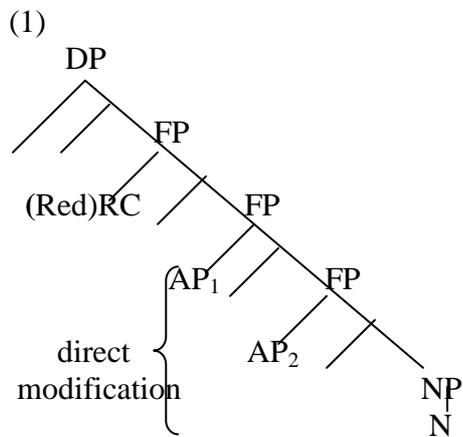


Chapter 3: Phrasal movement and the two sources of adnominal adjectives

3.1. The two sources of adnominal adjectives. As already implicit from the above discussion, the first component of the analysis to be developed here is the idea that adnominal adjectives (APs) have two separate sources.¹ One is a direct adnominal modification source, which I take to involve merger of the different classes of APs in the specifiers of various dedicated functional heads of the extended projection of the NP (evidence for this position over alternatives that have been proposed in the literature will be discussed in Chapter 4, section 4.1.1, below). The other is a (reduced) relative clause source (to which, I will argue, the other source cannot be reduced – see Chapter 4, section 4.1.3). This second source corresponds to Sproat and Shih’s (1988,1991) “indirect modification”. As already noted, I will also be assuming that the Merge position of (reduced) relative clauses is prenominal, specifically in the specifier of a projection above the projections hosting direct modification APs, as very roughly sketched in (1):²



As also mentioned above, the postnominal position of (reduced) relative clauses will be taken to arise as a consequence of the merger of a (possibly covert) complementizer that attracts the NP (plus any direct modification APs, if present) along lines recently advocated by Kayne (see Kayne 1999, 2000, 2005a):³

(2)a [[_{IP} e recently arrived] nice Greek vases] → (merger of C and attraction of the remnant)

b [nice Greek vases] C [[_{IP} e recently arrived] t] → (merger of the determiner)

e [the [[nice Greek vases] C [[_{IP} e recently arrived] t]]]

3.2 A summary of the interpretive properties associated with each source. As seen, the two sources turn out to have quite different interpretive properties. Each source is associated with a value for the semantic distinctions reviewed above that is in general the opposite of the value associated with the other source. See (6) below, which represents the Merge structure of the two types of modification.

An further distinction between the two sources is suggested by an observation of Larson's (2000b). There he notes that in (3) the first temporal modifier is interpreted deictically ('which took place on Thursday this week'), while the second is interpreted generically ('which ordinarily takes place on Thursday'):

(3) I missed the THURSDAY Thursday lecture

Although the same distinction cannot be reproduced in Italian with adjectives (both the deictic and the generic temporal modifiers take the form of a postnominal PP introduced by *di*, in the generic case typically accompanied by a definite article), it can be reproduced with PPs, which are found in the expected mirror-image order (N > generic > deictic):

(4) la lezione del giovedì di giovedì (prossimo)

the class of the Thursday of Thursday (next)

'(Next) Thursday Thursday class'

(5) *?la lezione di giovedì (prossimo) del giovedì

the class of Thursday (next) of the Thursday

There is an additional interpretive difference between the two sources. Only direct modification adjectives can give rise to idiomatic readings. See the discussion in Chapter 7 (section 7.2) on the possible idiomatic interpretation of prenominal, but not of postnominal, adjectives in English (as opposed to Italian), the possible idiomatic interpretation of Bosnian/Croatian/Serbian ‘long-form’ adjectives (which can be direct modification adjectives) vs. the impossibility of an idiomatic interpretation of ‘short-form’ adjectives (which are only indirect modification adjectives) (Appendix, section 3), and the possible idiomatic reading of Chinese *de*-less adjectives vs. the impossibility of an idiomatic reading for the corresponding adjectives with *de* (Appendix, section 1).

Presumably this is a consequence of the nonintersective nature of direct modification vs. the necessarily intersective nature of indirect modification (which is incompatible with the semantic non compositionality of idioms).

The table in (6) summarizes the different properties associated with each source:

(6)	indirect (reduced RC) modification	direct modification	
	[Det. [stage-level (or individual-level)	[individual-level	NP]]
	[Det. [restrictive	[nonrestrictive	NP]]
	[Det. [implicit relative clause	[modal	NP]]
	[Det. [intersective	[nonintersective	NP]]
	[Det. [relative (to a comparison class)	[absolute	NP]]
	[Det. [comparative (with superlatives)	[absolute (with superlatives)	NP]] ⁴
	[Det. [specificity or non-specificity inducing	[specificity inducing	NP]] ⁵
	[Det. [epistemic ‘unknown’	[evaluative ‘unknown’	NP]]
	[Det. [discourse anaphoric ‘different’	[NP dependent ‘different’	NP]]
	[Det. [deictic	[generic	NP]]
	[Det. [literal interpretation	[possible idiomatic interpretation	NP]]

That is, direct modification has only the “adverbial” individual-level, nonrestrictive, modal, nonintersective, absolute (with both non superlative and superlative scalar adjectives), specificity inducing, evaluative (for adjectives like ‘unknown’), NP dependent (for an adjective like ‘different’), generic, interpretations, and can give rise to idiomatic readings. Indirect modification (the relative clause source) has instead the opposite values, with two apparent exceptions. It has the opposite values: restrictive, implicit relative clause, intersective, relative to a comparison class, comparative (with superlatives), epistemic (for adjectives like ‘unknown’), discourse anaphoric (for an adjective like ‘different’), deictic, literal; but it appears to be underspecified for the value specificity/non-specificity inducing, and, to some extent, for the value stage-level/individual-level, as noted above.

The reason for these two apparent exceptions is very likely the fact that indirect modification has the same readings of predicative adjectives in relative clauses, and predicative adjectives in relative clauses are compatible with both values of such distinctions. See (7)a, where reference may be to a specific house which is nearby, or to some house or other which must satisfy the property of being nearby, and (7)b, where *navigable* may be interpreted as ‘currently navigable’ (stage-level) or ‘generally navigable, though maybe not at the present moment’ (individual-level):

(7)a He wants to burn a house that is nearby

b This is the only river that is navigable

3.3. A preview of the syntactic properties associated with each source. There are also syntactic properties that go together with these clusters of semantic properties.

3.3.1 Relative distance from N. As seen with English prenominal adjectives and Italian postnominal ones, direct modification adjectives (with the interpretive properties associated with them) are closer to the N than adjectives deriving from relative clauses (with the opposite

interpretive properties). This is especially visible in those languages in which the two series are morphologically distinct as in some of the languages that we briefly discuss in the Appendix).⁶ So, for example, articulated adjectives in Maltese Arabic, which appear to derive from a relative clause source, are invariably further away from the noun than articleless ones, which are direct modification only (see the Appendix, section 2). Also see the cases of Chinese, Bosnian/Croatian/Serbian and Greek, in sections 1, 3, and 5 of the Appendix). This property will be made to follow from the different height at which (reduced) relative clauses and direct modification adjectives are merged (see Chapter 4).

3.3.2 Rigid and non-rigid ordering. A second syntactic difference between the two sources involves their word order properties. As already suggested in Sproat and Shih (1988,1991), direct modification adjectives, like *de*-less adjectives in Chinese (see the Appendix, section 1), are rigidly ordered, while adjectives deriving from relative clauses are not. The same is true of articleless adjectives in colloquial Slovenian, whose order is rigid (Marušič and Žaucer 2006,190), as opposed to the free order of adjectives preceded by the ‘article’ TA, which Marušič and Žaucer argue derive from reduced relative clauses. The rigidity of the order of direct modification adjectives is especially clear in those languages, like Yoruba, which only have direct modification adjectives (i.e., lack predicative adjectives that can enter the relative clause source), or Iká, whose direct modification adjectives are morphologically distinct from predicative adjectives. See section 3.5.1.2 of this Chapter. Other languages reported to have a rigid order of adjectives are Muna (Austronesian – Berg 1989, section 5.9.1), Nabak (Papuan – Fabian, Fabian and Watters 1998,72f), and Nawdm (Niger-Congo – Albro 1998,3).

As to languages like English or Italian, which appear not to have an absolutely rigid order, but only a “preferred”, or unmarked, one, it is interesting to note that their unmarked order corresponds to the rigid order of those languages that do have one.⁷ We interpret this as suggesting that also English and Italian have a rigid order with their direct modification adjectives, even though this is

obscured by the existence of adjectives that can be used either as direct modifiers or as indirect modifiers (i.e., also as predicative adjectives that enter a relative clause source, thus giving rise to an apparent reversal of the rigid order). See the text below, Chapter 5, sections 5.1.1, and 5.2.1, and Chapter 6, section 6.1.

The hypothesis that even in English or Italian direct modification adjectives are rigidly ordered is confirmed by the rigidity of the order in those cases in which the adjectives have no independent predicative usage, and thus can only be direct modifiers of the NP, like “classificatory” and “adverbial” adjectives:

- (8)a La ripresa economica americana vs. *la ripresa americana economica
b the American economic recovery vs. the *economic American recovery

- (9)a He is an occasional hard worker
b *He is a hard occasional worker

Surrendering to the appearance that (direct modification) adjectives in English or Italian have no ordering restrictions would leave such cases as (8) and (9) as exceptions, and the very existence of an unmarked order which corresponds to the rigid order shown by other languages as something of a coincidence.⁸

The apparent non-rigid ordering of adjectives (where found) may be due to a number of reasons. One has already been mentioned: when the lower of two adjectives that are rigidly ordered when in direct modification can also be used predicatively and can thus access the higher reduced relative clause source. In some such cases there is a discernible change of meaning. See (10)-(11). In others, this may be present, but harder to pin down, as in (12):⁹

- (10)a He is an alleged heavy drinker

b He is a heavy alleged drinker

(11)a He is a former heavy drinker

b He is a heavy former drinker

(12)a a beautiful old house

b an old beautiful house

Failure to take the two sources of adjectives into consideration has in fact led many authors to the conclusion that (certain) languages have no strict ordering of adjectives, or just a partial one, possibly determined by semantic or informational conditions. See Malouf (2000), Bouchard (2002, to appear), Kremers (2003,74f), Knittel (2005), Truswell (2004a,b,2007), Teodorescu (2006), Szendrői (2008, section 3), among others. For a discussion of Teodorescu's (2006) pair *a famous alleged actor* and *an alleged famous actor*, see Chapter 5, section 5.1.

More interesting are cases like her pair *an alleged former thief* and *a former alleged thief*, where both adjectives are direct modification adjectives only.

Perhaps, *former* is merged in two different positions of the extended projection of the NP, which is possibly at the base of its systematic ambiguity with a possessive adjective.¹⁰ For example, *former* can under the scope of *my*, thus modifying the NP 'intension' (*[my [former [mansion]]]*) = a current possession of mine that used to be a mansion), or may be merged higher, taking scope over *my*, which has plausibly moved past it (*[my_i [former [t_i [mansion]]]]*) = the mansion which was formerly mine). Possible evidence for the different height of merger is the fact that the two readings can co-occur. In a scenario in which each of us strives for possessing a house that was a former mansion, it seems possible to say "Now I have a new one. My former former mansion was in too poor a state to be inhabited".¹¹

Another source of apparent freedom of order is when all of the adjectives involved can have a reduced relative clause source, as in (13) (namely when all of them also have a predicative usage, maybe in addition to a direct modification one) (cf. Sproat and Shih 1988,1990; Baker 2003b,3):

(13)a Loro accettavano solo studenti stranieri ricchi

They used to accept only students foreign rich

‘They used to accept only rich foreign students’

b Loro accettavano solo studenti ricchi stranieri

They used to accept only student rich foreign

‘They used to accept only foreign rich students’

Given that the corresponding non-reduced relative clauses are not rigidly ordered with respect to each other (see (14)), we do not expect the reduced ones to show any rigid ordering either.

(14)a Loro accettavano solo studenti che fossero stranieri che fossero (anche) ricchi

‘They used to accept only students that were from abroad that were (also) rich’

b Loro accettavano solo studenti che fossero ricchi che fossero (anche) stranieri

‘They used to accept only students that were rich that were (also) from abroad’

Yet another source of apparent freedom is given by asyndetic coordination; what Sproat and Shih (1988,477f; 1991,section 2.3) call “parallel modification”, whereby each adjective belongs to a separate intonational phrase and modifies the NP independently of the others (“in parallel” rather than “hierarchically”, as when the adjectives are stacked). See (15), from Sproat and Shih (1988,478):

(15)a She loves all those Oriental, orange, wonderful ivories

- b She loves all those wonderful, orange, Oriental ivories
- c She loves all those orange, Oriental, wonderful ivories
- d She loves all those wonderful, Oriental, orange ivories

Apparent violations of the order of direct modification adjectives are also found whenever the lower of the two adjectives is in the (definite) superlative form (Abney 1987,340; Matushansky 2002, 160f).¹² So, for example, while the unmarked order of shape and colour adjectives is shape > colour (see (16)), and that of evaluative and size adjectives is evaluative > size (see (17)), if the colour adjective or the size adjective are in the definite superlative form, the order is reversed (see (18) and (19)):

(16)a a long white plane

b %a white long plane

(17)a a nice small apartment

b %a small nice apartment

(18)a *?the long whitest plane (that I saw)

b the whitest long plane (that I saw)

(19)a *?the nice smallest apartment (that I know of)

b the smallest nice apartment (that I know of)

This is even more striking when the adjectives involved are both nonintersective (their order thus being quite rigid). See (9)a-b, repeated here as (20)a-b. If the lower of the two is in the definite superlative form, their order can, in fact must, be reversed. See (21)a-b:

(20)a an occasional hard worker

b *a hard occasional worker (in the intended meaning)

(21)a *?the occasional hardest worker (that I know)

b the hardest occasional worker (that I know)

I interpret this as suggesting that the superlative morpheme is merged high up in the functional structure of the DP, from where it attracts the lower of the two adjectives (cf. Heim 1999, Stateva 1999,2000; also see Sharvit and Stateva 2002 and Matushansky 2008).

Apparently, this position can be higher than the position of (finite) restrictive relative clauses, as shown by cases like (22), where it is the superlative adjective that licenses negative polarity *any* inside the relative clause:¹³

(22) the highest mountain that anyone climbed...

All in all, it would seem hasty, if not downright wrong, to conclude from the cases of apparent free ordering and order reversals just reviewed that no ordering exists among (direct modification) adjectives in English and Italian, or, for that matter, universally.

3.4 Summary of the semantic and syntactic properties of the two sources.

We can summarize the clusters of properties associated with each source as follows:

(23)	indirect (reduced RC) modification	direct modification	
	[Det. [stage-level (or individual-level)	[individual-level	NP]]]
	[Det. [restrictive	[nonrestrictive	NP]]]

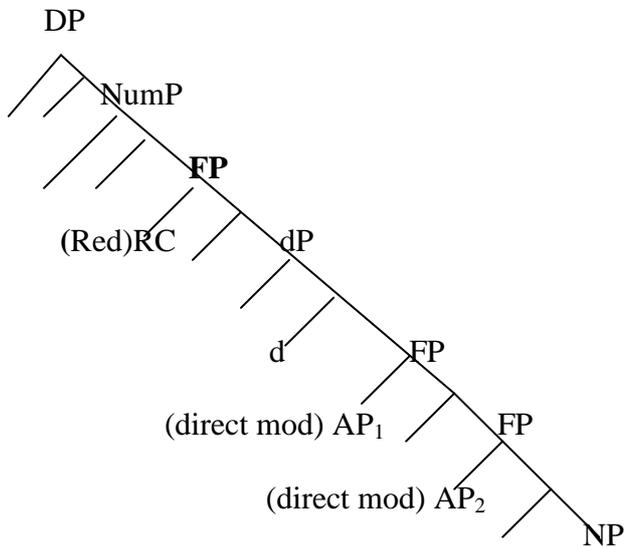
[Det. [implicit relative clause	[modal	NP]]]
[Det. [intersective	[nonintersective	NP]]]
[Det. [relative (to a comparison class)	[absolute	NP]]]
[Det. [comparative (with superlatives)	[absolute (with superlatives)	NP]]]
[Det. [specificity or non-specificity inducing	[specificity inducing	NP]]]
[Det. [epistemic ‘unknown’	[evaluative ‘unknown’	NP]]]
[Det. [discourse anaphoric ‘different’	[NP dependent ‘different’	NP]]]
[Det. [deictic	[generic	NP]]]
[Det. [literal interpretation	[possible idiomatic interpretation	NP]]]
further away from the N	closer to the N	
not rigidly ordered	rigidly ordered	
possible in predicate position	not possible in predicate position	

The question why direct and indirect modification adjectives have the cluster of interpretive properties that they have, rather than the opposite, is a deeper question; and one to which we cannot offer a definite answer. Bolinger’s (1967) idea that attributive adjectives (what we referred to here, following Sproat and Shih’s (1988,1991), as “direct modification” adjectives) are nonintersective, nonrestrictive, individual-level, etc. as a consequence of their modifying the *reference* of the nominal phrase, while predicative adjectives have the properties they have (intersective, restrictive, etc.) as a consequence of their modifying the *referent*, seems to us to have some merit. See Waugh (1976,1977), Pustejovski (1995, chapter 6), Jackendoff (1997, 62-66), Bouchard (1998, section 3; 2002, chapter 2), Larson (1998), McNally (2005), for possible refinements of this idea.

I suggested above that direct modification adjectives are merged below (reduced) relative clauses (and numerals). In Cinque (2003,2008b), I tentatively suggested that they are also merged below a “small” indefinite dP (itself merged below relative clauses) which qualifies as the Head of the

relative clause itself (and is matched by an identical constituent inside the relative clause – see Cinque in preparation for more detailed discussion):

(24)



If we think of *d* as assigning some referential import (though not the uniquely individuating referential import of the higher *D*, which marks the (maximal) intersection of the set contributed by *dP* and the set contributed by the relative clause), it is evident that direct modification adjectives, which are below *d*, modify something that is still predicative in nature, while (full and) reduced relative clauses, which are higher than *d*, modify something that already has some referential status.

3.5 Some cross-linguistic and acquisitional evidence for the dual source of adnominal adjectives.

3.5.1. Languages that lack one of the two sources.

Additional evidence for the two sources for adnominal adjectives comes from the existence of languages that lack one, or the other, of the two sources (see Baker 2003a, section 4.2.4; Cinque 2006, Introduction).

3.5.1.1 Languages lacking direct modification adjectives. As noted in Baker (2003a,207), Slave (Athapaskan) appears to be one language where adjectives can be used as predicates (also within relative clauses) but not as adnominal (direct modification) attributes:¹⁴

(50)a yenene (be-gho) sho h̄ij̄i (Rice 1989,389-90)

woman (3-of) proud/happy 3-is

‘the woman is happy/proud (of him/her)’

b *yenene sho (Rice, p.c. to Mark Baker)

woman proud/happy

‘a proud/happy woman’

Other languages lacking adnominal adjectives are apparently Lango (Noonan 1992,103), and Hixkaryana and Tiriyo (Dixon 2004,28f). Also see the discussion in Rijkhoff (2002,133ff).

3.5.1.2 Languages lacking predicative adjectives. Adjectives in Yoruba form a closed class, and can appear only in adnominal (attributive) position ((51)a),¹⁵ not in predicate position ((51)b) (hence not in the predicate position of a relative clause). See Ajíbóyè (2001,6, and references cited there):¹⁶

(51)a Mo rí [ajá n̄lá] (= (30b) of Ajíbóyè 2001)

I see dog big

‘I saw a big dog’

b *Ajá n̄lá (= (29b) of Ajíbóyè 2001)

dog big

‘The dog is big’

In predicate position, what one finds instead of the impossible (51)b is (52)a, with an intransitive stative verb, *tóbi* ‘to (be.)big’ (cf. ‘to tower’), which, conversely, cannot be used adnominally ((52)b). As Ajíbóyè (2001,7) observes: “[I]n order to use *tóbi* as a modifier, one must nominalize it, or form a relative clause, [(53)a-b]”.

(52)a *Ajá tóbi* (= (29a) of Ajíbóyè 2001)

dog be.big

‘The dog is big’

b **Mo rí [ajá tóbi]* (= (30a) of Ajíbóyè 2001)

I see dog be.big

‘I saw a big dog’

(53)a *Mo rí [ajá tí-tóbi]* (= (31a) of Ajíbóyè 2001)

I see dog Nom-be.big

‘I saw a big dog’

b *Mo rí [ajá [tí ó tóbi]]* (= (31b) of Ajíbóyè 2001)

I see dog Rel 3sg be.big

‘I saw a dog which is big’

In Cinque (2006, Introduction) the closed class character of the exclusively adnominal adjectives of Yoruba is taken to be an indication that adnominal-only adjectives are functional (also see Chapter 5, section 5.1.1 below).

Another African language apparently lacking predicative adjectives is Gbaya Mbodómó (an Adamawa-Ubangi (Niger-Congo) language of Cameroon – see Boyd 1997, section 3.1.3).

Differently from Yoruba, however, Mbodómó in predicate position utilizes a nominalization of the adnominal-only adjective (which is only a secondary strategy in Yoruba). Compare (54) with (55):¹⁷

(54)a so ada

sharp machete

b we li

hot water

(55)a ada ná so-a

machete has sharp-ness

‘The machete is sharp’

b li ná we-a

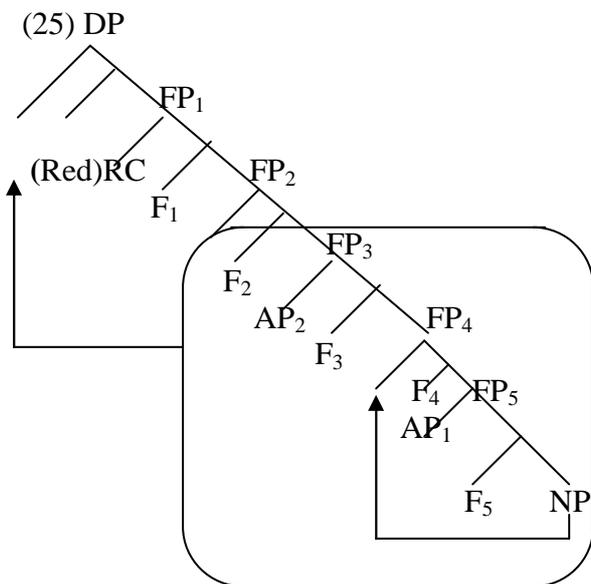
water has hot-ness

‘The water is hot’

3.5.2. Possible evidence from acquisition. As noted by Cardinaletti and Giusti (2007), acquisition of adjectives in both English and Italian shows characteristics that can be taken to support the existence of direct and indirect modification adjectives, with their respective properties. The fact that both in English (Blackwell 2001, 2005), and Italian (Cardinaletti and Giusti 2007), stage-level adjectives (like ‘dirty’, ‘clean’, ‘wet’, ‘dry’, ‘hot’, ‘cold’, ‘happy’, ‘sad’, ‘sick’, etc.) systematically appear later than individual-level adjectives (like ‘round’, ‘straight’, ‘pretty’, ‘ugly’, ‘long’, ‘green’) seems to show that the acquisition of indirect modification is delayed with respect to that of direct modification. No child produces stage-level adjectives before individual-level ones. Furthermore, when they produce stage-level adjectives, children appear to have “learned” reduced relatives. See Cardinaletti and Giusti (2007) for illustration and more detailed discussion.

3.6 Phrasal movement over head movement or base generation. A feature of the analysis developed so far is that only phrasal movement (more precisely, movement of phrases containing the NP) plays a role in the grammar of Romance and Germanic, as in other language families.¹⁸ As seen in Chapter 1 and Chapter 2, section 2.11, N movement alone would be unable to derive the desired generalizations.¹⁹

In addition to the raising of the reduced relative clause Head (i.e., the NP plus the projections dominating it which contain direct modification adjectives) around the reduced relative clause APs, further phrasal movements of the NP around some of the direct modification adjectives will be needed to account for the pre- and post-nominal positioning of these adjectives, as schematically shown inside the box in (25) (see Chapter 6 for illustration):



Even if one were to concede that phrasal movement is superior to head movement for the reasons just noted, it might still be objected that one could, perhaps should, do away completely with movement in favour of a base generation analysis.

I think that in addition to antisymmetric considerations there are conceptual and empirical reasons to prefer a movement to a base generation analysis.²⁰

The main reason lies in the fact, first noted in Greenberg (1963) (see Cinque 1996, 2005 for discussion), that cross-linguistically one finds prenominally only one order, while postnominally there are (at least) two; either the same one as the prenominal order, or its exact opposite:

- (26)a Dem > Num > A > N
 b *A > Num > Dem > N
 c N > Dem > Num > A
 d N > A > Num > Dem

The same is true, at a finer-grained level, of the order of (direct modification) adjectives (for example, size, colour, and nationality adjectives - see Cinque 2009 and references cited there):

- | | | |
|-------|---|--------------------------|
| (27)a | A _{size} > A _{colour} > A _{nationality} > N | (English, Chinese...) |
| b | *A _{nationality} > A _{colour} > A _{size} > N | 0 |
| c | N > A _{size} > A _{colour} > A _{nationality} | (Welsh, Irish...) |
| d | N > A _{nationality} > A _{colour} > A _{size} | (Indonesian, Yoruba,...) |

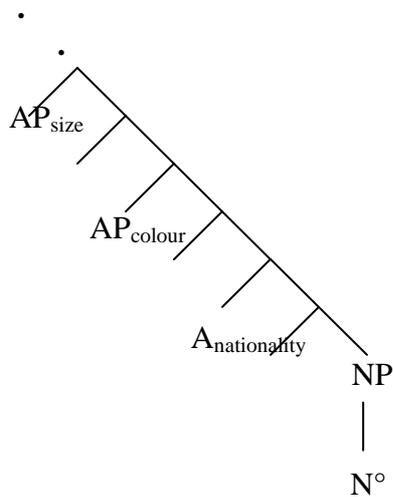
Under a base generation analysis, each of these orders would have to be generated independently of the others even if one feels that they are the same order at a more abstract level (they are either literally the same, or mirror images of each other).

In a base generation analysis it would also be impossible to state the principle (whatever that turns out to be) that governs the ordering of the different classes of adjectives with respect to the N. It has for example been proposed that the more abstract identity of the various orders of adjectives across languages is expressed by a principle that determines the relative distance of each class of adjectives from the head N, thus accounting for what are the two most common orders, (27) a and d, and for the impossibility of (27)b.

But, if one takes this line, (unless some movement is admitted) one can only state the principle as a tendency given that the fourth order, (27)c, (which is documented, even if rarer) plainly violates it.

The principle, whatever it ultimately follows from, can instead be stated as an absolute principle rather than just a tendency, if we are willing to abandon the symmetrical view underlying the base generation account (as in fact Kayne's 1994 Linear Correspondence Axiom would force us to), and to adopt a more abstract, asymmetrical, view, whereby there is only one order/structure available for all languages ((28)), and whatever word order difference there is among them is a function of independently motivated types of movement.

(28)



We know that languages vary with respect to whether they displace interrogative *wh*-phrases or not. In English, (single) *wh*-phrases must be displaced to sentence initial position (as in (29), below), while in Indonesian (see (30)) they remain *in situ*.

We also know that depending on certain conditions movement can affect just the phrase bearing the feature triggering the movement - here the *wh*-feature - (as in (29)), or a larger phrase containing the phrase bearing the relevant feature (as in (31)); what Ross (1967) called Pied Piping:

(29) [Who] did you see ?
 ↑—————|

(30) Siti mau apa? (Cole, Hermon and Tjung 2005,553)

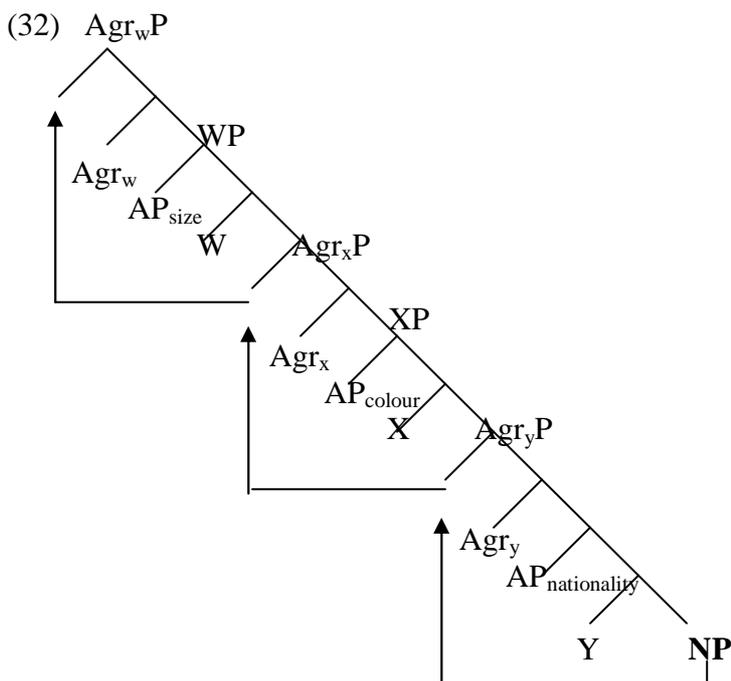
Siti want what

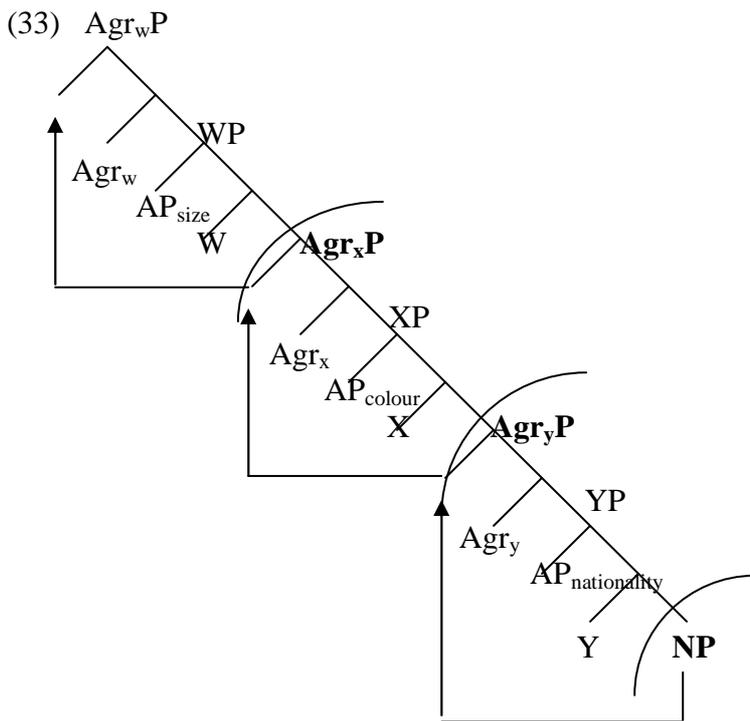
‘What does Siti want?’

(31) [[*Whose*] pictures] did you see _____ ?

In Cinque (1996, 2005) I suggested that precisely these two independent parameters (whether the relevant phrase remains in situ or moves; and, if it moves, whether it moves by itself, or by pied piping each time the immediately dominating phrase as in (31)) can account for the three attested orders of (27) and for the principled absence of the fourth ((27)b). The phrase bearing the relevant feature triggering the movement (a nominal feature) is in this case NP.

If NP does not move, we get (27)a. If NP moves by itself (all the way up), as shown in (32), we get (27)c. If it moves (all the way up) each time pied piping the immediately dominating phrase, as in (33), we get (27)d. (27)b cannot be derived because the NP has not moved and the base structure has the modifiers in the wrong order. Crucially $A_{nationality}$, A_{colour} , or A_{size} cannot move by themselves just as phrases not bearing the *wh*-feature cannot move by themselves to the sentence initial *+wh*- position.²¹





Note that if the principle governing the degree of proximity of each modifier to the head is stated on the “base level” (24), before movement takes place which disrupts the original order of elements, it can be stated as an absolute principle forcing $AP_{\text{nationality}}$ to be merged closer to the head than AP_{colour} , and AP_{colour} closer to the head than AP_{size} .

Furthermore, a (phrasal) movement analysis appears more equipped than a pure base generation analysis to derive the comparative observation that the adjectives which are obligatorily postnominal in Romance (nationality, classificatory, etc.) correspond to the adjectives which are the lowest (closest to the N) prenominal in Germanic. While this is an accident for a purely base generation analysis, the leftward, bottom to top, character of (NP) movement makes it natural that partial movement of the NP will typically effect the lowest elements of the structure, rendering the reversal of higher adjectives without the previous reversal of the lower ones more marked. For a discussion of marked and unmarked DP internal movements, see Cinque (2005).

¹ This idea rests in fact on a long tradition. See, Bolinger (1967), Siegel (1976a,b), Sproat and Shih (1988, 1991), and, more recently, Cinque (1994) and Alexiadou and Wilder (1998), among many others. Also see Kayne (2008, note 8).

² In this connection, see Lehmann's (1984, 201-203) and Hawkins' (1990, 241-243; 1994, 269-274) typological generalization that adjectives are found closer to the head noun than relative clauses. What they note is that while (i)a and b (as well as (i)e and f) are all attested orders, no language appears to have as its basic word order adjectives further away from the N than relative clauses ((i)c and d):

- (i)a. RC Adj N c. *Adj RC N (also e. Adj N RC)
b. N Adj RC d. *N RC Adj (also f. RC N Adj)

Rijkhoff (1998) claims that relative clauses in Dargwa (North East Caucasian), and Finnish, follow “all other prenominal modifiers, yielding [dem num A [Rel] N]” (p.362). While no clear indication of this is to be found in Sumbatova and Mutalov (2003, 161f and 183ff) and Sulkala and Karjalainen (1992, 87f), respectively, Dal Pozzo (2007, 26) explicitly states that, in Finnish, APs can either precede or follow prenominal reduced relative clauses, giving (ii) as an example:

- (ii) nämä kolme (komeaa) toimistossaan työskentelevää (komeaa) miestä
these three (fascinating) office-INESS working (fascinating) men
‘These three fascinating men working in the office’

Interestingly, however, it seems that only indirect modification adjectives can precede reduced relative clauses. Direct modification ones are only possible *after* the reduced relative clause, as the following contrasts (kindly provided by Lena Dal Pozzo, p.c.) show:

- (iii)a. Tuo huomenna kilpaileva mahdollinen voittaja
that-NOM tomorrow playing probable-NOM winner-NOM
‘The probable winner that is playing tomorrow’
b. ?*Tuo mahdollinen huomenna kilpaileva voittaja
that-NOM probable-NOM tomorrow playing winner-NOM
- (iv)a. Tuo toimistossani työskentelevä kova tupakoitsija
that-NOM office-INESS+POSS1sg working hard-NOM smoker-NOM
that in my office working heavy smoker
‘that heavy smoker that works in my office’
b. ?*Tuo kova toimistossani työskentelevä tupakoitsija
that-NOM hard-NOM office-INESS+POSS1sg working smoker-NOM

that heavy in my office working smoker

The b. examples become better, as Lena Dal Pozzo also observed, if the reduced relative clause is pronounced with a parenthetical intonation, a situation that has a perfect analogue in German and English (see note 32 of the next chapter).

³ I consider here only reduced relative clauses. As noted in Cinque (2003, 2008b) the prenominal origin of relative clauses allows both raising and matching derivations in accord with antisymmetry.

In the present framework, Rubin's (1994, 1997, 2002) Mod head, which he proposes in order to reduce adnominal intersective modification to the function composition needed for predicative adjectives, may perhaps be directly identified with the INFL of the reduced relative clause. At the same time, given the existence of direct modification adjectives, it is not clear whether adnominal modification can be reduced entirely to function composition.

⁴ Although it seems that the two readings cannot easily obtain simultaneously (*#who bought the tallest (comparative) most expensive (absolute) building?*), the relative ordering of the two readings can be indirectly inferred from the interpretive patterns characterizing Italian and English, plus the fact that prenominally, in Italian, only the absolute reading is possible.

⁵ The same considerations brought up in the previous note hold for the relative order of the two readings specific and non-specific.

⁶ We differ here from Alexiadou (2003, section 2.2), and Laenzlinger (2005a,654), who assume that non-predicative adjectives occur higher in DP (more distant from the N) than predicative ones.

⁷ Other languages which, like English, are reported to have a preferred, or unmarked, rather than a rigid, order of adjectives are Arabic (both Standard and regional – Fassi Fehri 1998a,b,1999), Finnish and Ibibio (Scott 2002,99), Russian (Pereltsvaig 2007, section 2), as well as Bosnian/Croatian/Serbian and Greek (see the Appendix, sections 3 and 5).

⁸ We abstract away here from the important, but distinct, questions of what the precise order of adjectives is (see for discussion Barrit 1952, Lance 1968, Quirk, Greenbaum, Leech, and Svartvik 1972,925, Dixon 1982, Fries 1986, Adamson 2000, Scott 2002, and references cited there), and what the ultimate cause of the order is. Of the many attempts to derive it from external, mostly semantic, cognitive, or pragmatic, principles, none seems entirely convincing (see, for example, Vendler 1968, Hetzron 1978, Seiler 1978, Dixon 1982, Risselada 1983, Posner 1986, Sproat and Shih 1988,1990, Frawley 1992, chapter 10, section 10.3, Zuber 1996, Dirven 1999, Adamson 2000, Muromatsu 2001, Vandelanotte 2002, Wulff 2003, Kiefer 2004, Bouchard 2005, Matushansky 2005a, section 5.4, Champollion 2006, Teodorescu 2006, Bakker 2007, and for a recent overview Feist 2008). On the latter question also see the discussion in Scott (2002, section 2.2) and in Alexiadou, Haegeman and Stavrou (2007, Part III, chapter 1, section 3). Whether

adjective order should be encoded syntactically via merger in dedicated functional projections (see Chapter 4, section 4.1.1), or not, remains an open question. But leaving their merger entirely free, with the illegitimate orders filtered out in the semantics (Bošković to appear, section 2) begs the question of why UG avails itself of the semantic classes of adjectives that it has rather than of other conceivable ones. Thinking of the many “adverbial” adjectives that there are, the existence of remarkable gaps (**a just(ly) departure* ‘an event of having just left’, **an already winner* ‘an individual who has already won’, *a luck(il)y survivor* ‘an individual who has luckily survived’, etc.) may in fact be taken to suggest that the syntax/numeration of UG is so built as to specify which actual classes, members (and corresponding projections) are admitted, and which are not.

⁹ In (10)a, *heavy drinker* can be understood nonintersectively, as ‘someone who (allegedly) drinks a lot’; in (10)b, it is understood intersectively only, as ‘an (alleged) drinker who weighs a lot’. Similarly, in (11). Posner (1986,312fn.8) observes that *a light heavy drinker* is interpreted as ‘a light person that drinks heavily’ and *a heavy light drinker* as ‘a heavy person that drinks lightly’, and not the other way round. Similar effects are observable in other Germanic languages. See for example the German case in (i), given in Sauereisen (2005, section 2):

(i)a ein arroganter großer Idiot

an arrogant big (degree) idiot

b ein großer arroganter Idiot

a tall arrogant idiot

(cf. *Der idiot ist groß* ‘the idiot is tall/*big (degree)).

¹⁰ For the original discussion of this ambiguity and for different accounts of it, see Partee (1983/1997), Partee and Borschev (2000), and Larson and Cho (1999,2003). Also see note 16 of Chapter 2 above. The same ambiguity is found in Guaraní with the nominal tense suffix *-kue* (Tonhauser 2006,159).

¹¹ It is also possible that *alleged* has a usage as a focusing adjective, much like the corresponding evidential (and epistemic) adverbs (cf. Cinque 1999, chapter 1, section 1.6; Shu 2009), thus giving the impression (much as *allegedly*, *probably* – cf. *<Allegedly> he quickly left his office <allegedly> at 5 o’clock*) that it has no fixed position.

As with the corresponding adverbs in their focusing usage (see Kayne 1998), *alleged* could then be taken to attract what falls under its narrow scope, apparently reversing its position relative to the adjective *former* (which should be *alleged > former*):

(i)a [former [thief]] → merger of a focus head and attraction of NP

b [thief F° [former t]] → merger of *alleged* (in the Spec of a head)

c [alleged X° [thief F° [former t]]] → merger of a head and attraction of the remnant

d [[former t] Y° [alleged X° [thief F° [t]]]]

In this respect, *alleged* would behave much like the focusing adjective *unico* ‘only’ in Demonte’s (1999b,51) pair *mi unica divertida amica* ‘my only funny colleague’, and *mi divertida unica amica* ‘my funny unique colleague’.

The viability of this conjecture however needs to be further checked, as need to be possible factors limiting it. For example, certain direct modifiers of the NP cannot easily be “stranded” by the NP, to be later moved within a remnant, as the meaning of (10b), and the ungrammaticality of *A fréquent alleged flier* discussed in chapter 5, section 5.1.1, seem to show. In other contexts, however, this seems marginally possible. Taking (i) to represent the canonical order of *occasional* and *heavy*, it seems that (ii)b is marginally acceptable in the context of (ii)a (thanks to Megan Rae for pointing this fact out to me):

(i) (I am) an occasional heavy smoker

(ii)a Speaker A: I’m only an occasional smoker

b Speaker B: But you are a fairly heavy occasional smoker

¹² For non-definite superlatives, see the discussion in Teodorescu (2006), and references cited there.

¹³ The sentence was suggested to me by one of the reviewers, who also pointed out that superlatives are not interpreted intersectively (“the highest mountain is not the highest object and a mountain” – cf. Heim 1999).

Larson and Cho (2003, fn.19) observe that a prenominal adjective that is otherwise under the scope of a relative clause (like *old* in example (i)a) necessarily takes scope over the relative clause when it is made superlative (see (i)b):

(i)a the old antique that was rotten with age

b the oldest antique that was rotten with age

This suggests once more that, to become superlative, an adjective must move to a scope position higher than that of relative clauses, which may also be at the basis of the fact, noted by Kayne (2008,fn.18), that “in Persian (Moshiri (1988,24)) superlatives end up prenominal, while ordinary adjectives and even comparatives are generally postnominal”. Kayne, in the same footnote, also observes that adjectives, when superlative, can be higher than numerals too (*the blackest two dogs that I’ve ever seen*), which are higher than direct modification adjectives (and arguably lower than the Merge position of restrictive relative clauses (cf. Cinque 2008a, fn.35, 2008b). Megan Rae tells me (p.c.) that for her the superlative adjective can license negative polarity *any* even if it follows the numeral (*The two blackest dogs that anyone ever owned..*).

¹⁴ To judge from Saxon (2000,99), the same is true of the related Athapaskan language Dogrib. In both languages attributive adjectives are expressed through relative clauses (Keren Rice p.c., Saxon 2000,99), non-predicative ones (*former, future*, etc.) being rendered with periphrases (‘the one who used to be, etc.’ – Keren Rice, p.c.). Keren Rice

however informs me that there are a few adjectival meanings ('new', 'flat', 'old') "that are uninflected stems that, at least phonologically, are part of the same word as the noun that they modify". It is thus not entirely clear whether (direct modification) attributive adjectives are entirely missing in the language, or are just a closed class of very few items. The same may be true of Ika (Chibchan, Colombia), in which most adnominal adjectives occur inside a (head-internal) relative clause (Frank 1990,20; Baker 2003a,207), yet a few occur in direct attribution (Frank 1990,19f., 32f). Baker (2003a,240,fn.34; 2003b) claims that adjectives in Japanese (at least those of the *utsukushi* class) can enter the DP only as predicates of (reduced) relative clauses (whence their free ordering, their necessarily intersective interpretation, etc.).

¹⁵ They "fall into four distinct semantic classes, and show ordering restrictions [Colour > Dimension > Quality > Quantity]." Ajíbóyè (2001; 2005, chapter 1, section 1.2.4) notes that the rigid order of the adjectives in Yoruba is the mirror image of the English order, which is consistent with the fact that the head N is initial and the demonstrative final: N > A_{Colour} > A_{Dimension/size} > A_{Quality} > Numeral/Quantifier > Demonstrative.

¹⁶ Madugu (1976,93) gives similar pairs (see (i)), also pointing out (p.89ff) that one can have 'Olu has wisdom' instead of 'Olu is wise':

- | | |
|-----------------------|---------------|
| (i)a Olú jé ọmọ rere | b *Olú rere |
| Olu is child good | Olu good |
| 'Olu is a good child' | 'Olu is good' |

Iká (Igboid - Niger-Congo) shows a similar picture, though it has some adjectives that can be used both attributively and predicatively (Maho 1998,9). Attributive-only adjectives show a rigid order, which is the same as the English (unmarked) order, for size and colour adjectives, even if all other modifiers show an inverse order after the N (N A_{size} A_{colour} Num Dem Rel.Cl) (Maho 1998,21):

- | |
|---------------------|
| (i)a *ηkite ogi uku |
| dog black big |
| b ηkite uku ogi |
| dog big black |
| 'a big black dog' |

¹⁷ Other languages appear to be like Yoruba and Gbaya Mbodómó in having a closed class of "adnominal-only" adjectives. Welmers and Welmers (1969) as well as Welmers (1973,258-62) mention Igbo, Siegel (1976a) mentions Ngamambo, Koopman (1984,64-66) Vata and Gbadi (all Niger-Congo languages), Osumi (1995,77f) mentions Tinrin (Austronesian), Dutta Baruah and Bapui (1996,56) Hmar (Tibeto-Burman), Wetzler (1996,77f) Kassena and Babungo

(Niger-Congo). To express adjectival predications Kassena and Babungo utilize a strategy still different from that of Yoruba or Gbaya Mbodómó. As Wetzer (1996) points out, a sentence like *this man is tall* is rendered as *this man is a tall man*, where “[t]he head of the predicative noun phrase is usually some kind of dummy noun, such as “man”, “child”, or “thing”.”(p.77). The same appears to be true of the Dravidian language Tamil, in which “a sentence like English ‘this is good’ is not possible [...and] must have the form ‘this thing is a good thing’ [...]” (Schiffman 1999,141), and the Papuan languages Yagaria (Baker 2003,206f) and Hua (Haiman 1978,567;1980,268; Schachter 1985,16), which also have a closed class of adnominal-only adjectives. See, for example, (i)a-b, from Haiman (1978,567):

(i)a *Bura fu nupa baie	b Bura fu nupa fu baie
that pig black is	that pig black pig is
‘That pig is black’	‘That pig is a black pig’

This strategy also appears to be available in Korean (see Kang 2007,131).

¹⁸ See for example Cinque (2000), Shlonsky (2000, 2005), and Sichel (2000a,b,2002,2003) on Semitic, and Cinque (2005) for a more general claim that only NP movement (with or without Pied Piping) is available within the DP cross-linguistically. Laenzlinger (2000,2005a,b), Alexiadou (2001,2003), Mallén (2001,2002), Alexiadou, Haegeman and Stavrou (2007, 364ff) and Knittel (2005,216) also assume the presence of certain DP-internal phrasal movements, though the analysis developed here differs from theirs in a number of respects (see notes 1, 18 of Chapter 2, note 6 of this chapter, the last paragraph of section 5.1 of Chapter 5, notes 3 and 7 of Chapter 6, and notes 11,13,14, and the paragraph before (22) of the Appendix).

If head movement is to be abandoned in DP in favour of phrasal movement (pace Dehé and Samek-Lodovici 2007), Longobardi’s (1994,2001) results based on N to D movement should perhaps be rethought of in terms of NP movement to Spec,DP (cf. Giusti 2002, section 3.4).

¹⁹ For the apparent problem raised for the phrasal movement analysis by the fact that complement and adjunct PPs are not dragged along by the NP, or a larger phrase containing it, when these move, see Chapter 6, section 6.2.

²⁰ This line of argumentation is developed within a broader context in Cinque (2009). Abels and Neeleman (2006), without doing away with movement entirely, propose returning to a direct ‘base generation’ of orders excluded by Kayne’s Linear Correspondence Axiom. We would like to keep to that axiom and still feel that a system that minimizes base generation (to one structure/order for all languages), deriving all other structures/orders via independently needed types of movement is more interesting. Abels and Neeleman’s (2006) system, in deriving certain orders either via base generation or via movement appears to us to introduce a redundancy that should perhaps be avoided. (“For example,

(1biii) can be base-generated as above or derived on the basis of, for example, (1bii) by short movement of N as in (10)” (p.9).

²¹ In certain languages, (only) one of these elements, if it bears a focus feature, can apparently move to an initial focus position – see note 4 of Chapter 5 and Cinque (2009, fn.20) for relevant references.