

## Chapter 4: An analysis of the two sources of adjectives

**4.1. A syntactic analysis of direct modification adjectives.** As hinted at above, direct modification adjectives will be argued here to be functional elements (section 4.1.1), with phrasal status, merged as specifiers of distinct heads of the extended projection of the NP (section 4.1.2), not derivable from (reduced) relative clauses (section 4.1.3).

**4.1.1 The functional nature of direct modification adjectives.**<sup>1</sup> Evidence that adnominal direct modification adjectives are functional appears to come from the fact that in many languages, like in the Yoruba and Gbaya Mbodómó cases discussed in the previous chapter, they constitute a closed, often quite small, class of elements (cf. Dixon 1982, 1994, 2004).<sup>2</sup> The fact that adjectives seem to constitute an open class in certain languages (English, and Germanic more generally, Romance, Slavic, Fijian and Dyrbal<sup>3</sup>, Japanese<sup>4</sup>, Cherokee<sup>5</sup>, etc.), and a closed class in others (many Niger-Congo, Papuan, and sundry languages of India, America and the Pacific – cf. Hagège 1974, Dixon 1982,3ff,1994,34, and references in note 17 of Chapter 3) may appear particularly puzzling. In the Introduction to Cinque (2006), I conjectured that this apparent inconsistency is due to the two different functions adjectives typically serve: as predicates and as adnominal modifiers. If in a language adjectives qualify as predicates, they will usually appear to be an open or very large class (as predicates typically are).<sup>6</sup> If on the other hand they only qualify as (direct) adnominal modifiers (with verbs or nouns taking over the task of expressing “adjectival predication”), they will appear to be a closed class. Suggestive evidence for this conclusion comes, as noted above, from the case of Yoruba and Gbaya Mbodómó, and from the other languages mentioned in note 17 of Chapter 3. In different Uto-Aztecan languages adjectives appear either reduced, as prefixes on the noun (which I take to be a sign of their functional character) or as independent words, with special suffixes (see Langacker 1977,74 and Grune 1997,6 on Hopi; Dayley 1989,263f; Gould and Loether 2002,82; and

McLaughlin 2006,27ff on different dialects of Shoshoni; Tuggy (1979,75) on Tetelcingo Nahuatl, and Givón 1980,290f on Ute). In view of the fact that the former “are usually more idiomatic” (Dayley 1989,264), are individual-level and non-restrictive, in opposition to the stage-level and restrictive readings of the latter, (McLaughlin 2006,27, Givón 1980,290f), it is tempting to take the former as (functional) direct modification adjectives and the latter as indirect modification adjectives deriving from a relative clause source (as Givón himself suggests).

Further evidence for the functional nature of direct modification adjectives may come from language impairment. If functional elements are characteristically impaired in agrammatic speech, then the fact that adnominal adjectives in such sentences as *old sailors tell sad stories* “fail to be integrated in Broca’s aphasia” (Rizzi 1985,157, and references cited there) may be taken as an additional indication that at least certain types of adjectives (those in direct modification, we conjecture) are functional.

Concerning the putative functional nature of adjectives, it is sometimes claimed, in analogy with adverbs, that if their order followed from independent semantic scope principles no motivation would exist for their generation in the Spec of dedicated functional projections (see note 8 of the previous chapter). Despite the appealing simplicity of this idea, that remains to be seen. Minimally, one has to distinguish those semantic aspects that are grammatically relevant from those that are not, and even then the question remains whether these are directly encoded in the syntax or not.<sup>7</sup>

**4.1.2 The phrasal nature of direct modification adjectives.** Prenominal adjectives have often been claimed not to be phrasal (see, among others, Berman 1974, Abney 1987, Sadler and Arnold 1994, Truswell 2005, for English; Sproat and Shih 1988,1990 for Chinese; Lamarche 1991, Valois 1991a,b, 1996, Bouchard 1998, 2002, and in part Bernstein 1991,1993a for French; Delsing 1993a,b, and others mentioned in Julien 2005,6 for Scandinavian; and Baker 2003, section 4.2, for adnominal adjectives in general).

The main grounds for this conclusion is that prenominal adjectives (in contrast to postnominal ones, and to adjectives in predicate position) often manifest properties and restrictions which are unexpected of a phrasal category. For example, in many languages prenominal adjectives cannot take complements or adjuncts:

(1)a \*Los [fáciles de resolver] problemas (Spanish - Luján 1973,399)

the easy to solve problems

b \*Il [simile ad un vocabolario] libro di Gianni (Italian – Giorgi 1988,303)

Gianni's similar to a dictionary book

Gianni's book similar to a dictionary

c \*the [proud of his son] man (English – Abney 1987,326)

Indeed this would follow if prenominal adjectives were heads, rather than phrases, either taking a portion of the nominal extended projection as their complement (Abney 1987,327), or incorporating (left-adjoining) to the N (Valois 1991a,b,1996; Sigurðsson 1993,178 – but see Sigurðsson 2005, fn.10). The same result would also follow if they made up a compound with the following N (Sproat and Shih 1988,1990; Lamarche 1991).<sup>8</sup>

Notice that the fact that prenominal adjectives do take complements in other languages, either to the left of the adjective (Germanic other than English, literary Italian, etc. – see (2)), or to the right of the adjective (Russian, Bulgarian,<sup>9</sup> Greek, etc. – see (3)), does not necessarily weaken that hypothesis, at least if one can show that the languages in question also have prenominal reduced relative clauses with the same properties, which seems to be true for the languages in question (see (4)-(5)):<sup>10</sup>

(2)a Die [dem Mann treue] Frau (German – Fanselow 1986,343)

the the.DAT man faithful woman

‘the woman faithful to her husband’

b en [mig motbjudande] tanke (Swedish - Platzack 1982,275; also see

a me repulsive thought Platzack1982/83,55fn7)<sup>11</sup>

‘a thought repulsive to me’

c L’a noi più invisa sete di potere (literary Italian – cf. Cinque 1994,93fn.12)

the to us more hated thirst of power

‘the thirst for power more hated by us’

(3)a [dovol’nyi vyborami] prezident (Russian – Bailyn 1994,25)

satisfied elections.INSTR president

‘the president satisfied with the elections’

b [mnogo gordiyat sās svoeto dete] bašta (Bulgarian – Tasseva-Kurktchieva 2005,285)

very proud.the with SELF.the child father

‘the father very proud of his child’

c i [perifani ja to jos tis] mitera (Greek – Androutsopoulou 1995,24)

the proud of the son her mother

‘the mother proud of her son’

(4)a der gestern geschriebene Brief (German – Holmberg and Rijkhoff 1998,97)

the yesterday written letter

‘the letter that was written yesterday’

b en mördad man (Swedish – Delsing 1993,110)

a murdered man

c Il da poco restaurato museo atestino (literary Italian – see note 1 of Chapter 6 below)

the recently renovated museum of Este

- (5)a Sidjaščaja okolo pal'my devuška (očen' krasiva) (Russian – Babby 1973,358)  
 the sitting near the palm girl (very pretty)  
 'the girl sitting near the palm (is very pretty)'
- b na skoro prestignalijat President (Bulgarian – Iliyana Krapova, p.c.)  
 recently arrived.the president  
 'the recently arrived president'
- c ta prósfata sideroména me prosohi pukámisa (Greek - Melita Stavrou, p.c.)  
 the recently ironed with care shirts  
 'the shirts recently ironed with care'

Quite generally, then, the impossibility for an adjective (or a verbal participle) to take complements in prenominal position does not tell us much about whether the adjective is a head or a phrase (in specifier position). Languages simply differ as to whether they allow a complement or adjunct to follow the adjective,<sup>12</sup> or whether they allow a complement at all.

Given this, if adjectives have two sources, it could be claimed that when they take a complement (if any) they are reduced relative clauses (indirect modification adjectives), and that direct modification adjectives, being heads, do not take complements.

However, some evidence exists that even direct modification adjectives are (or, at least, can be) phrasal. Excluding adjectives that may have access, as the ones in (2) and (3), to the relative clause source, we still have reasons to posit more structure for those that do not have a relative clause source. In Bulgarian and Greek, for example, non-predicative adjectives like “main” can be followed, in prenominal position, by an adjunct. See (6)a-b:<sup>13</sup>

- (6)a glavnata po znacenie pricina (Bulgarian - Iliyana Krapova, p.c.)  
 main.the in significance reason  
 'the main reason for importance'

b o kίrios kata protereótita λόγος (Greek - Melita Stavrou, p.c.)

the main by priority reason

‘the main reason in terms of priority’

In other languages, non-predicative adjectives can take modifiers, if not complements:<sup>14</sup>

(7)a la **più** verosimile causa del suo rifiuto

the most likely cause of his refusal

b il mio **più** vecchio collaboratore

my oldest collaborator

c i **più** alti dignitari

the highest dignitaries

(8)a the **most** probable winner

b (I felt) the **most** utter fool (Tallerman 1998,44)

c a **very** poor soul (Richard Kayne, cited in Bernstein 1993a, ch. 2,fn.68. Also see her fn.57)

e (They are) hard **enough** workers to earn that kind of money<sup>15</sup>

It could be claimed that (7) and (8) do not show conclusively that the adjective heads a phrase in a specifier position of the extended projection of the NP, as the adjective could still be a head of the extended projection of the NP with the modifier in its Spec. This however leads to some incorrect expectations. As noted in Svenonius (1994), if adjectives were heads, one would expect that a modifier modifying the first of several adjectives should take scope not just over the adjective to its immediate right but over all adjectives following it. Yet, this expectation is not fulfilled. In the Norwegian example *alt-for heit sterk kafee* ‘much too hot strong coffee’, as Julien (2005,8) notes, the modifier *alt-for* ‘all too’ only modifies the adjective *heit* ‘hot’; it does not also modify the

adjective *sterk* 'strong', suggesting that it and the first adjective form a phrase that excludes the second adjective and the N. Also see Leu (2008,75, and 94f).

Furthermore, non-predicative adjectives can, in some languages, undergo *A-bar* movement to a DP initial position (see Corbett 1979, Giusti 1996, Rijkhoff 1998, 352f; 2002,267,272, Campos 2009): a clear sign of their phrasal status. In English, for example, in so-called Degree and Negative Degree Inversion, they can target the specifier of a functional projection above the (indefinite) DP. See Hendrick (1991), Valois (1991b,34), Bernstein (1993a, ch.2,fn.21), Kennedy and Merchant (2000, section 4.2), Matushansky (2002), Troseth (2004), Felber and Roehrs (2004), and Borroff (2006):<sup>16</sup>

- (9)a [[how old] a friend] is he?
- b [[how big] an eater is he?
- c [[how natural] a successor] will he be?

Also, as Rowlett (2007) observes, “the existence of a single SpecFP position for each class of adjectives explains why where two adjectives of the same class appear together, coordination is required” (p.88, fn.33).

The fact that such adjectives as 'mere', 'utter', 'pure and 'simple' can be coordinated may be construed as evidence, at least within Antisymmetry theory (Kayne 1994), that non-predicative adjectives have phrasal structure, as heads in that theory cannot be coordinated:<sup>17</sup>

- (10)a Questo è un imbroglio puro e semplice  
      this is a pure and simple swindle
- b Questa è una scusa bella e buona  
      this is an excuse nice and good (= an obvious excuse)

Another piece of evidence that adnominal adjectives are phrases rather than heads appears to come from their behavior in code-switching. If in contexts of intrasentential code-switching “the language of a head determines the position of its complements” (Santorini and Mahootian 1995,15), then the fact that “the language of an adnominal adjective does not determine the position of the noun it modifies, and all possible code-switching combinations are attested” (p.15) suggests that adnominal adjectives are phrases rather than heads taking (an extended projection of the) NP as their complement.<sup>18</sup>

French DP internal sandhi facts (*liason*) have sometimes also been taken to show that prenominal adjectives are heads rather than XPs (Lamarche 1991, Valois 1991a) (and that prenominal adjectives are related to the noun in a way tighter than postnominal ones are - Bouchard 1998, 2002). I fail to see how a not yet completely understood phenomenon like *liason* (especially with respect to the exact syntactic conditions of its working) can provide a clear argument one way or the other. The different degree of application of *liason* to prenominal and to postnominal adjectives may perhaps indicate that a prenominal adjective and the adjective or noun that follows it are in a structural configuration different from that in which the noun and a postnominal adjective are found, but (at present) it can hardly indicate anything more precise than that. And some structural difference between AN and NA sequences is in any event what many analyses of adjectival syntax assume, the present one included.<sup>19</sup>

Further arguments against the head, or the incorporated, status of (prenominal) adjectives are discussed in Svenonius (1994, sections 3.1-2), Matushansky (2002, Appendix 2), Julien (2005, chapter 1, section 1.2.2), Knittel (2005,203ff), and Laenzlinger (2005a). Also see Roehrs (2006,19ff).

It thus seems plausible to conclude that even direct modification adjectives are phrasal.<sup>20</sup>

### 4.1.3 Some reasons for not deriving direct modification adjectives from relative clauses.

A long tradition in generative grammar (beginning with Chomsky 1955 [1975],539f; 1957; Smith 1961) has treated prenominal attributive adjectives as deriving from predicate adjectives in a (postnominal) relative clause through some preposing operation. In a sense, this derivation comes for free given the it must be available for reduced relative clauses in general (*the letters [recently arrived]* and *the [recently arrived] letters*). Unless expressly blocked, the same derivation applying to a reduced relative clause containing just an adjective in predicate position directly relates such cases as *a star [visible]* to *a [visible] star*. This derivation would also appear to allow one to state the conditions on both predicative and attributive adjectives only once (Chomsky 1955 [1975], 539f; Sussex 1975,6; Hamann 1991,663).

Though attractive in its simplicity as it may be, this analysis encounters a number of problems. For one thing, as Winter (1965), Motsch (1967), Bolinger (1967), Levi (1973,1975), Berman (1974, chapter ), Emonds (1976, section V.3), among others, have observed, not all prenominal adjectives can apparently undergo such a derivation, the reason being that several of them cannot be used predicatively (*the former minister* < *\*the minister former* < *\*the minister who is/was former*; cf. *\*the minister is/was former*).

Secondly, the preposing operation that optionally turns a postnominal adjective into a prenominal one would have to be made obligatory in some cases (*\*the house [red]* → *the [red] house*), and to be blocked in others (*the people [ready]* → *\*the [ready] people*).<sup>21</sup>

Thirdly, as seen in Chapter 2 with English and Italian, prenominal adjectives appear to have readings not found with the corresponding postnominal adjectives (their putative source).

A fourth problem for analyses deriving all adjectives from relative clauses may be represented by those constructions where (full and reduced) relative clauses, as well as adjectives more clearly derived from relative clauses, like those that can be postnominal in English, are ruled out, and yet some adjectives (direct modification adjectives, we claim) are possible. Two such constructions,

singling out exactly the same classes of admitted and non admitted forms, are the following (from Italian and French, respectively):<sup>22</sup>

*Elliptical DPs introduced by the definite article in Italian*<sup>23</sup>

(11)a \*Le che sono state pubblicate

the that have been published (understood: riviste ‘journals’)

b \*Le recentemente arrivate

the recently arrived (understood: riviste ‘journals’)

c \*Le di Gianni

the of G. (understood: scarpe ‘shoes’)

d \*Le orgogliose dei propri figli<sup>24</sup>

the proud of their children (understood: madri ‘mothers’)

e \*Le presenti (understood: persone ‘people’)<sup>25</sup>

the present

(12) Le altre/precedenti/principali/(più) probabili/etc.<sup>26</sup>

the other/former/main/probable/etc. (understood: conseguenze ‘consequences’)

*DPs introduced by possessive adjectives in French* (Bernstein 1993a,17f; Bouchard 2002,143, both based on Ronat 1974,62-71,1977,163)<sup>27</sup>

(13)a \*Je te donnerai mes livres qui sont rouges

I’ll give you my books that are red

b\*Je te donnerai mes livres récemment arrivés

I’ll give you my books recently arrived

c \*Je te donnerai mes livres sur la table

I'll give you my books on the table

d \*Je te donnerai mes livres susceptibles de te plaire

I'll give you my books likely to please you

e \*Je te donnerai mes livres disponibles/présents

I'll give my books available/present

(14) Je te donnerai mes livres rouges/principaux/..

I'll give you my red/main/.. books

Both contexts remain, however, to be better investigated.

Concerning the putative derivation of all adjectives from relative clauses, one possibility to consider, which could perhaps provide an answer to the first and fourth problems above, is that non-predicative adjectives derive from adverbs (contained in relative clauses) rather than from adjectives in predicate position (see for example Bach 1968,101ff, Givón 1970,828). Thus *the former president* could be thought of as deriving from something like 'the x (who was) formerly a president', *an alleged murderer* from something like 'an x (who is/was) allegedly a murderer', etc. Though attractive and apparently manageable if we limit our attention to these few cases, a derivation along these lines soon proves difficult to control if we extend its application. Givón's (1970) attempt at deriving all adjectives from relative clauses is a good illustration of this. As soon as we try to derive further types of non-predicative adjectives from a relative clause, we are forced to posit more and more complex derivations from sources that differ more and more from one another. So, for example, a case like *a poor typist* cannot have the same (relatively simple) derivation as *the former president* or *an alleged murderer* (cf. '\*an x (who is/was) poorly a typist'), but should rather derive from something like 'the x who types poorly' (Givón 1970,828). While the same derivation might extend to *an early riser*, it could not extend to *an early arrival*. The latter can neither derive from 'an x which arrives early' (as with *a poor typist*), nor, for that matter, from 'an x

(which is/was) early an arrival’ (as with *the former president* or *an alleged murderer*). A more plausible source would seem to be ‘an x (which is/was) an event of arriving early’ (cf. Givón (1970,829). *The chief/main reason* can neither derive from ‘the x (which is/was) chiefly/mainly a reason’ (as with *the former president* or *an alleged murderer*), nor from ‘the x which reasons chiefly/mainly’ (as with *a poor typist*), nor from ‘an x (which is/was) an event of reasoning chiefly/mainly’ (as with *an early arrival*). For Givón (1970,fn.12), a more sensible source would seem to be: ‘the reason that is chiefly emphasized here..’. *This particular spot* cannot have any of the above derivations. Again, Givón (1970,fn.12) suggests the following as a possible source: ‘the spot was chosen for the particular reason (with the particular purpose in mind)’. Examples like these could easily be multiplied: *the only man there* (‘He was present there alone’ - Givón 1970,fn.12), *the very day* (the x such that it was exactly the day), *a shocked silence* (an x such that they were silent out of shock).<sup>28</sup> Whether or not some such sources are plausible, it is clear that such a line of analysis eventually gets out of control.<sup>29</sup> Also, if some such sources are admitted, one would have to somehow block possible derivations such as *their bad need* or *our lucky chairman* from sources like ‘the x which they badly needed’ and ‘the x who is/was luckily our chairman’ (also see Fedorowicz-Bacz 1977,40).

The derivation of all adnominal adjectives from a reduced relative clause source would also, it seems, have little to say about the different interpretive properties of prenominal and postnominal adjectives reviewed above for Romance and Germanic, nor would it shed light on the overt distinction between two classes of adjectives in the languages examined in the Appendix below, nor for the rigid order of direct modification adjectives seen in Chapter 3, section 3.3.2, given that relative clauses can in principle stack in any order.<sup>30</sup>

An analysis recognizing two sources for adnominal adjectives seems instead able to capture the basic insight of the traditional analysis while providing an account for the observations that could not easily be subsumed under it.

The same conclusions appear to hold for nonrestrictive adjectives, which are sometimes taken to derive from nonrestrictive relative clauses (cf., e.g. Chomsky 1965,217fn.26, Blinkenberg 1969,108fn.1, Luján 1972, Kayne 1994,111). Many of them do not even have a parallel predicative usage, which makes such derivation difficult (see (15)a-b):

(15)a La sua povera mamma (=/= la sua mamma, che era povera)

the his poor (=pitiable) mother (the his mother, which was poor (=/= pitiable))

‘his poor (pitiable) mother’

b quel dannato imbroglione (\*quell’imbroglione, che è dannato)

that damn swindler (that swindler, who is damn)

Another difficulty for the idea that nonrestrictive adjectives have their source in nonrestrictive relative clauses comes from one observation of Aoun’s (reported in Authier 1988,175fn.3). While nonrestrictive adjectives cannot modify the inalienably possessed DP in the Romance external possessor construction (Kayne 1975,169; see (16a)), nonrestrictive relative clauses can (see (16b)).

(16)a \*Oscar s’est lavé les mains propres

Oscar washed his clean hands

b Oscar s’est lavé les mains, qui pourtant étaient propres

Oscar washed his hands, which however were clean

Also, the derivation of a nonrestrictive adjective modifying a proper name ((17)) from a nonrestrictive relative clause ((18)) does not immediately account for the fact that the article is possible in front of the proper name modified by the adjective, but not in front of the proper name modified by the relative clause:<sup>31</sup>

(17)a \*(L') amata Londra cominciava a deluderlo

the beloved London was starting to disappoint him

'Dear London was starting to disappoint him'

b \*(the) incomparable Callas (cf. Matushanky 2005b,430)

(18)a (\*La) Londra, che era (da lui) amata, cominciava a deluderlo

the London, which was (by him) loved, was starting to disappoint him

'London, which was dear (to him), was starting to disappoint him

b (\*The) Callas, who was incomparable,...

Finally, taking restrictive and nonrestrictive adjectives to derive from restrictive and nonrestrictive relative clauses, respectively, would lead one to expect restrictive adjectives to occur closer to the N than nonrestrictive ones, just as their putative sources. But, as we have seen with postnominal adjectives in Italian (Romance) in Chapter 2, section 2.10.4, just the opposite is true.

#### **4.2 A syntactic analysis of indirect modification adjectives**

As mentioned above, Chapter 3, section 3.1, I take indirect modification adjectives to originate in the predicate position of a reduced relative clause (Sproat and Shih 1988, 1991), merged prenominally (Cinque 2003, 2008b, in preparation).

Some facts seem to suggest that the prenominal Merge position of indirect modification adjectives is higher than the projections hosting direct modification adjectives, and lower than the Merge position of numerals.

For example, in German, participial reduced relative clauses, which are obligatorily prenominal (see (19)a-b), have to precede direct modification adjectives (see (20)), and have to follow numerals (see (21)).<sup>32</sup>

(19)a Er ist ein [sein Studium seit langem hassender] Student

he is a his study for a long time hating student

‘He is a student who has been hating his study for a long time’

b \*Er ist ein Student [sein Studium seit langem hassend(er)]

he is a student his study for a long time hating

(20)a Der [kürzlich angekommene] ehemalige Botschafter von Chile (Walter Schweikert, p.c.)

the recently arrived former ambassador of Chile

b \*?Der ehemalige [kürzlich angekommene] Botschafter von Chile

the former recently arrived ambassador of Chile

(21)a Diese drei [in ihren Büro arbeitenden] Männer (Walter Schweikert, p.c.)

these three in their office working men

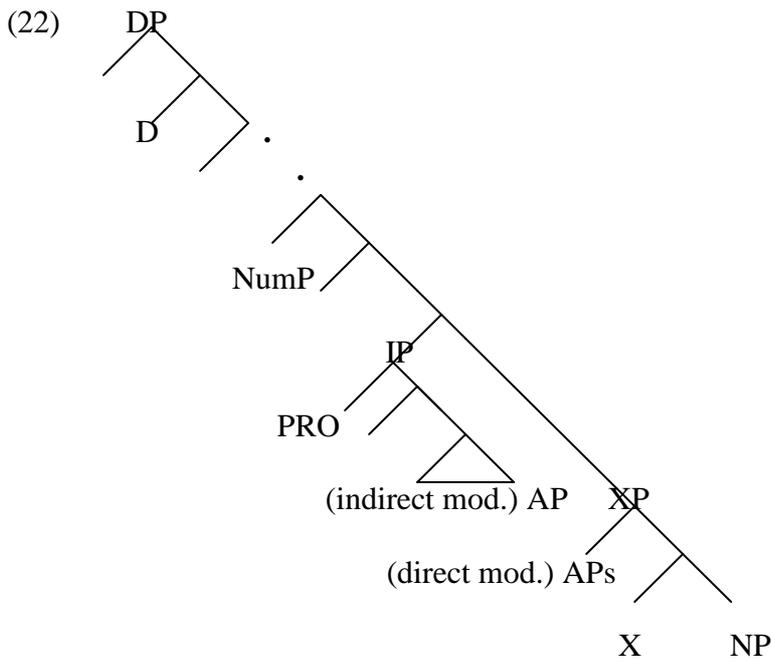
‘These three men working in their office’

b ??Diese [in ihren Büro arbeitenden] drei Männer

these in their office working three men

‘These three men working in their office’

This suggests a (partial) structure as in (22)



In the non finite reduced relative clause IP of (22) I have assumed the presence of a subject PRO, distinct from and matched with the Head of the reduced relative clause; i.e., [<sub>XP</sub> (direct mod.) AP + NP].

German appears to provide direct evidence for the presence of such a PRO.<sup>33</sup> In participial reduced relative constructions in German, the determiner, the head N and the participle agree in Case. See

(23):

(23) (Wir sahen) die<sub>AccPl</sub> angekommenen<sub>AccPl</sub> Studenten<sub>AccPl</sub>

(we saw) the arrived students

‘(We saw) the students who had arrived’

As noted in Fanselow (1986), such ‘floating’ distributive phrases as *einer nach dem anderen* ‘one after the other’ agree in Case with the DP with which they are construed. See (24)a-b:

(24)a Wir<sub>Nom</sub> haben Maria<sub>Acc</sub> einer<sub>Nom</sub>/\*einen<sub>Acc</sub> nach dem anderen geküßt

we have Maria one after the other kissed

‘We have kissed Maria one after the other’

b Maria<sub>Nom</sub> hat die Männer<sub>Acc</sub> einen<sub>Acc</sub>/<sup>\*</sup>einer<sub>Nom</sub> nach dem anderen geküßt

Maria has the men one after the other kissed

‘Maria kissed the men one after the other’

As Fanselow further observes, if such floating phrases are construed with the PRO subject of an infinitive, they invariably bear nominative Case. This is particularly evident in such Cases as (25), where the controller of PRO bears a different Case:

(25)a Weil ich die Männer<sub>Acc</sub> überzeugte, PRO Renate einer<sub>Nom</sub>/<sup>\*</sup>einen<sub>Acc</sub> nach dem anderen zu küssen,...

as I the men convinced Renate one after the other to kiss,..

‘As I convinced the men to kiss Renate one after the other,..’

Now, what we observe in the reduced relative clause case is that the floating distributive phrase also appears in nominative Case, irrespective of the Case borne by the Head with which it is construed:

(26) (Wir sahen) die<sub>Acc</sub> [einer/<sup>\*</sup>einen<sub>Acc</sub> nach dem anderen angekommenen<sub>Acc</sub>] Studenten<sub>Acc</sub>

(we saw) the one after the other arrived students

‘(We saw) the students arrived one after the other’

This clearly points to the presence of a PRO with which the floating distributive phrase is construed.

This does not exclude the possibility that, in addition to the “matching” analysis sketched in (22),<sup>34</sup> there may also be a “raising” analysis of reduced relative clauses, especially considering that idiom

chunks may be modified by them (*The headway made so far is not negligible*). See Cinque (in preparation).

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<sup>1</sup> This section draws substantially from the Introduction to Cinque (2006). Bernstein (1993a, 75f), and Kayne (2005a, section 2.1) also postulate the existence of (certain) ‘functional adjectives’.

<sup>2</sup> In the wake of Lyons (1968, § 9.5.2), and a much earlier tradition, I take “lexical” categories to be distinguished from “functional”, or “grammatical”, ones in being *open* classes (classes with open membership) in opposition to the latter, which are *closed*. See Cinque (2004b, section 1) for the parallel claim that adverbs too should be considered functional elements, as there are languages where they constitute a closed and quite limited class (Dixon 1982,40; Schachter 1985,21ff; Reesink 1990). Richard Kayne has recently advanced the very interesting conjecture that if most “lexical” verbs are derived from the incorporation of a noun into a “light” verb (à la Hale and Keyser 1993) possibly nouns are the only truly open class. Interestingly, Dixon (1982), reports that “[s]ome languages from North Australia and some from New Guinea have only a small set of monomorphemic verbs (varying from about six to around 100 members)” (p.225). Also see Pawley (2006).

<sup>3</sup> Dixon (2004,36ff).

<sup>4</sup> Backhouse (1984).

<sup>5</sup> Lindsey and Scancarelli (1985).

<sup>6</sup> This is not necessary, though. They will still be a closed class if in the language in question most “adjectival predication” is expressed by verbs and/or nouns. Dixon (2004,29) reports two north Carib languages (Hixkaryana, and Tiriyo) as having a closed class of *predicate-only* adjectives (on the order of thirty/forty).

<sup>7</sup> A recent neurolinguistic study (Kemmerer 2000) would seem to suggest that knowledge of the grammatically relevant semantic features that influence prenominal adjective order (categories like ‘size’, ‘colour’, etc.) can be selectively impaired, while knowledge of grammatically irrelevant aspects of adjective meaning (like, for example, perceptual and conceptual features distinguishing ‘brown’ from ‘black’) is not. This may perhaps be construed as additional evidence for the functional nature of (direct modification) adjectives.

<sup>8</sup> Nonetheless exceptions exist even in English (and Germanic, more generally, for which see Holmberg and Rijkhoff 1998,97, and Kester 1996,168). One is provided by *easy-to-please* constructions (see (i)); another by comparative cases like those in (ii), but other types exist as well (see (iii)):

(i) a a difficult to please child      (Sadler and Arnold 1994,190)

    b a hard to pronounce name      (Sadler and Arnold 1994,190)

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(ii) a a bigger than usual ice-cream cone (Svenonius 1992,fn.15)

b (He showed) a larger than average capacity for inaptitude (Radford 1989, ex. (45)a)

c Linguists are showing a greater than ever fascination for functional fantasies (Radford 1989, ex. (45)b)

d a larger than expected profit (Pullum and Huddleston 2002,551)

(iii) the much talked about new show (Sadler and Arnold 1994,190)

Even if they are quite restricted, most such cases become productive if extraposition of the complement or adjunct takes place. See Berman (1974; especially chapters 1 and 6), Riemsdijk (2001), Matushansky (2005a, section 5.2), and Fleisher (2008).

<sup>9</sup> Among the other Slavic languages, Czech, Slovak, Sorbian, Bosnian/Croatian/Serbian and Slovene obligatorily place complements before the prenominal adjective, while Macedonian, Polish and Ukrainian, like Bulgarian and Russian, place them after it (cf. Siewierska and Uhlířová 1998,135f).

<sup>10</sup> For it could be claimed, at least in the present framework, that the non phrasal nature of direct modification adjectives is simply obscured by the presence on the same side of the noun of phrasal indirect modification adjectives with their different properties.

<sup>11</sup> Danish is similar. See Julien (2005,6).

<sup>12</sup> The impossibility for a complement (or adjunct) to follow the head, which still defies proper understanding, is generally attributed to a ban on right recursion for phrases found on (certain) left branches. For discussion and different proposals, see Zwarts (1974), Emonds (1976,18f), Williams (1981,1982), Giorgi and Longobardi (1991,95-100), Escribano (2004), among others. It also follows from Biberauer, Holmberg and Roberts' (2007) Final-over-Final Constraint (FOFC), which rules out head final-over-head initial orders, although examples like (6) are unexpected. In English, preposed participles, arguably reduced relative clauses (see Chapter 6, section 6.1.4), cannot take complements preceding the participle either, just like adjectives cannot take complements preceding the adjective (cf.

(i) and (ii)):

(i) \*a to me recently sent book

(ii) \*a of his children proud father

<sup>13</sup> The exceptions mentioned in note 8 above to the ban on complement and adjuncts for English prenominal adjectives extend to non predicative adjectives, which thus provides evidence that they too are (may be) phrasal. See:

(i) a He is a *bigger than usual* pasta eater

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<sup>14</sup> A similar case is provided by the synthetic absolute superlatives of Italian, at least if *-issim-* (and *-o*) betray the presence of separate functional heads above AP. See, for example, (i)a and b in the non-predicative interpretation of *buono* as ‘considerable’, and *vecchio* as ‘of long standing’:

(i)a questi sono in buonissima parte inutilizzabili

these are to a very considerable extent non utilizable

b lui è un mio vecchissimo collaboratore

he is a collaborator of mine of very long standing

For the analogous possibility of superlative modification of (direct modification) *de*-less adjectives in Chinese, see Paul (2005,section 4.2).

<sup>15</sup> *AP enough* arguably has a trace of the AP to the right of *enough*: [[ AP<sub>i</sub> [enough t<sub>i</sub> ] ] NP ] (see Kayne 2005,32).

<sup>16</sup> The presence of *of* (*how old of a friend*) renders fronting of non predicative adjectives quite marginal if not ungrammatical (which may indicate the presence of predicate inversion in such cases). The well-formedness of (9) instead suggests (pace Troseth 2004) that the construction without *of* does not involve predicate inversion (before A-bar movement). The loss of the ‘pitiable’ reading of *poor* in *Bill Bradley is too poor of a man..* arguably depends on the presence of *of*, and in addition, as Troseth (2004,fn.1) herself notes, on the presence of the degree word *too*. For a nonmovement analysis of the construction, see Abney (1987, chapter IV, 3.2.a).

<sup>17</sup> The evidence reviewed in this section also seems to argue against the weaker hypothesis (Bernstein 1991,1993a; DeGraff and Mandelbaum 1993; Zamparelli 1993) that exclusively prenominal adjectives in Romance (like *vecchio* ‘old’ in the sense of ‘of long standing’, and *mero* ‘mere’) are heads, while postnominal ones are phrases.

<sup>18</sup> In section 3.2, Santorini and Mahootian (1995) discuss evidence which they take to suggest that some adjectives may be heads after all. Although English adjectives, as one would expect, are overwhelmingly postnominal in Irish-English code-switching when the language of the head is Irish, there are few expletive adjectives (*bloody, fucking,..*) that precede the Irish noun. This fact, however, can hardly be interpreted as evidence for their head status, given that some other high adjectives are also prenominal in Irish (see Stenson 1981,30, and 161,fn7; as well as Stenson 1990,177f and 195,fn.9).

<sup>19</sup> In the present analysis, after the “roll-up” of the NP (shells) around the APs, the noun is plausibly more deeply embedded with respect to specifiers found after it than (the head of) a prenominal specifier is with respect to a lower specifier, or the NP (also see Laenzlinger 2005a,fn.36).

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<sup>20</sup> The fact that even ‘ergative’ (or ‘unaccusative’) adjectives (i.e., those whose subject is merged in complement position - Cinque 1989,1990a; Stowell 1991; Bennis 2000, 2004; Bentley 2004, Baker 2008, section 3.1.1) can occur prenominally (see (i)) also casts doubt on the pure head status of prenominal adjectives:

(i) Le [PRO note t] vicende giudiziarie di Gianni

Gianni’s well-known judicial vicissitudes

What I indicated as PRO in (i) (more generally the unpronounced subject of all direct modification adjectives) is possibly smaller than a DP, in that it corresponds only to a NP plus any inner direct modifiers (‘[<sub>XP</sub>[<sub>NP</sub> vicende] giudiziarie]’ in (i)).

It remains to be seen whether the highly articulated structure of adjunct modifiers uncovered by Faults (2006, chapter 2) for gradable adjectives in predicate position ([ than DP [compared to DP [PPcomplement [ for DP [A]]]]) is also present silently in their attributive use.

<sup>21</sup> Other adjectives for which the preposing operation would have to be blocked include *ill*, *right* (in one of its readings), *present* (in its locative reading), *glad* (Pullum and Huddleston 2002,529), and all the adjectives mentioned in Chapter 5, section 5.2.2, which begin with the aspectual prefix *a-*. Also see Borsley (1997,fn.3).

<sup>22</sup> Note that (11) becomes grammatical if a demonstrative is used in place of the article (a demonstrative can also be used in (12)). Spanish is different in that all of the forms corresponding to (11) are possible, though certain other possibilities are blocked (see Kester and Sleeman 2002, Cabredo Hofherr 2005, and references cited there).

<sup>23</sup> For a comparison with other Romance languages, see Brucart and Gracia (1986), Sleeman (1993, 1996, chapter 2), and references cited there.

<sup>24</sup> Note that the same adjective without the complement is instead possible with the article:

(i) (?)Le persone testarde e le orgogliose..

the persons stubborn and the proud..

‘The stubborn people and those proud..’

<sup>25</sup> Interestingly, only the locative interpretation of *presenti*, the one found in postnominal position in English, gives unacceptable results. The temporal one is instead possible: *le condizioni passate, e le presenti, sono tutt’altro che rosee* ‘the past conditions, and the present, are all but favorable’.

<sup>26</sup> An exception is represented by direct modification adjectives like *solo* ‘only’, *mero* ‘mere’, *puro e semplice* ‘pure and simple’, etc. (see Bernstein 1993a,70f).

<sup>27</sup> Other Romance languages do not share the same paradigm. See Brucart (1994) for some discussion.

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<sup>28</sup> Also see Vendler (1968, chapter 6) for many other putative sources one would have to adopt in order to derive non-predicative adjectives from relative clauses.

<sup>29</sup> A derivation of classificatory adjectives (the other main class of non-predicative adjectives) from relative clauses raises comparable difficulties. See Levi (1973,1975,1978) and Berman (1974).

<sup>30</sup> Further arguments against deriving attributive adjectives in English, Spanish, Polish, Japanese, and Korean, from relative clauses are presented in Berman (1974, chapter 3), Contreras (1981), Fedorowicz-Bacz (1977), Yamakido (2000,2007), and Kang (2005, 2006, 2007), respectively. Also see Alexiadou, Haegeman and Stavrou (2007, 295-306). See, however, Leu (2008, section 4.5) for an attempt at reconciling an approach like that taken here with one involving relativization even for non-predicative adjectives.

<sup>31</sup> Nonrestrictive adjectives (in Italian) appear compatible with ‘only’ (see (i)a), while nonrestrictive relative clauses are not (see Kayne 1994,163fn.65):

- (i) I soli industriosi greci di Megara (riuscirono a sopravvivere)  
the only industrious Greeks of Megara (managed to survive)

Further reasons for not deriving nonrestrictive adjectives from nonrestrictive relative clauses (in Chinese) are discussed in Del Gobbo (2004).

<sup>32</sup> Cf. Rijkhoff (1998,362): “In Dutch (as well as e.g. in German and Frisian) the preposed participial construction follows the demonstrative and the numeral.” As Martina Witschko pointed out to me (p.c.), the b example of (20) becomes better if the reduced relative clause (*kürzlich angekommene*) has a parenthetical intonation (see note 2 of Chapter 3 above). Of course, indirect modification adjectives, which are also reduced relative clauses, should be able to precede participial reduced relative clauses. A case in point may be (i), from Kafka, cited in Koch (2005, section 3):

- (i) kleine, unter dem Strassenniveau liegende, durch paar Treppen erreichbare Läden  
small under the street-level lying through a few stairs reachable stores  
‘small stores that lie below the level of the street that are reachable by (walking down) a few stairs’

The same situation appears to hold in English. See (ii) vs. (iii):

- (ii) that beautiful recently arrived letter (Kayne 2005b,66)  
(iii) \*That former recently arrived ambassador (barring a parenthetical intonation)

<sup>33</sup> The argument that follows is based on Fanselow (1986).

<sup>34</sup> The arguments against the presence of PRO in Italian (and French) reduced relative clauses given in Siloni (1995, section 3.2) do not seem to us to be cogent. For example, reduced relative clauses like *Gianni era l'unico tornato contento* ‘(lit.) G. was the only (one) returned happy’ are embedded in a DP, hence islands, independently of the status of their subject, and contrast with infinitival clauses like *Gianni era l'unico a tornare content* ‘(lit.) G. was the only

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(one) to return happy', which are not so embedded, hence no islands. This is shown by the contrast in (i), where the infinitival clause, but not the reduced relative clause appears preposable:

(i) a A tornare contento, non era l'unico

To return happy, he was not the only (one)

b\*?Tornato contento, non era l'unico

Returned happy, he was not the only (one)