp's with respect to other elements of the nominal phrase, among which quantifiers. Following a suggestion of Szabolcsi (1987) for Hungarian, he proposes to analyse minimal pairs such as (1), basically as having the same structure, namely (2):

(1) a. the many children
    b. many children

(2) a. [DP [Dp the] [NP [QP many] [Np children]]]
    b. [DP [Dp ⌀] [NP [QP many] [Np children]]]

This analysis implicitly excludes Q from the class of determiners and in general of functional categories, treating it as a modifier of the noun, on a par with adjectives, and predicts that quantifiers never precede determiners. But this is not the case for the universal quantifier across languages (cf. all, in all the children). There are also other reasons to suppose that the quantifiers in (1a) and (1b) do not have the same function. In section 2, we will see that the unified structure (2) hides, more than explains, certain syntactic properties of quantifiers.

Sportiche (1988), in accounting for the phenomenon of floating quantifiers, proposes that Qs, at least those that can float,2 (basically universal and distributive all and each) are generated adjoined to the NP (in Abney’s terms, to the DP) they modify. The S-structure of the floating construction in (3b), is derived from the D-structure (3a) from which NP* has been moved leaving the Q dominated by NP* in place:

(3) a. [VP [NP Q all] [NP the children]] arrived]
    b. [the children] have [VP Q all] [NP t1] arrived]
This theory can explain why only universal Qs can remain in place, while other modifiers or determiners cannot. Unfortunately, Sportiche does not deal with the question of the position of quantifiers that do not appear in this configuration. This is what I will investigate in what follows.

In a recent paper on the syntax of ne in Italian, Cardinaletti and Giusti (1990) analyse the quantifier left in place by ne-cliticization as a head. Starting from the basic structure (4a), ne-cliticization applies in (4b):

(4) a. ho visto [QP tre [NP ragazzi]]  
    [I have seen three boys]

   b. [ne]_i ho visti [QP tre [NP e_i ]]  
    NE   [I have seen three

They propose that an indefinite Q such as molti selects and assigns partitive case to NP. This explains why the clitic surfaces with genitive morphology. Furthermore, they claim that partitive ne is always linked to an NP position and that the partitive PP that can follow a quantified nominal (as in many of the boys) is an (optional) indirect complement of Q. Their structure for an indefinite quantified nominal is the following:

(5)

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     QP
    /   \   
   Spec Q'  PP
     \   /   
     Q'' NP
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This analysis has the advantage of generalising Chomsky’s (1986) restriction of movement to minimal and maximal projections that seems to hold very generally across languages and to which Belletti and Rizzi’s (1981) analysis of ne as an N’ did not conform.

Although in the spirit of the DP-hypothesis, in that it takes Q to be a functional category in the nominal complex, this analysis is in clear contrast with Abney (1987), in that it places the QP among the functional projections in the nominal complex, and more on line with Belletti and Rizzi’s (1981) implicit assumption that Q is a determiner of some sort. Cardinaletti and Giusti do not take a stand explicitly on the question of whether Q is a functional category different from D, or is in the head of DP. Neither do they discuss Abney’s cases in (1) since no D ever surfaces with an indefinite quantifier when ne-cliticization applies.³

The three analyses are not necessarily incompatible with each other. Each of them contributes to the understanding of some property of the category Q. However, the combination of the three of them, as they stand, draws a very idiosyncratic picture of this category, which appears to function under different points of view.
as a modifier, as an adjunct, and as a head. In what follows I will try to provide a more principled approach to the categorial status of Q.

1.2 Possible Alternatives

There are several structural alternatives to unify the proposals presented above. One is to slightly modify Abney’s proposal and claim that QP can or must move to the Spec of DP under certain conditions:

(6)

\[
\begin{array}{c}
\text{Spec} \\
\text{D'} \\
\text{D}^o \\
\text{QP} \\
\text{NP} \\
\text{N'}
\end{array}
\]

QP raising to Spec of DP would produce the following strings:

(7)

a. \[\text{DP}\quad \text{[Spec]}\quad \text{[D^o \ \emptyset]}\quad \text{[NP}\ 	ext{[QP many]}\quad \text{[N'}\ 	ext{children]}\]

b. \[\text{DP}\quad \text{[QP many]}\quad \text{[D^o \ \emptyset]}\quad \text{[NP}\ 	ext{[Spec t]}\quad \text{[N'}\ 	ext{children]}\]

c. \[\text{DP}\quad \text{[QP all]}\quad \text{[D^o \ \emptyset]}\quad \text{[NP}\ 	ext{[Spec t]}\quad \text{[N'}\ 	ext{children]}\]

d. \[\text{DP}\quad \text{[Spec]}\quad \text{[D^o \ the]}\quad \text{[NP}\ 	ext{[QP many]}\quad \text{[N'}\ 	ext{children]}\]

e. \[\text{DP}\quad \text{[QP all]}\quad \text{[D^o \ the]}\quad \text{[NP}\ 	ext{[Spec t]}\quad \text{[N'}\ 	ext{children]}\]

This hypothesis has both theoretical and empirical shortcomings. In (7a – b), the sequence many children appears to have two possible configurations, that cannot be empirically distinguished, since movement of QP is string-vacuous in this case. Their analogy to (7d – e), in which D^o is overt, cannot be the correct explanation. When D^o is overt, in fact, a number of restrictions seem to apply: a QP such as many must be prevented from raising to Spec, as in (7d), otherwise we could have *many the children, along with the many children* (cf. (8a)), while a QP such as all must be forced to move, as in (7e), otherwise we could have *the all children, along with all the children* (cf. (8b)). Furthermore, certain quantifiers such as some/any, several, etc. are incompatible with an overt determiner in either position (cf. *some the children, *the some children in (8c)):

(8)

a. (the) many (*the) boys
b. (*the) all (the) boys
c. (*the) any/each/every/some (*the) boy(s)

Nothing could distinguish between the structures (9a) and (9b), parallel to (7a – b):

(9)

a. \[\text{DP}\quad \text{[QP]}\quad \text{[D^o \ \emptyset]}\quad \text{[NP}\ 	ext{[Spec some]}\quad \text{[N'}\ 	ext{children]}\]

b. \[\text{DP}\quad \text{[QP some]}\quad \text{[D^o \ \emptyset]}\quad \text{[NP}\ 	ext{[Spec t]}\quad \text{[N'}\ 	ext{children]}\]
In other words, it is not clear how quantifier raising to Spec of DP could be learned by the child, since there is so much idiosyncrasy and so little empirical evidence for it.

The facts summarised in (8) could certainly be described by stipulating that quantifiers such as those in (8a) are generated in Spec of NP, the universal quantifier as in (8b) is generated in Spec of DP, and others, such as those in (8c), are inserted in D°. However, a more explicative account should be preferred to this, unless one could motivate the differences among the different classes of quantifiers on independent grounds. Notice also that any account that places (at least) the quantifier all in a Spec position is incompatible with an analysis à la Sportiche of floating quantifiers. In fact, one would have to assume that what moves in (10) is a D’ which is incompatible with the well-known restriction of movement to X° and X\text{max} categories:

(10) the children have all arrived

Let us suppose, instead, that the quantifier is a functional head. Once again two possibilities come to mind: in the first case, QP is lower than DP, in the second, it is higher:

(11) a. 
\[ \text{DP} \]
\[ \text{Spec} \quad \text{D’} \]
\[ \text{D°} \quad \text{QP} \]
\[ \text{Spec} \quad \text{Q’} \]
\[ \text{Q°} \quad \text{NP} \]

b. 
\[ \text{QP} \]
\[ \text{Spec} \quad \text{Q’} \]
\[ \text{Q°} \quad \text{DP} \]
\[ \text{Spec} \quad \text{D’} \]
\[ \text{D°} \quad \text{NP} \]

In principle, both structures could co-exist in a grammar whose lexicon is rich enough to provide a different selection for each functional category. In (11a), which is also suggested by Abney (1987, ch. 4), in the case of a lexical D like the, only a restricted class, including many/ few, and numerals and excluding some/ any, several, etc. can be selected, while in the case of a null D all Qs could appear. (11b) would represent the single case of the Q all which can select a definite nominal cross-linguistically. The cooccurrence of all with a definite quan-
tified nominal would merge (11a) and (11b) yielding (11c) which represents the case of all the three children (Spec's are omitted for reasons of space):

(11) c. 

The assumption that functional projections can appear in various positions in the structure is quite peculiar in a theory that wants to draw a strict similarity between sentences and nominals. In fact, it is never the case that the functional projections of a clause have an interchangeable order, or can appear more than once in the structure as in (11c). A more restricted account that establishes a possibly universal hierarchy among the functional projections of the noun in a parallel fashion to that of the clause is certainly to be preferred. In the following, I will provide empirical support to generalise a structure like (11b) to all kinds of quantified nominals.

The only difference that seems to apply is the selection of the complement of the quantifier: the universal quantifier selects a DP, other quantifiers appear to select a bare NP. There is no evidence for the presence of an empty DP in the complement of indefinite quantifiers, and some evidence for the contrary, as we will see in 4. Our working hypothesis is as follows: Q is a functional head, as in (11b), that selects a definite nominal (DP), as in all the boys, or an indefinite nominal (NP), as in many boys, according to its semantic properties. In this way, all word orders represented in (8) are accounted for, except for the occurrence of a determiner at the left of Q in (8a). But, if we can independently motivate the possibility for a restricted number of quantifiers to function as modifiers, we can single out the order “D - Q - N” as parallel to “D - A - N”, without further stipulation. This will be the goal of next section.

2 Heads and Modifiers

I will now examine certain cases that can differentiate quantifiers from adjectives. In particular, we will see in 2.1 that quantifiers never appear in predicative position while adjectives can, in 2.2 that quantifiers can license an empty category, in 2.3 that they can select a partitive PP, and in 2.4 that they have a partitive complement that is represented by the clitic ne in Italian and its correspondents in the languages which have a partitive clitic. Adjectives, on the other hand, do not have these properties. In 2.5, we will observe that in languages like Italian, which do not allow null determiners, all indefinite quantifiers appear nevertheless with a bare noun. According to these observations, we will be able to distinguish between an adjective and a quantifier. It turns out that only those quantifiers that can behave
as adjectives, namely *many/few and numerals, can be preceded by a D. I propose, therefore, that the property that distinguishes *many/few and numerals from other indefinite quantifiers, responsible for (8b) above, is that *many/few and numerals can function either as adjectives or as quantifiers, and can accordingly appear in either position.\(^5\)

2.1 Predication

*Many/few and numerals can function as both adnominal and predicative APs, on a par with other adjectives and as opposed to other quantifiers:

(12)  
a. the many/ several/ twenty/ numerous boys I know  
b. the boys I know are many/ several/ twenty/ numerous

(13)  
a. the nice/ intelligent boys I know  
b. the boys I know are nice/ intelligent

(14)  
a. *the all/ each/ every/ some boy(s) I know  
b. *the boys I know are all/ each/ every/ some

The parallelism between (12) and (13) and the contrast between (12) and (14) show that *many/few and numerals, contrary to other quantifiers such as *all/each/every/some can syntactically function as adjectives. This contrast can be found by and large cross-linguistically with some slight lexical idiosyncrasies.\(^6\)

2.2 Bare Quantifiers

In English, *many/few and numerals, when preceded by a D, cannot be followed by an empty nominal, on a par with adjectives (15a – b). But they can do so when used as quantifiers, contrary to adjectives (15c – d):\(^7\)

(15)  
a. *I had already met the many you introduced to me last night  
b. *I had already met the nice you introduced to me last night  
c. I have already met many  
d. *I have already met nice

The parallelism between (15a) and (15b) clearly shows that *many behaves as an adjective when it is preceded by D. And the contrast between (15c) and (15d) suggests that *many behaves as a quantifier when it is not preceded by D. In structural terms, the canonical position for a quantifier is that of a head, which can license an empty category in its complement, neither a determiner nor an adjective can do so. When a quantifier is in modifier position, it does not govern the empty NP and no empty category is licensed in that position.

On the other hand, we expect that a language like German that allows an empty NP in the construction “D° – AP”, also allows the sequence “D° – QP”, as is the case:

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(16)  a. ich ziehe die blau vor  
     b. ich ziehe die drei (da) vor  
     c. ich habe die vielen gekauft, die du mir empfohlen hast

It is not the place here to explain the difference in the licensing of the empty NP in English and German, what is relevant to our discussion is that in both languages a quantifier preceded by a determiner behaves like an adjective.

2.3 Partitive PPs

Cardinaliatti and Giusti (1990) notice that the partitive PP introduced by *di ("of") in Italian is optionally selected by Q, as reported in (5) above. In fact, it cannot appear when no quantifier is there. The same contrast can be reproduced in English:

(17)  a. avevo già incontrato molti/ parecchi/ tre ragazzi di quelli che mi hai presentato alla festa  
     b. I had already met many/ several/ three boys of those you introduced to me at the party

(18)  a. *ho già incontrato i ragazzi di quelli che mi hai presentato alla festa  
     b. *I had already met the boys of those you introduced to me at the party

The PP introduced by *di regularly appears when molti/ parecchi/ etc. is not preceded by D, as in (19), showing that in this case it behaves as a quantifier. But it cannot appear when it is preceded by D, as in (20), showing that in this case it behaves like the adjective in (21):

(19)  a. many of the boys I know  
     b. many/ each/ all boys of those you introduced to me

(20)  a. *the many of the boys I know  
     b. *the many boys of those you introduced to me

(21)  a. *the (nice) ones of the boys I know  
     b. *the (nice) boys of those you introduced to me

If a quantifier appears to have selectional properties over its complement, we have good reasons to believe that it is a head. In (20), on the contrary, these properties are lost, supporting the hypothesis that in this case, and only in this case, the quantifier is not a head, but a modifier.
2.4 Ne-cliticization

More indirect evidence to assume that Q is a head is provided by Cardinaletti and Giusti’s (1990) observation that *ne has genitive case features. These features cannot be straightforwardly reduced to the presence of the genitive marking preposition *di in the partitive PP, which is optional. They argue that the clitic *ne is linked to the NP complement of Q and not to the optional PP. On these premises, they propose that an indefinite Q, assigns partitive case to its complement. 9

(22) a. *ne ho visti molti
   [I] CL-gen saw many

   b. li ho visti tutti
   [I] CL-acc saw all

Partitive case assignment appears to be a selectional property of a certain class of quantifiers, namely indefinite quantifiers, completely parallel to their semantics. As expected, when an indefinite quantifier is preceded by a determiner, ne-cliticization cannot arise:

(23) a. ne ho visti molti
   [I] CL-gen saw many

   b. *ne ho visti i molti
   [I] CL-gen saw the many

This phenomenon is shared by languages that display a partitive clitic, such as Catalan, French, and Dutch. The framework proposed here offers a straightforward analysis of the contrast in (23): In (23a) molti is a head, it selects and assigns Case to its complement. On the contrary, in (23b) molti is a modifier and cannot impose any selectional requirements on the NP.

2.5 Null Determiners

Abney’s proposal predicts that the sequence three boys should arise in languages like English and German, in which a null D is allowed in indefinite plurals, but not in Italian in which a (expletive) D is always preferred, as in (24), and is required in ungoverned positions, as in (25). (Cf. Longobardi 1990):

(24) a. I ate spaghetti
   b. ho mangiato gli spaghetti
   c. ho mangiato spaghetti

(25) a. (plain) spaghetti is not fattening
   b. gli spaghetti (sconditi) non fanno ingrassare
   c. *spaghetti (sconditi) non fanno ingrassare
But this is not the case. In Italian, all quantifiers, including those that may appear preceded by a determiner, can appear with no determiner at all, in all syntactic positions, crucially including the subject:

(26) a. molti spaghetti fanno ingrassare
      many spaghetti make one fat
b. I molti spaghetti che hai mangiato ti hanno fatto ingrassare
      the many spaghetti you ate made you fat

Whatever reason excludes (25c) should also exclude (26a) if the structure of quantified nominals was the one in (2). The fact that the determiner in (26a) not only is not required, but is also impossible in the partitive reading, shows that there is no null determiner preceding the quantifier in a quantified nominal such as many children, at least in Italian and other languages like it. But a language specific device to adjust this rather general fact cannot be considered satisfactory.10

The hypothesis that a restricted class of quantifiers can function as adjectives clears up the paradigm in (8) and reinforces Cardinaletti and Giusti’s (1990) hypothesis that Q is a functional head in the quantified nominal, in that it imposes selectional properties on its complement and can properly govern an empty category. In what follows we will see if this proposal can also be extended to universal quantifiers, as in structure (11b) proposed above.

3 Quantified Pronouns

A first independent piece of evidence in favor of the assumption that universal quantifiers too are functional heads can be found in Shlonsky (1990) who notes that floating quantifiers in Hebrew display an agreement morpheme that normally appears attached to heads when their complement is moved:

(27) a. Kol ha-yeladim ohavim le-saxek
      all the-children like to-play
b. ha-yeladim kul-am ohavim le-saxek
      the-children all-them like to-play

In (27a) the quantifier kol cannot agree with the noun ha-yeladim, while in (27b) it must. Shlonsky proposes to analyse (27b) as having the noun ha-yeladim in Spec of QP. The structure proposed for a postposed quantifier in Hebrew is (28):
In this configuration, the head of the projection, namely the quantifier *kol*, must agree with its Spec. The agreement morpheme -*am* signals exactly this relation. Sportiche (p.c.) suggests to adopt Shlonsky’s proposal to explain certain otherwise mysterious differences in the word order when the quantifier modifies a pronoun. For example, in French it is impossible (and in Italian marginal) to have the order “Q – pronoun”, whereas the sequence “pronoun – Q” is in any case correct. Just the opposite of the case of a full NP:

(29)  
   a. j’ai vu tous les enfants  
   b. *j’ai vu les enfants tous

(30)  
   a. *j’ai vu tous eux  
   b. j’ai vu eux tous

The difference between a noun and a pronoun is that the second generally appears higher in the structure for independent reasons that are not relevant here. Italian behaves like French with respect to full nouns, as shown in (31), but allows both orders with pronouns, as shown in (32):

(31)  
   a. ho visto tutti i ragazzi  
   b. *ho visto i ragazzi tutti\(^\text{11}\)

(32)  
   a. il professore ha promosso tutti noi/ voi/ loro  
   b. il professore ha promosso noi/ voi/ loro tutti

In German, like in French and English, pronouns must precede the quantifier, contrary to full nouns, as noted by Reis and Vater (1980):

(33)  
   a. Jetzt sind sie alle gegangen  
   b. *Jetzt sind alle sie gegangen

(34)  
   a. *Jetzt sind die Gäste alle gegangen\(^\text{12}\)  
   b. Jetzt sind alle die Gäste gegangen

Reis and Vater also note that the sequence “pronoun – Q” can appear in the sentence initial position, while the sequence “noun – Q” cannot:

(35)  
   a. wir alle haben der Mutter beim Waschen geholfen  
   b. *die Kinder alle haben der Mutter beim Waschen geholfen\(^\text{13}\)

The same phenomenon is displayed by *d*-pronouns that appear in left dislocation, as noted by Altmann (1981):
(36)  a. die Kinder, die alle/ *alle die sind gekommen
    the children those all/ *all those have come
   b. die Kinder, die sind alle gekommen

If we adopt the hypothesis of Movement to Spec QP presented above, we can
derive all these facts with no further stipulation, just assuming that pronouns in
German must move away from their basic position.

(37)  a. *ich habe gestern [DP sie] gesehen
   b. ich habe sie_{i} gestern [DP t_{i}] gesehen

(38)  a. ich habe gestern [Spec_{i} [alle [DP t_{i}] ]]] gesehen
   b. ich habe sie_{i} gestern [Spec_{i} [Q' alle [DP t_{i}] ]]] gesehen

In (37), no QP projection is present. The pronoun is too “light” to remain in its
base position in (37a) and must move to the “Wackernagel position”, as in (37b).
When a QP projection is instantiated, as in (38), the Spec QP is available. The
pronoun can stop there as in (38a), or further move to the “Wackernagel position”
as in (38b).

In a parallel fashion, in (36) the whole QP can function as a d-pronoun in the left
dislocation construction, provided that the d-pronoun moves to Spec QP, as in
(36a) above. Otherwise, the d-pronoun can move to the sentence initial position
alone, leaving the QP in place, as in (36b).
The movement-to-Spec-of-QP analysis can explain a whole range of phenomena
that arise cross-linguistically in connection with quantified pronouns that would
otherwise remain mysterious. It therefore justifies the extension of Cardinaletti
and Giusti’s (1990) hypothesis that Q is a functional head in (Italian) indefinite
quantified nominals to all quantified nominals (hopefully in UG). In other words,
structure (11b), chosen above on theoretical grounds, proves to be fruitful also
from the empirical point of view.

4  Some non-canonical instances of floating

(11b) appears to have two variants: one which is headed by a universal
quantifier, selecting a definite nominal (39a), and one headed by indefinite quanti-
tifiers, selecting an indefinite nominal and an optional partitive PP (39b):
The issue of the possible unification of the structures in (39) is left open here (cf. also note 4 above). We have seen in 2.3 that indefinite quantifiers assign partitive case to their complement, which surfaces in the genitive clitic *ne, shown in (40a). The universal quantifier, on the other hand, must have the property of transmitting case, on a par with D, since the clitics that appear connected with a universal quantifier in object position display accusative case, as shown in (40b):

(40)  

a. *ne ho visti molti  
[I] CL-Gen saw many  

b. li ho visti tutti  
[I] CL-Acc saw all

This is due to the fact that the universal quantifier imposes a definiteness requirement on its complement according to its semantic properties and that partitive is incompatible with definiteness, as argued by Belletti (1988).

Let us see now how the structures in (39) interact with Sportiche’s (1988) proposal that quantifier float is the side effect of movement of a maximal projection inside the nominal complex. The first observation is that not all projections of the nominal complex can move leaving the higher ones in place:

(41)  

a. the boys have all arrived  
b. *boys have (all) the arrived

(42)  

a. many boys have arrived  
b. *boys have many arrived

In (41a) DP is moved from the VP-internal subject position to the Spec of IP (or AgrP), leaving QP in place. But it is not possible to move NP leaving DP or QP in place, as shown in (41b) and (42b).
The bare stipulation that NPs cannot be moved is immediately falsified by ne-
cliticization in Italian (40a) above, and by the so-called Split Topicalization in
German (43b) below:

(43)  
  a. *die Kinder habe ich alle gesehen  
  b. Kinder habe ich viele gesehen

In (40a), we saw that ne, which is linked to an NP, moves exactly in the same
fashion as li, which is linked to a DP. In (43b), we see that in German, a bare
noun can be topicalised.

An interesting parallelism can be drawn between bare NPs and predicative ad-
jectives in (44) – (46) that differ from DPs in that they cannot undergo A-mov-
ement,16 but can undergo cliticization and topicalization, namely head-movement
and A-bar movement:

(44)  
  a. schön ist sie nicht  
  b. bella non è mai stata

(45)  
  a. Arzt ist sie nicht  
  b. medico non è di certo

(46)  
  a. sie ist es nicht (es = schön/Arzt)  
  b. lei non lo è di certo (lo = bella/medico)

This property suggests that bare NPs are predicates and that they must be saturated
by a DP (or a QP, if I am correct), if they are to appear in argumental position.17
This turns out to be true for German as well. As a matter of fact, the contrast
between the English (42b) and the German (47a) below is only apparent and can
be straightforwardly derived by the independent properties of the sentence initial
position in V/2 clauses, which is an A'-position:

(47)  
  a. Bücher sind viele gekommen  
  b. *weil Bücher viele gekommen sind

(47a) is therefore acceptable because the NP Bücher is topicalized (A'-moved).
(47b), parallel to (42b), is incorrect because the NP is in Spec of IP (an A-position).
This leads to violation of some version of the Principle of Full Interpretation (cf.
Chomsky 1986a). The bare NP is a predicate, and as such is not licensed in an
argumental position such as Spec of IP.

Summarising so far, the fact that some kind of floating also appears with indefinite
quantifiers in A'-movement supports our attempt to unify the structure of quantified
nominals, while the fact that we find no instance of canonical floating from
indefinite quantifiers support my proposal to keep the structure of definite and
indefinite quantified nominals separate, as in (39a - b).
5 Conclusions

A restricted theory of the functional categories in the nominal complex which views QP as the higher projection in quantified nominals appears to be able to draw the correct empirical distinction between quantifiers properly used and quantificational adjectives, between definite and indefinite quantified nominals, between quantified nouns and quantified pronouns, and among the various instances of floating. The restriction in the hierarchy of the functional projections in the nominal structure is also theoretically welcome in that it reinforces the parallelism between nominals and clauses, reinforcing, as a consequence, the legitimacy of the assumption of functional categories for the nominal complex.

The difference in the assignment of selectional features to the complement of quantifiers, which derives all the differences between the two structures proposed in (39) for universal and indefinite quantifiers, is independently motivated on semantic grounds: Indefinite quantifiers must have a partitive interpretation, universal quantifiers cannot. Whether this semantic property is represented in the structure with a different categorial selection (NP vs. DP) or more simply with some deeper properties of the category taken as the DP in current research, is not clear from what we have studied in this paper and should be left for future research.

Notes

1 I will not discuss previous literature on German in this section. I refer the reader to Link (1974), who discusses the problem of floating quantifiers in German in the framework of the Standard Theory, and to Vater (1980), who brings up more empirical observations on the same topic presenting it in the framework of the Extended Standard Theory. For an application of the DP-hypothesis to German, see Haider (1988), and Löbel (1990). The latter proposes, following a suggestion in Abney (1987, ch. 4) that QP is a functional category lower than DP to account for partitive and pseudo-partitive constructions such as ein Liter von Milch and ein Liter Milch respectively. For a detailed discussion of empirical data cf. Vater (1986), and Giusti (1990b) for a review of this collection of studies.

2 He is not specific about the structure that arises with other quantifiers and why other quantifiers cannot float.

3 Cf. section 2 for a discussion of this phenomenon in this framework.

4 In Giusti (in progress) I argue that both kinds of complement of Q are functional projections, namely Case Phrases, (KPs). The KP in the complement of an indefinite Q is the realization of partitive case. It is therefore incompatible with definiteness. The KP in the complement of a universal quantifier has the same case as the quantifier itself and must be definite. Nothing of what is discussed later hinges on this. Therefore, for the time being, I will not take this tentative analysis into account.

5 Here I am using a purely syntactic terminology that should not be confused with the semantic terminology of Higginbotham (1987) in which the terms are reversed.

6 Not all English speakers accept many/ much/ few/ little and numerals as predicative adjectives. The same idiosyncratic variation appears to be present in German as well. In Italian the example (12b) is perfect. What is relevant in this case is that even for those English and German speakers who accept (12b), (14b) are impossible.

7 It is not clear to me what is that rules out the many/ few/ three/ etc. ones, as opposed to the nice ones. Richard Kayne suggests in a personal communication that the pronoun one can only appear with descriptive adjectives, cf. (i) with the second sentence in (ii):
(i) The industrious americans work more than the lazy ones.
(ii) Do you admire the industrious americans?

*Of course I admire the industrious ones.

As a matter of fact, quantifiers appear to be used only as non-descriptive adjectives. They are therefore expected not to be able to modify the pronoun one.

8 Cf. Olsen (1987), on this topic.

9 The question of how Belletti's (1988) theory combines with this proposal is not thoroughly dealt with in Cardinali and Giusti (1990) and, unfortunately, cannot find an answer in this paper either. Let us notice, however, that even if one does not assume Belletti's proposal that verbs assign an inherent partitive and a structural accusative case to the object position at different levels of derivation, Cardinali and Giusti's proposal that indefinite quantifiers assign partitive Case to their complement NP can still be maintained.

10 Notice that it cannot be claimed that multi is an adjective which somehow allows the noun to occur without a determiner, since no other adjective has this property.

11 It is possible to have a phrase such as i parenti tutti ('the relatives all') in certain marked contexts. This does not contradict the impossibility of (31b). I find i parenti tutti only possible in the traditional formula of Italian death announcements and can reasonably be considered as an idiom.

12 (34a) is obviously acceptable in the irrelevant reading of a floating construction.

13 When the third person appears, Q float is preferred, but the sentence is by no means deviant (cf. Reis and Vater (1980), ex. (27a)):

(i) *sie alle haben der Mutter beim Waschen geholfen

14 For a principled account of the phenomenon described by the Wackernagel position cf. Cardinali and Roberts (1990, to appear).

15 The contrast between (37a) and (38a) can be due to the "heaviness" of the quantified pronoun, that in this case may not move to the Wackernagel position. Since the reason why bare pronouns must move from their basic position is not at all clear, the explanation for why they may not move when they are quantified is necessarily superficial.

16 Bare NPs here are crucially distinguished from DPs with an empty D.

17 Cf. Longobardi (1990) for a similar proposal on independent grounds.

References


