

‘Discontinuous’ AP’s in English*

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Abstract

‘Discontinuous’ AP’s are problematic. Under P&P/minimalist assumptions, they cannot be initial structures and must result via Move, but Move should be motivated, and what the triggering feature might be is unclear, for ‘AP-Splitting’ is optional in some cases and impossible in most. This paper examines why it occurs in English. Section 1 discusses the facts and what grammarians have said about them. Section 2 reviews current wisdom on adjectival modification and considers possible approaches to discontinuity via A(P)-Raising and Extraposition, but shows that neither is well-motivated nor can explain why ‘AP-splitting’ is not generally available, which suggests still unidentified constraints. Section 3 adopts a theory of modification that bans pre-nominal right-branching AP’s, eliminates the Extraposition option, and derives genuine cases of AP-Splitting through A-Raising from post-nominal AP’s. A-Raising is assumed to occur to prevent the adjective from inheriting Focus narrowly associated with its complement, but is allowed only within unaccusative AP’s. Most AP ‘discontinuities’, therefore, cannot involve A-Raising, but the theory allows them to be base-generated when the post-nominal PP/CP is a modifier and the adjective is allowed pre-nominally. Adjectives denoting individual-level properties are, and are predicted to occur in ‘discontinuous’ AP’s, but those denoting stage-level properties are not. These predictions are confirmed on the whole, but the evidence is murky due to divided usage. Section 4 sorts out dubious cases and claims that they arise from the fuzziness of the complement/modifier and the individual-level/stage-level distinctions, and from alternative construals of the post-nominal XP as a modifier of the noun or higher categories. Finally, section 5 briefly summarizes the results and the advantages of the present approach.

1. The facts

In English, AP's containing complements or post-modifiers¹ usually cannot precede nouns, as shown in (1).²

- (1) a. *a keen on jazz student
 b. *a fat around the waist man

There are exceptions like (2), but there is widespread agreement among scholars that they result from lexical processes,³ as the dashes required with many of them suggest.

- (2) a. a hard-to-pronounce name
 b. a tongue-in-cheek remark

Thus, the broad rule is that right-branching AP's must follow nouns, as in (3).

- (3) a. a student keen on jazz
 b. a man fat around the waist

However, in certain poorly understood circumstances there is another way to attach a right-branching AP modifier to a nominal,⁴ i.e., the adjective, possibly preceded by its degree or adverbial modifier, may remain pre-nominal, whereas its complement or modifier is realized post-nominally, as in (4a, b), respectively.

- (4) a. a (very) similar car to mine

b. a fat man around the waist

English ‘discontinuous’ AP’s, though, have not been well studied so far. Quirk et al. (1985: 420, 1220, 1395, 1400) remark that the construction is ‘canonical’, if ‘somewhat more informal’, with certain PP’s and infinitival clauses, and other grammarians have occasionally noted its existence, but, as far as I know, the only explicit discussion in the literature concerning the circumstances in which AP-splitting is allowed appears in an unpublished LSA paper by Bernstein (1995: 6-9), who claims that splitting is acceptable when what follows the noun is a modifier of the adjective and unacceptable if it is a complement.

The complement/modifier distinction is notoriously difficult to establish,⁵ particularly for adjectives, whose complements are nearly always optional or required only with certain senses,⁶ but, according to the standard criteria of complementhood applicable in this case,⁷ i.e., essentially, being a) theta-marked by the head, b) introduced by head-selected prepositions or complementizers, c) obligatory (where applicable), and d) transparent to extraction,⁸ the post-nominal XP’s of examples like (5-7) are complements, PP’s in (5), finite CP’s in (6), and controlled infinitival CP’s in (7), and, as Bernstein claims, they cannot be separated from their adjectival head.⁹

- (5) a. *an abounding area in oil
 b. *a bound ship for New York
 c. *a capable man of murder
 d. *a dependent youth on his parents
 e. *an empty principle of content
 f. *a familiar teacher with our problem
 g. *a guilty convict of murder

- h. *a heedful officer of the rules
- i. *an ignorant child of the danger
- j. *a keen friend on classical music
- k. *a liable person to prosecution
- l. *a married woman to a businessman
- m. *a next person to me
- n. *an observant citizen of the law
- o. *a partial friend to miniskirts
- p. *a respectful family of etiquette
- q. *a satisfied worker with his pay
- r. *a thankful neighbour for her attentions
- s. *an unaware child of the danger
- t. *a wanting diplomat in subtlety

- (6) a. *an aware child that there is a war
- b. *a conscious woman that she has no chance
- c. *a convinced teacher that he is always right
- d. *a glad mother that her children are well off
- e. *a happy girlfriend that he is a bachelor
- f. *a lucky friend that he has a job
- g. *a proud student that he has passed
- h. *a sorry V.C that the university is short of funds
- i. *an amazed constable what a mess he had made
- j. *an unsure officer what he should do

- (7) a. *an anxious foreigner to make himself understood

- b. *a bound marriage to fail
- c. *a condemned prisoner to be shot at dawn
- d. *a disinclined colleague to cooperate
- e. *a due book to appear soon
- f. *an eager yuppie to succeed
- g. *a glad student to see you again
- h. *a happy neighbour to oblige us
- i. *a reluctant child to go to bed
- j. *a sad woman to leave her home
- k. *an unable woman to say no
- l. *a willing terrorist to cooperate¹⁰

On the contrary, examples like (8) support Bernstein's claim that modifiers of the adjective can discontinuously follow the noun.¹¹

- (8)
- a. a famous actress for her Lady Macbeth¹²
 - b. a fat man around the waist
 - c. a lucky woman in matters of love
 - d. a popular guy with girls
 - e. a respected woman in her field
 - f. a shy man around linguists
 - g. a strong department in semantics
 - h. a timid girl with strangers

The specific structures that Bernstein attributes to her examples of complements and adjuncts, however, ultimately lead to no explanation of the contrasts in splittability,

in my view, but the details need not detain us here, for Bernstein's generalization is unfortunately inaccurate on both counts. Thus, as (9) and (10) show, certain 'split' AP's whose post-nominal elements are unquestionably complements according to the criteria above are definitely acceptable, whereas many post-nominal modifiers are clearly unacceptable, as in (11).

- (9) a. a subsequent article to Chomsky's
 b. a previous version to this one
 c. a prior attempt to Russell's
 d. a preferable solution to Chomsky's¹³
- (10) a. an alternative view to Chomsky's
 b. an analogous hypothesis to Abney's
 c. a comparable situation to ours
 d. a different view from yours
 e. an equivalent idea to that
 f. a parallel theory to Frege's
 g. a separate room from ours
 h. a similar car to mine¹⁴
- (11) a. *a blue man in the face
 b. *a brilliant face around the nose
 c. *a due payment in thirty days
 d. *an extended rumour in the capital
 e. *a restless child in her seat
 f. *a smiling baby from her cradle

- g. *a suffering patient from early childhood
- h. *a tired woman in the evenings
- i. *a transferable sum in a few days
- j. *a yellow book with age¹⁵

In sum, the ‘discontinuous AP’ analysis is unavoidable at least when the post-nominal XP is selected by the adjective and depends on its presence, and the construction is considered canonical, although the details have not yet been properly investigated, to my knowledge. Bernstein’s descriptive generalization that complements cannot be split whereas modifiers can is a good first approximation in view of data like (5-8), but 1) certain adjectives (e.g., inherently comparative and symmetrical predicates) obviously allow their complements to appear post-nominally, and 2) not all PP modifiers of pre-nominal adjectives can appear post-nominally. Since the distinction between adjectival complements and modifiers is fuzzy and presumably inaccessible to ordinary speakers, a certain amount of fluctuation in acceptability judgments is to be expected, but the categorical nature of the evidence in (9-11) suggests additional lexical and/or structural constraints that remain uninvestigated. Whether Bernstein’s hypothesis is ultimately on the right track, such exceptions should be explained, which will lead to substantial refinements below. However, under current syntactic assumptions the immediate problem is to account for any ‘AP-splitting’, an issue to which we now turn.

2 Split AP’s in current syntactic theory

2.1 Adjectival modification in P&P/minimalist theory

Unfortunately, in the recent theoretical syntactic literature there is no consensus concerning the structure of attributive adjectives. The discrepancies affect all conceivable sides of the matter: their X-bar level, function, and underlying position

with respect to the noun, derivation, relation to predicative AP's, and semantic type. Thus, as to their X-bar status, pre-nominal adjectives have been considered heads by Stowell (1981) and Abney (1987), A-bar projections by Sproat & Shih (1987) and Liberman & Sproat (1992), a mixed A/AP class by Bernstein (1993), Williams (1994: 92), and Santorini & Mahootian (1995), and full AP's by most scholars, including Bresnan (1973), Bowers (1975), Jackendoff (1977), Delsing (1993), Cinque (1994), Svenonius (1994), Bosque & Picallo (1996), Radford (1997), Haegeman & Guéron (1999), Demonte (1999), and Mallén (1999, 2000, 2001a,b), among many others. Functionally, they are heads for Stowell (1981) and Abney (1987), adjuncts for Bowers (1975), Emonds (1976), Jackendoff (1977), Delsing (1993), Svenonius (1994), and Williams (1994), and specifiers for Cinque (1994), Kayne (1994), Chomsky (1995b), Bosque & Picallo (1996), Radford (1997), Haegeman & Guéron (1999), Demonte (1999), Mallén (1999, 2000, 2001a,b), Carstens (2000), and most current researchers, and, correspondingly, they are alternatively sisters to N, N', full NP's, or various functional X' projections above NP. As to their derivation, Stowell (1981), Liberman & Sproat (1992), Sadler & Arnold (1994) and Abeillé & Godard (2000) consider pre-nominal A(P)'s the result of lexical processes, and most other scholars take them to arise in the syntax, although subject to special syntactic or parsing-theoretic restrictions. There is a further issue as to whether pre-nominal adjectives are derived from relative clauses, and therefore ultimately equivalent to predicative AP's, as in much early TGG work from Chomsky (1975[1955]) and Smith (1961) onwards, and now in Kayne (1994) and Bernstein (1995), among others, or different from predicative AP's and directly generated pre-nominally (in the various positions implied above). Correspondingly, there finally subsists an old discrepancy in semantics between scholars that take AP's to be of type $\langle e, t \rangle$ (first-order predicates), and those that take at least non-intersective ones to be of type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ (see Higginbotham 1985,

Hamann 1991, Partee 1995, Dowty 1996: 24-25, or Heim & Kratzer 1998: 63-73 for illustrative, if inconclusive, discussion of adjectival semantics).

The potentially relevant literature, obviously, cannot be adequately reviewed here, and much thereof is no longer compatible with current theoretical assumptions anyway, so, just as background for the new approach to modification to be defended in section 3, let us instead identify the key P&P/minimalist theoretical assumptions relevant to the issue of AP-splitting broadly shared by generative syntacticians.

1) Merge, binary branching, and maximality. Syntactic objects are assumed to merge yielding binary-branching structures within which the participants in the merger become invisible to further syntactic computation (see e.g. Kayne 1984, Chomsky 1995a,b, 1999, 2000[1998], 2001). On this, every Chomskyan syntactician nowadays agrees without difficulty. A consequence is that discontinuous AP's cannot be base-generated ternary branching structures like (12).

[Editor: insert figure 12 here]

Since under Abney's (1987) analysis of adjectives as f-heads such structures would be the only way to accommodate a second argument of the adjective, Abney's hypothesis is incompatible with current theory.¹⁶ Furthermore, under Merge, non-heads must be maximal, which discards Emonds (1976, 1985), Liberman & Sproat's (1992), Sadler & Arnold's (1994), and Williams' (1994) view of pre-nominal adjectives as non-maximal phrases as inconsistent with Bare Phrase Structure.¹⁷

2) Locality/predication. Thematic satisfaction is usually assumed to be strictly local, subject to Minimality (or even Adjacency) and XP-internal (cf. the XP-Internal Subject Hypothesis of Fukui & Speas 1986, Sportiche 1988, the Lexical Clause Hypothesis of Speas 1990, etc.). Accordingly, arguments of the adjective are not

expected outside AP in initial structure, and ‘discontinuous’ AP’s must, if at all, be derived *via* Move. The alternative view is the Predication Theory of Williams (1980, 1989, 1994), Bowers (1993, 2001), etc., according to which the subject is realized external to the XP, although still under a version of strict locality, for subject and predicate must be sisters. If, as our semantic intuitions suggest, and scholars like Fabb (1984: 112-116), Higginbotham (1985), Sproat (1985), Grimshaw (1990), Williams (1994: 38-40), and Chomsky (2001: 18) claim, the AP+NP construction is a case of predication, we expect no other argument or modifier of the adjective to occur outside AP, i.e., configurations like (13) are also forbidden at initial structure if XP is an argument or modifier of A, which forces ‘discontinuous’ AP’s to arise *via* Move if at all.¹⁸

[Editor: insert figure 13 here]

3) Subject asymmetry. All versions of ‘Linking Theory’ assume a systematic correlation between the cognitive prominence of the entities discharging thematic roles, as expressed in the Thematic Hierarchy,¹⁹ and the structural realization of the XP’s that encode them, and whether under XPISH or Predication Theory, the subject has to be attached higher than all other arguments. In the case at hand, no argument of the adjective should be merged higher than its nominal subject, so there is a second reason to exclude initial phrase structure configurations like (13). On the contrary, initial structures like (14) are expected, but they violate Williams’s Head Final Filter (HFF hereafter),²⁰ and never surface (cf. *a similar to mine car).

[Editor: insert figure 14 here]

4) Specifier asymmetry. Within classical P&P theory, given the values of the parameters in English, specifiers and complements must be attached on opposite sides

of X. This was part of X-bar theory²¹ and remained a core assumption of P&P through the 80's (e.g., in Chomsky 1981, 1986), although in more recent versions of P&P theory (e.g., Chomsky & Lasnik 1993), and in Minimalist Theory (e.g., Chomsky 1995b, 2000[1998], Uriagereka 1998, etc.) left-to-right order is taken to be irrelevant until PF. Kayne (1994), however, has claimed that, universally, specifiers asymmetrically c-command and, given his LCA, precede the head and its complements. In either case, specifiers will precede heads at the P interface. If the AP is a base-generated specifier of (a functional head dominating) the NP, it should precede the NP, and any AP-related material in post-nominal position should have been derived *via* Move.

5) Ban on base-adjunction. Since the late 80's, Larson (1988), Kayne (1994), Cinque (1994, 1999), Chomsky (1995a, b, 2000[1998]), etc. have made a sustained effort to eliminate base-adjunction altogether. Although adjunction analyses of modification have not, in fact, been completely discarded (cf. Bowers 1993, 2001, Svenonius 1994 or Ernst 2002 for excellent survivors), there is increasing pressure to reduce earlier AP adjuncts to specifiers of functional projections dominating NP, and therefore most traditional analyses of adjectival modification (e.g., Bowers 1975, Jackendoff 1977, Baker 1978, 1995, Hornstein & Lightfoot 1981, Radford 1988, etc.) are incompatible with current assumptions. Base-generated adjuncts will also be dispensed with here, but within a new theory of modification that changes the issues substantially.

Merge/Binary Branching, Locality/Predication, Subject/Specifier Asymmetry, the Head-Final Filter, and the Ban on Base-Adjunction conspire with the adicity of the adjective to create the following different scenarios concerning the initial position of ad-nominal AP's.

1. If A is a one-place predicate, AP and NP will be sisters, as required by Predication Theory. Granted the non-directionality of the latter (cf. Williams 1994: 39),

the adjective will precede or follow (as in the available resources vs. the resources available, etc.) subject to semantic or information-theoretic constraints that may or may not apply to initial structures.

2. If the adjective is a two-place predicate, the Subject and Specifier Asymmetry Principles and the HFF above allow two ways, none discontinuous, in which the two arguments may be syntactically realized:

a) The right-branching AP may be post-posed to the nominal, as in a friend familiar with the MIT set-up, and a ‘predicative’ construction will result.

b) The head A and its internal argument may be pre-posed to the nominal, but only if the argument is incorporated as the first term of a compound adjective (e.g., a time-consuming task). Compounding, however, is only a partial solution to the realization problem, for it does not help if the adjective is a three-place predicate (cf. *a comfort guest offering hotel, *a guest comfort offering hotel), or simply if the complement of the adjective has to be expressed by a referential expression (cf. *a this opera loving audience). A third logically possible realization strategy, i.e., for the adjective and its complement to be preposed to the nominal (e.g., *a keen on jazz colleague), is, of course, ruled out by the HFF in the syntax, but remains available if syntactic Merge does not intervene, i.e., in the derivation of lexicalized expressions.

Note, finally, that if base-adjunction is not available in the grammar, modifiers of the adjective (e.g., very in very intelligent, or at the age of nine in fluent in Latin at the age of nine) must themselves be specifiers. For degree phrases, this is relatively straightforward, but when an AP is modified by a PP, the implied base-generated structure is quite at odds with what surfaces at the P interface, and further (problematic) structure, as well as movement of an ill-understood type must be invoked. The details, to my knowledge, have never yet been made precise, so this remains an unsolved problem for all-in-specifier-position theories.

2.2 AP-splitting in P&P/minimalist theory

Obviously, the assumptions above exclude ‘discontinuous’ AP’s as initial structures, so, under standard theories, ‘AP-splitting’ must be accounted for in terms of *extra* principles imposed at P, if it is taken to have just phonetic effects, or at P and L, if it also has semantic ones. The obvious expedient is to allow ‘split’ AP’s to result from overt Move, which, depending on where AP’s are initially generated, yields several alternative (or complementary) possible accounts.

a) If all ad-nominal AP’s derive from the predicates of relative or relative-like clauses, as frequently assumed from the earliest work on generative grammar to the present,²² then ‘split’ AP’s could result from optional Adjective-Shift (Smith 1961), or, in contemporary jargon, A-Raising (see Bernstein 1995). Since, as a consequence of the HFF, a branching AP is not a possible target (cf. *a similar to mine car), and intermediate projections are invisible to Move *ex hypothesi*, A-Raising has to be a case of overt Head Movement. As to its landing site, D and Q are obviously not involved, since in the ‘split’ AP construction the adjective may surface after both (e.g. two similar cars to mine), so the landing site must be some head intervening between Q and N. If pre-nominal A does not exist, possible candidates include Number (Ritter 1991, Valois 1990), or Agr-NP (Bosque & Picallo 1996, Carstens 2000). A-Raising would leave the adjectival complement below, create the discontinuity effect, and automatically explain the AP-related head-final effects, for, by definition, under Head Movement, phrasal complements of A cannot be carried along to pre-nominal position. Such is essentially Bernstein’s (1995) account, with some of the finer details filled in, but there is at least a (minor?) problem, i.e. that, since pre-nominal A may be accompanied by a degree word or intensifying adverb (cf. a very similar car to mine, see Svenonius 1994), in such cases Deg and A should form a unitary constituent before A-Raising, which implies

previous obligatory, but otherwise unmotivated, right-adjunction of A to Deg.

b) Alternatively, if AP's are initially post-nominal and reach the pre-nominal position through AP-Raising (as in e.g., Kayne 1994), there is no problem in accounting for the presence of degree words and adverbs accompanying the adjectives, but right-branching AP's must somehow be excluded from the AP-Raising process, or systematic violations of the HFF will ensue (as, in fact, they do in Kayne's 1994 system).

c) Thirdly, if (at least some) AP's are initially generated before the noun, as assumed in much EST work (e.g., Emonds 1976: 167-9, Bowers 1975, Jackendoff 1977: 60-62, Baker 1978, Hornstein & Lightfoot 1981, descriptive works like Bolinger 1967, James 1979, Quirk et al. 1985, Ferris 1993, Huddleston & Pullum 2002), and in all modern analyses referred to above that take them to be specifiers, split AP's could result from obligatory Extraposition of the complements (or modifiers) of such pre-nominal AP's, as proposed in e.g. Bowers (1975), Ross (1986[1967]), Guéron (1980: 651fn), Rochemont (1986), Culicover & Rochemont (1990), Rochemont & Culicover (1990), and Abney (1991b: 221), among others. Extraposition from AP would be broadly parallel to Extraposition from NP, Relative Clause Extraposition from DP, and Result Clause Extraposition from DegP, and offers a simpler solution to the AP-splitting puzzle than Bernstein's A-raising approach, for it does not require A-to-Deg incorporation, since the extraposed elements are constituents (PP's, CP's), but, on the down side, the existence of rightward adjunctions has been a moot point for a long time.²³ If they exist, both AP-raising and Extraposition might be involved in the derivation of the AP-Splitting cases, i.e., some split AP's could result *via* A-raising from a post-nominal AP, and others from Extraposition from a pre-nominal one, respectively. Actually, if the initial position of AP's is semantically conditioned, as Bolinger (1967) and James (1979) claimed, there is a way to find out whether AP-splitting results from A-raising or Extraposition: if adjectives denoting non-permanent

properties occur in split constructions, their source should be A-raising, whereas if only adjectives denoting permanent properties do, the relevant source should be Extraposition. Furthermore, if both AP-raising and Extraposition exist in the grammar, of course they could well both apply in sequence in the derivation of particular examples, i.e., the former landing a right-branching AP before the noun, and the latter saving the pre-nominal AP from violating the HFF.

A theory with Move, therefore, obviously offers various possible accounts of AP-splitting, but the real problem is that none is particularly well-motivated from the point of view of minimalist Economy. A(P)-raising, being optional, cannot plausibly be triggered by any core-grammatical feature like agreement, and is difficult to reconcile with Checking Theory and Economy, as Carstens (2000: 330-333) observes in her discussion of Kayne's theory of adjectives, unless 'stylistic' or information-theoretic features (e.g., Focus, Topic) are added to the core, as in Rizzi (1997) and subsequent, included the present, work. As to Extraposition, whether 'therapeutical' action on behalf of the HFF is a sufficient trigger for Move is unclear, and would depend on whether there is a way to translate the 'negative' content of the HFF into a plausible feature to be checked off in phrase-final position, but, assuming this could be done, even more difficult is to justify a landing site on the right edge of the NP if this implies a suitable functional head with an 'attractor' and a specifier for the extraposed phrase to move into, for, in English (and, if Kayne 1994 is right, universally), all specifiers are on the left, and only leftward movements can exist. Obviously, granted extensive use of *ad hoc* hidden structure and free Kaynean leftward movement, even the 'extraposed' phrase might 'really' be in a canonical specifier of an XP-final head (e.g., Focus), but everything else in the NP should subsequently be raised leftwards, and, to my knowledge, no justification of the additional structure, and no remotely plausible economy-based account of the *extra* movements involved has ever been provided.

Finally, even if such conceptual difficulties can be overcome, none of those processes would in itself provide a complete explanation of the facts, for ‘AP-splitting’ is neither obligatory, nor generally available, so all the ‘real work’ would still have to be done by whatever principles determine the basic distribution of AP’s with respect to the nouns, on the one hand, and the triggering feature(s) (e.g., Focus or whatever), on the other. Since both must be determined at the level of initial structures, perhaps it is time to approach AP ‘discontinuities’ under different phrase structure assumptions.

3 An alternative approach to discontinuous AP’s

3.1 Phrase structure

Within lexicalist theories like the present one, syntax largely reduces to the satisfaction of the formal features of lexical items under strict locality constraints. The presence of an unsatisfied feature in a syntactic object automatically converts it into a potentially ‘active’ node. An active node launches a search through the system’s working space²⁴ for suitable goals that may satisfy its selection (or probe) features. In different versions, a principle of ‘Satisfaction’ is assumed in virtually all formal theories of syntax. Let us suppose this is correct.

As regards the construction of initial structures, selection features are crucial. Granted the properties of Merge, only one selection feature can be satisfied at a time. Since an active node may contain several, satisfaction will take as many mergers, and some selection features must ‘wait’ while others are satisfied. This indicates that selection features are ranked.²⁵ Let us refer to this second hypothetical property of the computational component as the principle of ‘Priority’.

The stepwise nature of satisfaction under Merge and Priority poses the issue whether all selection features of a head must be satisfied in a continuous sequence. Adapting familiar Fregean terminology in use in the field, let us say that a head is

‘saturated’ when all its selection features are satisfied, and refer to the assumption that a head remains active until saturation as the ‘Immediate Saturation’ principle (IS, hereafter). Under IS, which enforces locality and presumably simplifies computation, by definition, active objects are always unsaturated, goals are always saturated and inactive by the time they are attached to heads,²⁶ and Function-Composition is not part of the computational component.

IS is the standard assumption in late P&P and classical Minimalist Theory (cf. the Internal Subject Hypothesis of Sportiche 1988, the Lexical Clause Hypothesis of Speas 1990, Chomsky’s 1995b ‘strength’ hypothesis, etc.), but there is compelling evidence that better predictions follow if it is not adopted,²⁷ and will not be assumed here. On the contrary, when certain mergers occur, both participants still contain unsatisfied selection features and are, therefore, unsaturated, although, as a consequence of other principles of grammar (e.g., argument structure, Priority, Predication Theory), in no case do both participants remain unsaturated after the merger (see *infra*). The saturation of an active head, however, may be ‘interrupted’ by an operation satisfying a formal feature (selection, probe) of another active head. Although operations are triggered by unique features of one of the participants, and therefore only one node is ‘active’ with respect to each operation, if the other participant is still partially unsaturated it remains potentially active and will become active again with respect to a subsequent operation. In other words, although classical P&P and early Minimalist theory exclude Functional Composition, the present theory (like Chomsky’s in Chomsky 2001: 18) allows it, and, as briefly shown below, and in more detail in González Escribano (2002b), crucially relies on it for its own account of modification.

Strictly speaking, Merge is not adopted in the present theory, either. Satisfaction of selection features is here implemented *via* Match, a combinatory operation similar, but not equivalent to Merge as developed in Chomsky’s recent writings (2000[1998],

1999, 2001), which recommends using a new name. Like Merge, Match applies to two syntactic objects, an active node A and a suitable goal G, deletes the triggering selection feature [G] in A, and produces a set containing all the surviving features and sets (i.e., internal structure) of A and G, adding nothing (i.e., Match complies with Chomsky's Inclusiveness condition), but it diverges from Merge in several important respects.

First, according to Chomsky (2000[1998]: 133-134, 2001: 18), there are two types of Merge, 'Set Merge' and 'Pair Merge'. Under Set Merge (earlier 'substitution'), a feature-driven obligatory operation, a selection feature of the head is satisfied by a complement and the head projects its label, the basic case. Pair Merge (earlier 'adjunction'), on the contrary, is, according to Chomsky, an optional asymmetrical operation not driven by feature satisfaction that merges an adjunct Y to X, which projects. Match, on the contrary, is a unique, obligatory operation uniformly driven by feature satisfaction, i.e., in the present theory there is no optional structure-building. The difference between Chomsky's Set Merge and Pair Merge is irrelevant to Match, for it reduces to which of the two syntactic objects involved remains unsaturated (and therefore potentially 'active') after the merger. Otherwise, in cases of complementation, a head is active and the goal is a complement, and in cases of modification another head, the modifier's, is active, but the modified is no less of a complement of the modifier's head, and there is no difference between the two cases.

Of course, Chomsky distinguishes Set Merge from Pair Merge because the labelling patterns they induce are different. In the case of Set Merge, the active object containing the triggering selection feature must project its label, but since in minimalist theory heads are not assumed to select their modifiers, but the converse, the fact that the modifier does not project is exceptional and must be stipulated, e.g., by claiming that Pair Merge is inherently directional and merges an object to a head, which, like all targets, projects. Under present assumptions, however, that is an 'imperfection', and

goes hand in hand with a syntax-semantics mismatch, i.e., that, in spite of the differences between complementation and adjunction and the asymmetric distribution of selection features, neither complements nor adjuncts project.

Thus, a second difference between Match and Merge is that Match does not resolve the categorial status of the emergent syntactic object on the spot by deleting or ‘subordinating’ the category and type of one participant to those of the other, no matter how this is technically achieved. The reason why Match cannot directly project a label is that, in general, phrasal objects emerging during the computation are sets, but not categories, since they contain non-unifiable categorial and semantic type specifications²⁸ that Match cannot delete, because they are necessary for subsequent syntactic computation, as well as at the L interface.

Hence, the participants in a match do not become invisible to further computation. On the contrary, they remain accessible, as the internal structure of phrases in general, but the matching and the labelling must follow from independent principles. What determines which of the participant objects in a match will supply the ‘label’ of the emergent syntactic object is the following Labelling Principle (LP, hereafter): an object containing unsatisfied formal features projects its category and semantic type (where ‘formal’ includes both selection and probe features; see González Escribano 2002b).

To make LP work as desired, it is necessary to assume that, whereas modifiers never remain unsaturated after they merge with their modifieds, and therefore never project their ‘label’, modifieds (nominal and verbal projections in the core cases) do contain additional thematic (typically, subjects) or non-thematic arguments (i.e., Davidson’s 1980[1967] E(vent), Williams’s 1989, 1994 R(eferential) argument, and Corver’s 1997 G(egree) argument, for VP’s, NP’s and AP’s, respectively), that must still be satisfied by T, D or Deg, and therefore ‘project’, and remain potentially active until further matches satisfy those arguments. Such assumptions and LP correctly

determine the expected category of phrasal objects, except at the root, which can just as well remain labelless, since, by definition, it plays no further role in syntactic computation and, on the other hand, is assigned full propositional status by default by independent interface principles.²⁹

Thirdly, Match naturally fits within Kayne's (1994) antisymmetric approach, rather than standard order-free minimalist theories like Chomsky (1995a, b, 2000 [1998]), Uriagereka (1998), etc. In the present theory, as in Kayne's, left-to-right order follows from hierarchical structure, as does the difference between 'complement' and 'specifier', although the terms used here will be simply 'complement 1' and 'complement 2' (C1 and C2, hereafter),³⁰ since their different properties follow from the rank of the selection features they satisfy, the binary-branching structure determined by Match, and the LCA. Thus, only C1 can be a sister to the active lexical head H. C2 (the 'specifier' of standard X-bar theory) will always be derivationally and structurally more remote (attached 'later', and 'higher'), and will asymmetrically c-command and precede H and C1, from which universal Spec-Head order follows.

From Kayne's LCA also follows that H will precede C1 provided the latter is phrasal, but not if it is a lexical head, a possibility allowed in bare phrase structure, where vacuous projection is impossible. Such complements, therefore, cannot be represented as unary-branching phrases exhaustively dominating a lexical head, which invalidates Kayne's account of their ordering. However, apparently non-branching C1's might have more structure than meets the eye (e.g., if Focus is analysed as an underspecified lexical item, as in González Escribano 2002b), and there are other possibilities to handle that residue of the LCA (e.g., if Match is subject to Adjacency and the LCA is assumed, C1 cannot but follow the head), but we shall leave that issue open here.

3.2 Modification as Complementation

Modification reduces to complementation if modifiers are understood as predicates that take their respective modifieds as their subjects, a view common in traditional grammar and modern logic since, at least, Quine (1960) and more or less explicitly adopted in Montague (1974), Jackendoff (1977), Chomsky (1977), Williams (1980, 1994), Higginbotham (1985), Fabb (1990), Jackendoff (1990), Stowell (1991), Svenonius (1994), Partee (1995), Heim & Kratzer (1998), etc., although the underlying semantic assumptions differ. According to one view that ultimately draws on Fregean doctrine (cf. e.g. Quine 1960, Montague 1974, Higginbotham 1985, Fabb 1990, Williams 1994: 44-45, 91-94, Partee 1995: 325-330, and Chomsky 2001: 18, among others), nouns, verbs, adjectives, and prepositions are n-place first-order predicates, their modifiers are n-place higher-order predicates, and modification is Function Composition. Under such a view, the modified is a ‘subject’ of the modifier’s head, receives a theta role from it *via* Autonomous Theta Marking (see Higginbotham 1985: 564), and gets saturated. In current terms, a modifier of X is just a syntactic object M with its own selectional requirements competing for satisfaction within the derivation, and modification is the process by which another syntactic object X becomes the goal of M and gets attached to it by Match as a C1 or C2, depending on whether previous matches have occurred, with a selection feature of M satisfied and deleted in the process.

That modifiers never remain unsaturated after matching with their modifieds follows from the fact that their E(vent) or R(eferential) argument is discharged along with their highest thematic one, the former by Theta Identification, the latter by Autonomous Theta Marking (see Higginbotham 1985: 562-564). Granted Predication Theory, only one argument (and, under Priority, only the last one) may be external, so when a modifier is matched with its ‘subject’, whether the latter is a C1 or a C2, its head becomes fully saturated, and, according to LP, never projects, whereas the still

unsaturated ‘subject’ (i.e., the modified nominal in the case under focus here) does, which explains the labelling asymmetry between cases of ‘complementation’ and ‘modification’ within a unified theory of syntactic combination.

‘Adjuncts’, in other words, do not exist, according to the present theory, a welcome result if tenable, since they have never fitted in X-bar theory at all,³¹ but they are not specifiers, either, but heads. Thus, the structural difference between arguments and modifiers, obliterated in theories like Larson (1988), Kayne (1994), or Cinque (1994, 1999), is carefully preserved in ours. The present theory, on the other hand, does not view modifiers as in any sense marginal or disconnected from the main computation. On the contrary, they are fully integrated into the derivation, and in the strongest possible way, i.e., via Match and Satisfaction. Since the selection features of all heads must be satisfied, there is nothing optional about modification: if the head of a modifier is not saturated, the derivation does not succeed.

The linear distribution of modifiers with respect to their modifieds follows nicely as a consequence of the fact that Match, Priority, and the LCA hold and must be satisfied around every head, including a modifier’s. A modified G will be matched to a modifier M as a C1 or C2 depending on the previously assembled structure of M. Note that, whereas under traditional X-bar theory the first argument to incorporate to a head can be an object (transitives and unaccusatives) or a subject (unergatives), under minimalist assumptions no vacuous structure can be built, so the first complement to be matched to a head is necessarily its C1, and the second must be a C2.

As regards modification, then, the basic structures our theory licenses, are (15) and (16), depending on whether the modifier M takes the modified as a C1 or a C2, respectively. Structures like (17) or (18), on the contrary, violate the LCA and are predicted to be ill formed.

[Editor: insert figures 15 to 18 here]

In (15), for example, M is a one-place second-order predicate, matches with its only complement C1, which discharges M's theta role *via* Autonomous Theta Marking and M's external (R or E) argument *via* Theta Identification, gets saturated, and the still unsaturated C1[Cat: X] projects. In (16), M is a two-place second-order predicate, matches with its first complement C1, which discharges one of its theta roles as explained, remains unsaturated, matches with its C2, which saturates it, and the unsaturated 'subject' in C2 projects.

3.3 Adjectival modification

For pre-nominal adjectives and participles, independently of their argument structure, the relevant configuration is (15). In the case of passive participles (e.g., automated procedure), the nominal they select corresponds to a deep object, and (15) indeed places it in C1, the canonical position for Themes. The nominal selected by unergative adjectives and participles (e.g., active participant, attending students), on the contrary, corresponds to their 'subject' argument, but, since vacuous structure is illicit, it must also be realized as the C1 of (15).

Observe that *attending the course students, a typical HFF offence, instantiates structure (18), which violates the LCA. That explains the head-final effects in A+N environments (see González Escribano 2002b for details). Correspondingly, the 'split' variant *attending students the course violates Priority, as well as the LCA, since the order of combination of the head with its two selected arguments has been subverted. That explains why AP-splitting is generally disallowed when the post-nominal XP is a complement of the adjective (i.e., Bernstein's first observation).

Adjectives and participles accompanied by a C1 (typically a PP or CP, rarely other categories, e.g., a DP in worth a visit), on the contrary, must take their selected

nominal subject as a C2 and, granted the LCA, follow it, as in (16), which yields the ‘predicative’ construction.³² In that case, of course, C1 may itself contain a lower-shell structure and no arguments need be suppressed. Thus, in e.g. a hotel offering guests special services, offering takes its two internal complements C1 and C2 in the lower shell [guests[offering special services]] before raising to take its third and last argument, the subject hotel, as the C2 of the higher one.

If the adjective is itself modified by another predicate P, it will be a C1 or a C2 of P depending on the latter’s previous structure. In (19),³³ strong is modified by very, which takes it as its C1 and precedes it. In (20), on the contrary, the modifying P in already has a C1 (semantics) and must treat strong as its C2 and follow it, as it does.

[Editor: insert figure 19 here]

[Editor: insert figure 20 here]

Of course, nothing prevents an adjective from having both types of modifier. In that case, the present theory predicts structures (21) or (22), depending on the order in which modifiers become active. In (21), in takes strong as its C2 and follows it, whereas very takes strong in semantics as its C1 and precedes it. In (22), on the contrary, very takes strong as its C1 and precedes it, whereas in, which already has a C1 (semantics) by the time it is attached to very strong, takes the latter as a C2 and follows it.

[Editor: insert figure 21 here]

[Editor: insert figure 22 here]

If the doubly modified adjective is itself a two-place predicate (e.g., very keen on jazz at five), the present theory predicts structures like (23), where on jazz is a C1 to keen, keen on jazz is a C2 to at, and keen on jazz at five is a C1 to very, from which the right surface order follows.

[Editor: insert figure 23 here]

Note that, in very keen on jazz at five, keen remains an unsaturated predicate and must still take a C2, so we expect the initial structure that XPISH assigns to the AP predicate in Billy was very keen on jazz at five, where Billy must raise to satisfy EPP leaving a copy of itself behind under the AP, but we also expect the configuration boy very keen on jazz at five found after a D in e.g., a boy very keen on jazz at five. On the other hand, the ‘split’ version of the latter, i.e., *a very keen boy on jazz at five violates Priority and the LCA and is correctly excluded under present assumptions.

Finally, note that under this theory of modification predicative DP’s like a superb pianist in Billy is a superb pianist, which are problematic for other approaches, also take their subjects as their C2’s in initial structure, and fit nicely in the picture derived from the XP-Internal Subject Hypothesis. It suffices to analyse non-referential determiners as two-place predicates that take a nominal (e.g., superb pianist) as their C1, but remain unsaturated until a subject fills their C2.

The theory above, thus, brings substantial advantages, including a) the unification of Set Merge and Pair Merge under Match, b) the reduction of modification to complementation, and the elimination of the perennially troublesome ‘adjuncts’, but without obliteration of the structural distinctions between complements and modifiers, c) an elegant explanation of head-final effects that dispenses with Williams’ HFF, and, of particular interest here, d) a principled explanation of Bernstein’s prediction that AP-

splitting is generally impossible when the post-nominal XP is a complement of the adjective, since split AP's with post-nominal complements (e.g., *a keen boy on jazz) violate Priority and LCA as base-generated configurations. Of course, they could still arise *via* Move, which must be prevented in this case, but Move is Last Resort, and, as we shall see directly, in general, there is nothing to trigger it. Nevertheless, by banning right-branching AP's from pre-nominal position, at least Extraposition can be directly discarded and the options left open to account for unexpectedly acceptable split AP's, as in (9-10), reduce to A-Raising, an instance of Head Movement, and therefore presumably a *bona fide* operation of current syntactic theory to which we now turn.

3.4 A-Raising

Split AP's like a similar car to mine must now be derived exclusively from post-nominal AP's *via* A-Raising into a head above AP and below D and Q, presumably an AGR-like one (cf. Bosque & Picallo 1996, Carstens 2000), or into a higher adjectival projection, if lexical heads raise above their highest arguments, as Bowers (1993, 2001) claims. The relevant presumed derivation for a similar car to mine appears in (24).³⁴ Note that degree words and adverbial modifiers (very, extremely, etc.) cannot now raise along with the adjective, but it does not matter, for, as shown in (21, 22), granted the theory above, they can be attached as modifiers of nominal projections, which removes the difficulty faced by both Bernstein's A-Raising approach and Kayne's AP-Raising one cited in 2.2 above (see González Escribano 2002a, however, on degree phrases).

[Editor: insert figure 24 here]

Two problems remain, though, in connection with A-Raising. The main one is the Economy problem. Since A-Raising is not necessary to achieve a grammatical output,

the triggering factor cannot in this case be a core syntactic feature like agreement, and it is not clear what else it could be. The difficulty is shared by any approach that rests on A(P)-raising, as Carstens (2000) notes, and must remain open pending further research, but a possibility (assumed here *cum grano salis*) is that the trigger be an optionally present [-Focus] specification on the adjective.³⁵ If so, A-Raising is an adjective-defocusing device, since removing A from the lower, focused, AP shell into a non-focused pre-nominal position³⁶ enforces narrow focus on the PP complement (see e.g., Chomsky 1972b, Selkirk 1984, 1995, Zubizarreta 1998).

The second problem is that, if [-F] is the trigger, the defocusing option should be available to adjectives in general, or the account will suffer from vicious circularity, whereas A-Raising is perhaps needed to account for acceptable splits like (9-10), but is generally ungrammatical elsewhere, cf. (5-7), so hard-core grammatical principles must be sought for to explain why A-Raising does not apply generally, producing optional defocusing of all adjectives and generalized AP-splitting. Section 3.5 addresses that important issue.

3.5 Lexical constraints on A-Raising

So far, we have adopted a strictly structure-dependent approach and ignored the lexico-semantic properties of adjectival heads and their possible structural consequences, but there are reasons to believe that they are relevant. We may start by considering what makes examples from (9-10) like a preferable alternative to this or a comparable situation to ours different from *a keen boy on jazz, *an eager yuppie to succeed, and the other ungrammatical cases listed in (5-7) above.

A potential difference is that ‘symmetrical’ adjectives like alternative, different, parallel, similar, etc.³⁷ are related to unaccusative verbs (see e.g., Levin & Rappaport-Hovav 1986, 1995) like alternate, differ, parallel, resemble, etc. which project two

internal arguments, cf. (25).

(25) His theory parallels (equals, opposes, differs/diverges from, alternates with) mine.

An adjective like different, for example, is derived from the pure unaccusative verb differ, which projects Theme and Source, but not Agent, cf. (26a, b), and it is the Theme that discharges the AP subject function in (26c):

(26) a. *The student differed his situation from mine.

b. *a different situation from mine by the student

c. a different situation from mine

As to ‘passive’ adjectives like comparable (see Jespersen 1924: 168-169, Levin & Rappaport-Hovav 1986), they are obviously related to active/middle verbs like compare whose Agent must be suppressed in the corresponding adjectival constructions, cf. (27b), but whose internal Theme and Goal remain, and of these it is, again, the Theme that functions as ‘subject’ of the AP in (27c):

(27) a. The student compared his situation to mine.

b. a situation comparable to mine (*by the student)

c. a comparable situation to mine

Thus, a possible explanation of the acceptability of AP-splitting in just such cases turns on two ideas: a) that comparable, different, etc. are unaccusative predicates and do not project proper subjects, and b) that, therefore, the argument that plays the subject role in such cases can, although need not, be ‘re-internalized’ *via* A-Raising, which

yields a split AP construction, whereas adjectives like keen, eager, etc., which project proper subjects (e.g., Experiencers), cannot undergo re-internalization *via* A-raising, and thus do not split.

Significantly, some speakers also accept discontinuous complements to unaccusative raising adjectives such as likely and unlikely, as in (28), and to semantically related ones like sure and certain (in some of their readings), as in (29). The post-nominal infinitive clauses clearly are complements of the adjective in those cases, for they systematically correspond to those dominated by predicative AP's, and to the extent such split AP's are acceptable, A-Raising must be allowed to apply in such cases, too, (re-)internalizing the raised NP. That is not particularly problematic, though, as the NP is not an argument of the raising adjective and need not count as one for present purposes (i.e., the only argument of likely etc. is the CP containing the NP subject), but the divided usage observed with respect to such examples merits some discussion.

(28) a. ?a likely executive to be appointed CEO³⁸

b. ?*an unlikely accident to occur³⁹

(29) a. ?a sure candidate to win

b. ?a sure plan to fail

c. ?a certain candidate to be elected

d. ?a certain plan to fail

The two cases of (28) and (29) are semantically similar, but not identical, and must be separately treated at this point. In (28), likely is a raising adjective that selects a CP, and the reason why some speakers reject AP-splitting in that case may well be that

in their grammars the derived subject raised from inside the CP, not being an internal argument of the adjective at all, counts as a real subject of the AP. Adjectives like sure and certain, on the other hand, are parallel to (un)likely in being predicable of a clause, cf. (30), and in that sense can behave as raising predicates when followed by infinitival complements, cf. (31), but they also have non-raising interpretations as psychological states of the subject, cf. (32), and under those readings the subject of the adjective certainly counts as such and AP-splitting is blocked, cf. (33).

(30) a. It is sure/certain that P.

b. That P is sure/certain.

(31) Our plan is sure/certain to fail.

(32) I am not sure/certain about the figures/that I have passed/how much it will cost.

(33) a. *a sure candidate of his assets

b. *a sure candidate of winning

c. *a sure candidate that he will win

Such dyadic readings, however, are not available with sure and certain when their complements are infinitival CP's, so (29a) does not mean 'a candidate sure of winning', nor (29c) 'a candidate certain of being elected'. That suggests a possible reason for the fluctuating status of (29): when their complement is an infinitival CP, certain speakers interpret sure and certain as raising predicates and accept splitting if, and to the same extent that, they accept splitting with (un)likely, whereas others do not.⁴⁰

This theory, in other words, predicts that speakers for whom a raised subject does not count as a C2 of the adjective may accept split AP's headed by the two raising adjectives likely and unlikely and still object to split versions of AP's headed by certain and sure on account of their non-raising interpretations, and that speakers for whom raised subjects count as proper subjects will reject all examples under either interpretation. Obviously, a full-scale study of a representative population would be needed to reach safe conclusions, but the evidence suggests that the status of raised subjects in this respect is unstable and perhaps that a process of neutralization is under way in the grammars of the insecure speakers that might lead to depriving raising adjectives of their special status (and consequently to the rejection of their split versions along with those of ordinary AP's). The opposite development, i.e., the extension of acceptability to split versions of AP's containing sure and certain under their non-raising interpretation, and by extension to all ordinary AP's, of course, cannot take place if the present theory is on the right track.

3.6 Discontinuous AP's with Post-nominal Modifiers

Bernstein's second major observation, that modifiers of the adjective can appear post-nominally, creating a discontinuous AP, is an overgeneralization, as shown in section 1, but insofar as it is accurate the present theory has no difficulty in accommodating it. When the adjective takes a nominal as its C1 and is itself modified by a right-branching phrase (PP or CP), granted the principles above, we indeed expect discontinuous structures like (34), where fat precedes its C1, whereas the preposition around, which already has its own C1, takes fat man as its C2, and follows it.

[Editor: insert figure 34 here]

Acceptable ‘discontinuous’ AP’s like those in (8) above are, thus, correctly base-generated by Match without further ado.⁴¹ The problem under present assumptions is not to account for acceptable examples, but to formulate constraints to avoid the unacceptable ones, like those in (11) (e.g., *a brilliant face around the nose etc.), which contradict Bernstein’s generalization.

Again, the meaning of the adjectives is relevant, and in a rather trivial sense, i.e., that base-generating the discontinuous AP construction as above presupposes the adjective’s capacity to appear pre-nominally, and this, according to Bolinger (1967), James (1979), and many others since, depends on its expressing a ‘permanent’, or what Kratzer (1995) calls an ‘individual-level’ property.⁴² Notice that the examples of (11) and (8) clearly contrast in this respect. In the senses in which they are used in (11), at least, brilliant, blue, due, extended, restless, smiling, suffering, tired, transferable, and yellow all qualify as adjectives expressing transitory properties and are, therefore, not expected to occur before the noun in the first place. On the contrary, in the acceptable cases of discontinuity in (8), the readings of famous, fat, lucky, popular, respected, shy, strong, and timid all qualify as permanent properties, and, correspondingly, those adjectives are expected to be possible in pre-nominal position, which accounts for the acceptable status of the apparently discontinuous AP’s.

There are several other cases of apparent AP discontinuity induced by post-nominal modifiers that should also be briefly discussed. As shown in section 1, cf. (7), controlled PRO infinitives depending on the adjective usually are complements and, as Bernstein notes and our theory predicts, in that case cannot follow the nominal, but, as Quirk et al. (1985: 1226-1230) observe, the infinitives that follow adjectives represent several different structural patterns, and, correspondingly, surface strings of the form ...A+N+...to-VP also do, with significant differences in acceptability.

First, controlled infinitives like (35) are definitely better than examples like (7) (although one of my informants still rejects them). Granted present assumptions, this suggests that they are not complements, but modifiers of the adjective,⁴³ and that the difficulty one of the informants experiences in accepting their discontinuous form has to do with non-structural factors, perhaps the meaning of slow, etc. Interestingly, in the approximate relative clause paraphrases of (36), adjectives like quick and slow translate as low process oriented monadic manner adverbs, which, according to Jackendoff (1972), Cinque (1999), and Ernst (2002), do not take the subject in their scope under such readings. To that extent, (36) is not really an accurate paraphrase of (35), for the adverb in (36) does not attribute slowness to the agent, whereas the adjective in (35) does, and the reason why some speakers object to such discontinuities may have to do with the fact that preposing the adjective implies attributing to the individual denoted by the noun a property they feel it does not have.

- (35) a. ?a slow executive to react
 b. ?a quick man to fire back

- (36) a. an executive who reacts slowly
 b. a man who fires back quickly

Examples like (37), on the contrary, which are acceptable to all informants consulted, seem to contain infinitival modifiers of the adjective parallel to (35), but there are at least two differences that may explain their different status. One is that adjectives like brave, careless, stupid, etc. translate in the respective approximate paraphrases of (38) as event-evaluative or subject-oriented dyadic adverbs which do take the subject (as well as the VP) in their scope (see Jackendoff 1972, Ernst 2002).

Correspondingly, the cases of (37) can be broadly paraphrased as in (39), where brave takes man as one of its two arguments, whereas those in (35) cannot, cf. (40).

- (37) a. a brave man to jump into the icy water
 b. a careless nurse to leave the baby unattended
 c. a stupid girl to reject such an offer
 d. a wise man to keep his mouth shut
- (38) a. The man bravely jumped into the icy water.
 b. The nurse carelessly left the baby unattended.
 c. The girl stupidly rejected the offer.
 d. The man wisely kept his mouth shut.
- (39) a. It was brave of the man to jump into the icy water.
 b. It was careless of the nurse to leave the baby unattended.
 c. It was stupid of the girl to reject such an offer.
 d. It was wise of the man to keep his mouth shut.
- (40) a. *It was slow of the executive to react.
 b. *It was quick of the man to fire back.

The two uses of brave, careless, etc. illustrated in (39) and (37), however, differ in their adicity. Brave is dyadic in (39) (see Stowell 1991), but monadic in (37), where the second argument of (39) is demoted to modifier status, making the discontinuous AP construction possible, as the present theory predicts. Huddleston & Pullum (2002: 1256) claim that infinitival clauses like that in (41) are sentence-level adjuncts, but note

that the clause must be omitted if the adjective is (cf. *a man to jump into the icy water) and constituency tests like ellipsis and preposability lend no support to that analysis, for the infinitival clause certainly must be suppressed along with the adjective, cf. (41b), and cannot be fronted, cf. (42), whereas typical sentence-level adjuncts can.

- (41) a. Bill was mad to volunteer.
 b. *No, he wasn't _____ to volunteer.

- (42) *To volunteer, he was mad.

Still a third pattern of apparently discontinuous infinitival modification of adjectives is exemplified in (43), where the adjective lucky approximately corresponds to a speaker-evaluative adverb with propositional scope in the paraphrase of (44). In such cases, as for (35), the type of dyadic paraphrase shown in (39) is ungrammatical, cf. (45), because lucky has no dyadic readings, so the infinitival clause must be a modifier of the adjective (alternative analyses of the infinitival clause as a sentence-level modifier being implausible for reasons already given *a propos de* 35, 37, 41). Since its two monadic readings, cf. (46), denote permanent properties, and one is certainly predicable of individuals, cf. (46b), the discontinuous AP of (43) is correctly predicted to be acceptable.

- (43) a lucky youth to have a job

- (44) a. Luckily, that youth has a job.
 b. *That youth has a job luckily.

(45) *It is lucky of the youth to have a job.

(46) a. It is lucky that that youth has a job.

b. That youth is lucky (to have a job).

Fourthly, a post-nominal controlled infinitive is acceptable when the nominal is preceded by ordinal or limiting adjectives like first, last, next, and only, as in (47).

(47) a. the first friend of mine to call in

b. the only student to pass the test

c. the last train to arrive

d. the next book to be published

Such controlled PRO infinitives are similar to relative clauses, as the near synonymy between (47a) and (48) shows, but still clearly depend on the adjectives, for reasons already given, cf. (49).⁴⁴ On the other hand, observe that when the examples are paraphrased as in (50), the adjective corresponds in Cinque's (1999) hierarchy to a mid-high monadic time adverb with scope over the subject, which suggests that the related adjective, too, can take the nominal as its complement, as the discontinuous AP construction requires.

(48) the first friend of mine who called in

(49) *the friend of mine to call in

(50) a. the friend of mine who called in first

b. the friend of mine who first called in

The great majority of clausal modifiers that license apparently discontinuous AP's, however, are uncontrolled infinitives with an additional non-subject gap. Such post-nominal infinitives are typically found modifying adjectives of the easy class (see Nanni 1980), as well as adjectives like elegant (which look similar, but are different, cf. *infra*), and are accepted by all speakers, cf. (51), which follows from the present theory if they are modifiers (but not complements) of the adjective.

- (51) a. a difficult passage to play
 b. an easy book to read
 c. a hard man to convince
 d. a tough job to carry out

Such examples have been under discussion on and off ever since Chomsky called attention to them in the early 60's. Initially, on the strength of the semantic parallelisms observed in paradigms like (52), Rosenbaum (1967) had proposed to derive cases like (49a) transformationally from the structure underlying (50a) *via* a transformation then called 'Tough Movement'.

- (52) a. It is difficult to play (that) passage.
 b. To play (that) passage is difficult.
 c. a passage which it is difficult to play
 d. (That) passage is difficult to play.
 e. a passage (which is) difficult to play
 f. a difficult passage to play

An obvious objection to the Tough Movement account, however, is that difficult etc. have two monadic readings applicable to nominals and clauses, respectively, but (52f) seems more directly related to (52d, e), which attribute difficulty to the passage itself, than to (52a, b, c), where it is playing the passage that is said to be difficult, exactly the opposite of what the Tough Movement analysis would lead us to expect.

Under P&P theory, anyway, the Tough Movement analysis became incompatible with Case Theory and was abandoned, replaced by several base-generation accounts which avoided that objection. The earliest one was due to Ross (1986[1967]), Akmajian (1972), and Lasnik & Fiengo (1974: 543ff), who had alternatively proposed base-generating the subject of matrix clauses like (52d) and deleting the (identical) object of the infinitival clause (the ‘Object Deletion’ analysis), but what eventually became the standard view appeared in Chomsky (1977: 103-109), where the infinitive clause is an underlying complement (or modifier?) of the adjective,⁴⁵ the gap results from movement of an operator similar to WH, and split AP’s like an easy person to please are derived from an underlying structure like (53) *via* Extraposition.⁴⁶

(53) a [difficult [_{CP} OP PRO to play t]] passage

Of course, Extraposition is no longer available in mainstream Chomskyan grammars, and such AP discontinuities would presumably have to be accounted for nowadays in terms of A-Raising, as discussed in 2.2 above, but under the theory presented in 3.1-2 they can be directly base-generated (with a structure parallel to (34), except that the post-nominal XP is a CP, instead of a PP) provided the infinitival clause is a modifier, as assumed here.

Finally, apparent AP discontinuities are possible in cases like (54), superficially

similar to the ‘difficult’ cases of (51) in that the infinitival clause has an arbitrary PRO subject and a non-subject gap, but still different in several other respects.

- (54) a. a comfortable office to work in
 b. an excellent wine to serve cool
 c. a heavy suitcase to carry on such a trip
 d. a thick dress to wear in the summer

First, whereas adjectives like difficult can alternatively take as their arguments both states of affairs (clauses) and individuals (NPs), as shown in (52a-c) and (52d-f), respectively, adjectives like comfortable are predicable of individuals, but not of states of affairs, cf. the paradigm in (55).

- (55) a. *To work in this office is comfortable.
 b. *It is comfortable to work in this office.
 c. *an office which it is comfortable to work in
 d. *an office in which it is comfortable to work

Secondly, the infinitival clauses of (54) are less obviously attached to the adjectives if only because they may stay even if the latter are suppressed, as in (56), which suggests that they might be relative clauses directly modifying the NP. This analysis, of course, is easiest to accept for cases like (56a), for which equivalent stilted, but well formed paraphrases like (57) exist where the relative is directly visible.

- (56) a. an office to work in
 b. a wine to serve cool

- c. a suitcase to carry on such a trip
- d. a dress to wear in the summer

(57) an office in which to work

Thirdly, discontinuous AP's with adjectives like comfortable do not seriously deteriorate if the gap is replaced with a resumptive pronoun, as in (58a), whereas those with adjectives like difficult do, cf. (58b). Since resumptive pronouns are ungrammatical within relative clauses, cf. (59), some apparently discontinuous AP's in fact resolve into an ordinary A+NP structure plus an infinitival clause (e.g., of purpose) modifying a higher category.

- (58) a. (This is) a comfortable office to work in it.
 b. *(This is) a difficult passage to play it.

(59) *Show me the office that you work in it.

Finally, the infinitive clause, not preposable with adjectives like difficult, can be preposed with comfortable, etc., as the contrasts in (60) show. As is well known, relative clauses cannot be preposed, so (60c-d) suggest that the clause is not attached to the NP, either, but higher.

- (60) a. *To play, this is a difficult passage.
 b. *To play it, this is a difficult passage.
 c. To work in, this is a comfortable office.
 d. To work in it, this is a comfortable office.

What causes the structural ambiguity is that such infinitival clauses can be modifiers of adjectives, and are moved and ellided along with them in such cases, cf. (61), but they can also be modifiers of NP's (relative clauses), and then cannot be preposed, cf. (60a-b), and, thirdly, if they contain resumptive pronouns, they may be purpose or respect modifiers of higher categories like VP or S, and in that case they can be preposed, as in (60c-d).

- (61) a. Is this office comfortable to work in (it)?
 b. Oh, yes it is __. *Oh, yes it is __ to work in (it).
 c. Oh yes, comfortable to work in, it certainly is.

The only important point for present purposes, however, is that such infinitives are not complements of the adjective. Provided they are modifiers, whether of the adjective, the noun, or the verb is immaterial, for the theory above correctly predicts that the apparent AP discontinuity will be acceptable, as it is. Structural ambiguity, though, is a significant factor in many cases of divided usage, as shown directly in 4.

4. Structural ambiguity, fuzziness, and divided usage

The phenomenon of acceptable AP discontinuity in English, however, is not limited to A-Raising with a few unaccusative adjectives and perhaps generally available base-generation of PP or infinitival CP post-nominal modifiers of pre-nominal adjectives. All native informants consulted also accepted examples like (62), where, under the criteria above, the PP's are potential complements of the adjective. The close relation between the PP's and their respective adjectives is hard to ignore, for their prepositions are selected by the adjectives (cf. blind to/*on/*in, etc.), and, if the latter are removed, the

PP's must go, too (cf. *a man to his own defects, etc.).

- (62) a. a blind man to his own defects
 b. a curious lady about her neighbours' lives
 c. a foolish man about money matters
 d. a fussy man about wine
 e. an invisible process to the eye
 f. a kind man to strangers
 g. a loyal soldier to his Queen
 h. a particular man about food

Since distinguishing complements from modifiers is beyond the competence of lay native speakers, especially in the case of adjectives, the obvious way to dispose of such counterexamples is to claim that their PP's, although formally possible complements, are parsed as modifiers in the contexts from which the examples were obtained. Since the adjectives satisfy the other condition required for successful AP-discontinuity with modifiers, i.e., denoting permanent properties, the optional nature of the PP's and the presumably unreliable intuitions of speakers concerning which of them count as complements and which as modifiers in specific contexts offers a plausible explanation for the occurrence of such examples that is compatible with the theory. Significantly, in apparently parallel cases like (63), whose optional PP's also satisfy the formal criteria of complementhood, usage is divided, or perhaps even erratic, which suggests that what determines their status is not a core grammatical feature, but some contextual factor.

- (63) a. ?a clever guy with gadgets

- b. ?a dear friend to me
- c. ?a faithful husband to his wife
- d. ?a fastidious man about food
- e. ?a harmful substance to the lungs
- f. ?*a hostile president to the Palestinians
- g. ?*a reckless youth about money
- h. ?a ruthless tyrant to his opponents
- i. ?*a scrupulous mother about table manners
- j. ?*a talented boy at music

Even stronger support for that explanation comes from the fact that, confronted with such examples as (62) and (63), informants proved quite aware of the association between the discontinuous AP constructions and alternative versions with topicalized PP's, as in (64), and the availability of the topicalized alternatives seemed to help them accept the discontinuous examples, too, although mostly under a non-discontinuous reading. In fact, two young American informants considered all split AP constructions 'awkward' variants of their topicalized versions.

- (64) a. To his own defects, he is a blind man.
 b. With gadgets, he's a clever guy. (etc.)

Since in cases like a similar car to mine, where the PP's are surely part of the AP, the PP's cannot be preposed (cf. 65), and PP modifiers of the noun cannot be preposed either, cf. (66), it is tempting to conclude that such PP's are preposable in (64) because they are not attached to the AP, or even the NP, but higher, as modifiers of VP or S-like phrases. If so, apparently discontinuous complements of adjectives in cases like (62-63)

would not be counterexamples to the present theory at all, just PP's that, although introduced by prepositions that would allow them to be complements of the adjectives, are alternatively construable in certain contexts as modifiers of higher projections.

(65) a. *To Chomsky's, he published a subsequent article.

b. *To mine, he has a similar car.

(66) *With white stripes, he was wearing a red tie.

Notice, however, that preposable PP's are not always VP (or higher)-level modifiers. PP complements of adjectives can also be topicalized out of AP's, as in (67).

(67) a. On Stockhausen, I am not too keen.

b. With Japanese etiquette, I am not really familiar.

It is only post-nominal PP complements of pre-nominal adjectives, like (65), that are 'frozen',⁴⁷ so the fact that the PP's of (64) are preposable constitutes crucial indirect evidence that the equivalent post-nominal PP's *in situ* in (63) are not complements of the adjective, in spite of the prepositions that head them, but modifiers of higher projections.

The acceptability of the topicalized version does not invariably correlate with that of the 'discontinuous' AP construction, and some British informants rejected the examples in (63), although the respective topicalized versions of (68) were acceptable to them, but that is understandable: if they are not complements, as in (67), topicalized PP's cannot be modifiers of the adjective or even the noun (cf. 66), so they must be

modifiers of higher projections, and the structural ambiguity that makes speakers' judgments fluctuate when the PP follows the noun disappears when it is topicalized.

- (68) a. To me, he will always be a dear friend.
 b. To the Palestinians, he was a hostile president.
 c. About table manners, mine was a scrupulous mother.
 d. At music, he seemed a talented boy. (etc.)

Examples like (69) also may, but need not, be construed as instances of AP discontinuity, for their PP's can remain even if the adjectives are omitted (cf. a sacrifice to God), and thus can plausibly be parsed, in this case, as complements/modifiers of the nouns themselves, as the bracketing suggests. Informants were aware of structural ambiguity in such cases, too, and significantly accepted the examples preferably under the latter construal.

- (69) a. an agreeable [sacrifice to God]
 b. an embarrassing [protest to the authorities]
 c. an offensive [remark to the ladies]
 d. a suitable [person for that job]
 e. a typical [dish of the country]
 f. a useful [service to the community]

The structural ambiguity, however, remains, and the PP's can alternatively be construed as modifiers, but not as complements, of the pre-nominal adjectives, as the theory predicts. This accounts for the fact that they are not 'frozen', and can be

preposed, as in (70). Recall that split complements resulting from A-raising are ‘frozen’, cf. (65).⁴⁸

- (70) a. To the authorities, ours was an embarrassing protest.
 b. To the ladies, that was an offensive remark.

In apparently parallel cases like (71), though, usage was again divided. Although the adjectives can always be dropped in such examples too (cf. a proposal to us), forcing the PP’s to be construed as complements of the nouns, when they are present their association with their potential PP complements seems strong enough to make some informants inhibit the complement construal and, under the split-AP parse, the construction is rejected along with all discontinuities involving complements.

- (71) a. ?an acceptable [proposal to us]
 b. ?a flattering [remark to me]
 c. ?an incomprehensible [explanation to me]
 d. ?*an inherent [risk in the job]
 e. ?an internal [auditor to the firm]
 f. ?*a relevant [remark to the argument]
 g. ?*a representative [case of the disease]
 h. ?*a specific [endowment to man]

In a few cases like (72), finally, the post-nominal PP does not qualify as a potential complement, but only as a modifier of the adjective (or noun), and yet usage is divided, against what the present theory would seem to predict. Notice, however, that the adjectives of (72) are more difficult to interpret as denoting permanent properties,

the second condition necessary for the ‘discontinuous’ AP to be viable, as shown above. Although both a non-adjacent modifier of the adjective and an adjacent modifier of the noun should otherwise be acceptable in such contexts, according to the theory, with such adjectives there is good reason to expect unfavourable or divided judgments on independent grounds.

- (72) a. ?an established company in Japan
 b. ?a floating corpse in the river
 c. ?*a missing book from the shelf
 d. ?a radiant girl in her party dress

In sum, although uncontrolled priming effects induced by the uncontextualized way the batteries of examples were initially presented to informants⁴⁹ cannot be completely excluded as responsible for the fluctuation in speakers’ judgments, apparent counterexamples to the theory of AP discontinuity presented in section 3 seem to be consequences of a) the fuzziness of the complement/modifier distinction, particularly in the case of AP’s, b) the fuzziness of the distinction between individual and stage-level predicates, which determines which adjectives can appear pre-nominally and constitute initial candidates to appear in apparently discontinuous AP’s, and above all c) the structural ambiguities induced by potential alternative construal of post-nominal PP’s (but not topicalized ones) as modifiers of the adjective, the noun, or higher categories like VP or S, which in certain cases makes the proposed examples undecidable to native speakers. When the results of certain tests like paraphrase, ellipsis, preposability, etc., are taken into account, though, it is usually possible to elucidate which structure is being instantiated in each case, such apparent counterexamples largely dissolve, and the theory stands the empirical adequacy test remarkably well.

5. Summary

In this paper, having observed certain unexplained differences in the acceptability of discontinuous AP constructions (section 1) and noted their general unexpectedness within current P&P/minimalist theory (section 2), in section 3.1 we have substantially revised the standard assumptions of minimalist BPS theory concerning Merge and proposed a unified operation Match, in section 3.2 we have argued for a reduction of modification to complementation, and in section 3.3 we have shown how it applies to adjectival modification. Section 3.4. has claimed that genuine cases of AP-splitting are due to A-Raising, presumably an adjective defocusing strategy, but section 3.5 has shown that since A-Raising is reinternalization of the subject argument, it is allowed only with a restricted class of unaccusative adjectives, which explains why in general discontinuous complements of adjectives are not acceptable, as Bernstein (1995) had noted. Section 3.6, however, has shown that the theory allows for post-nominal XP modifiers of the adjective if the latter can independently precede the noun, which depends on its meaning, and revealed other lexical constraints which jointly explain why the apparently ‘discontinuous’ AP construction is not generally acceptable. Many apparent AP discontinuities, however, do not really involve A-Raising or base-generation of post-nominal modifiers of the adjective, but alternative construal of the post-nominal PP/CP’s as complements or modifiers of the noun (e.g., relative clauses), or of higher nodes like VP or IP (e.g., purpose clauses). In section 4, then, such structural ambiguities, along with the general fuzziness of the distinction between complements and modifiers and that between individual and stage-level predicates have been shown to contribute decisively to a certain instability in this area of the grammars of native speakers, which, along with possible priming effects induced by the method of

elicitation of grammaticality judgments used in the present study, largely explains the indeterminate reaction of some speakers to certain examples that apparently challenge the theory. However, even in those cases, the application of standard, if theory-internal, tests like paraphrase, ellipsis, and preposability, generally suffices to establish which construction is instantiated in each case, and the result is that, under not implausible syntactic and semantic assumptions, the facts of permissible and impermissible AP ‘discontinuity’ follow nicely from the theory, which resists the empirical adequacy test remarkably well.

If the theory can be maintained,⁵⁰ rather nice conceptual consequences follow whose key points should perhaps be emphasized in closing, since they vastly exceed the issue of AP discontinuity and affect the design of the grammar in general.

One is that Chomsky’s two cases of Merge can be unified under a homogeneous combinatory operation Match, which optimizes the computational component, and that the apparent optionality of modifiers is an illusion, or rather a confusion between competence and performance-related concepts. Clearly, since a modifier M of X is not selected by X, it seems an optional addition to X’s projection, but as soon as the point of view shifts to the projection of M itself, all optionality disappears, for unless X is matched to it, the selectional requirements of M will not be satisfied, and they must, or the derivation will fail. Thus, the ‘modified’ is as obligatory a complement to M as any, and the ‘optionality’ of modification results from a performance factor, i.e., whether what the speaker decides to say forces him to introduce a new predicate M in the system’s working space. If a new predicate is introduced, the mechanism of syntax forces satisfaction, and all optionality vanishes.

Secondly, the present theory, of course, reduces adjuncts to complements, a very welcome result if tenable, for adjuncts have always been a nuisance to generative syntacticians. In the last decade, substantial efforts have been made by Kayne,

Chomsky and Cinque, among others, to reduce them to specifiers, but just reducing adjuncts to specifiers denies structural representation to a semantically crucial distinction between predicates and arguments that should not be lightly given up in any structure-dependent theory of syntax and semantics. The theory of modification as complementation defended in section 3, on the contrary, eliminates adjuncts, but still keeps complements and modifiers neatly distinct at the structural and semantic level, as they should be.

Thirdly, the long-standing conflict between the standard assumptions of a) maximality of non-heads, b) locality of argument satisfaction (e.g., the XP-Internal Subject Hypothesis), and c) the need to interpret modifiers as open predicates is satisfactorily resolved. According to a) and b), modifiers must contain internal subjects, but, if they do, they are *ipso facto* thematically saturated and cannot be interpreted as open predicates. The present theory of modification as complementation, however, which is close in spirit to the Fregean-Montagovian view that adjectival modifiers are functions of a higher type and modification function composition, cleanly saves all three of the assumptions above and removes the conceptual tensions in this area.

Finally, a very nice consequence of the present theory of modification is that all the Head-Final effects and absence thereof in A...NP contexts follow automatically from phrase structure theory and the LCA, making the HFF redundant,⁵¹ whereas major alternative theories of modification like Larson's, Cinque's or Ernst's have nothing to contribute to the explanation of the mysterious HF phenomenon, which should count in favour of the present approach.

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FOOTNOTES

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¹ The term 'adjunct' will be replaced here with the structurally neutral term 'modifier', since base-adjunction is not available in the theory assumed in section 3 of this paper.

² See Jespersen (1909-1949, v. II: 378-384), Smith (1961), Bolinger (1967), James (1979), Quirk & al. (1985: 418-420, 1295), Ferris (1993), Sadler & Arnold (1994), and Huddleston & Pullum (2002: 445-446, 551-561) for good summaries of the main facts.

³ See Jespersen (1909-1949, v. II: 335-341), Quirk & al. (1972: 903, 1985: 1336-1337), Nanni (1980 *passim*), Hoeksema (1988), Roeper (1988), Lieber (1992: 11-13), Wiese (1996), Bauer (1998), and Huddleston & Pullum (2002: 551) for examples and discussion.

⁴ The term 'nominal' is used instead of 'NP', since, according to the theory in section 3, modifiers are attached to intermediate projections.

⁵ Thus, Larson (1988) cancels the distinction, Grimshaw (1990), Speas (1990), Pesetsky (1995: 232-233, 243-246) and Ernst (2002: 458-459, 266, 297) accept elements with an intermediate status, and Ernst (2002: 459-460) plainly admits that there is no way at present to characterize the opposition precisely. See Chametzky (2000) and González Escribano (2002b) on the general deficiencies of classical P&P and minimalist theories of adjuncts.

⁶ See Jackendoff (1977), Quirk & al. (1985: 1221-1231), and Huddleston & Pullum (2002: 542-550), for data and discussion.

⁷ See e.g. Jackendoff (1977: 57-60), and Chametzky (2000: 13-14).

⁸ The extractability test does not help much when applied to the split AP's if these result from Extraposition because of the effects of Ross's (1986[1967]) and Wexler & Culicover (1980) 'Freezing Principle'.

⁹ The following lists, obtained *via* a systematic survey, originally contained several hundred examples each, but have here been reduced for space-saving reasons to just a few in alphabetical order. All the PP's and CP's, however, have been carefully chosen to enforce their interpretation as complements of the adjective.

¹⁰ A few other minor complementation patterns also disallow AP-splitting, i.e., the adjectives worth and worthwhile, which exceptionally take a DP (cf. *a worth result the effort) or a controlled -ing clause with an additional non-subject gap (cf. *a worth book having, *a worthwhile visit making) and the adjective busy, which, according to Quirk et al. (1985: 1230) Huddleston & Pullum (2002: 546) takes a controlled -ing clause, but with no gap (cf. *a busy executive negotiating a fusion).

¹¹ A minor pattern of acceptable post-nominal modifiers of the adjective not mentioned by Bernstein is illustrated by examples like an attractive scheme financially, a respected colleague professionally, etc., for which the existence of acceptable variants with the adverb before the adjective, such as a financially attractive scheme, suggests a split AP construction. However, the fact that the adverb is often preceded by comma indicates that it is some kind of 'afterthought', so such examples will be disregarded here as of dubious relevance to the issues under discussion.

¹² Note that the PP's are not theta-marked, required, or selected by the respective adjectives. The fact that it is possible to extract from some of them (e.g., those after famous or popular, cf. What is she famous for?, Who is he popular with?, vs. *Which issue is your article forthcoming in?) does not conclusively establish them as complements, for many adjuncts can also be extracted from (cf. the PP in Did you come in Bill's car? vs. Whose car did you come in?, etc.). The decision to classify the

PP's as complements or modifiers in cases like these must, therefore, rest on a carefully weighted appraisal of all the criteria above, and it is no surprise that the distinction is a fuzzy one.

¹³ Apparent counterexamples to Bernstein's hypothesis induced by the exceptional positioning of enough, such as fond enough of them to make that sacrifice (Huddleston & Pullum 2002: 549), where enough clearly intervenes between fond and its complement, are best disregarded here, though, for the relation between enough and the adjective is not comparable to that between the adjective and the noun (see González Escribano 2002a). Also, widely cited examples of discontinuities like a better car than mine do not really involve AP-splitting, but, if anything, DegP-splitting, and do not technically contradict Bernstein's claim. Post-nominal as, than, for and that phrases are not constituents of AP but PP/CP complements of the corresponding Deg heads as, more/less, too, and so, (see González Escribano 2002a for discussion). That such phrases depend on the Deg item and not on the adjective is apparent from the fact that if Deg is removed they must go too, cf. *a pretty girl than/as Sue. That they are complements and not modifiers is equally clear, since as, than, etc. are strictly selected by the Deg words, and they even allow extraction (e.g., a girl that she was claimed to be prettier than, from a scholarly article by John A. Hawkins). For parallel reasons, equally disregarded as irrelevant here will be the 'Big Mess' construction of e.g., too short a girl for a top model, too young a man to be a professor, etc. (see Bresnan 1973 Abney 1987, and my own analysis in González Escribano 2002a). Note that in (9), on the contrary, given the non-gradable character of the adjectives (cf. *a more subsequent/previous/prior solution) Deg cannot be involved, the post-nominal PP must be an argument of the adjective, and the AP-splitting analysis is justified.

¹⁴ Other members of this class of symmetrical predicates are adjacent, alternating, antithetical, close, co-extensive, coincident, compatible, complementary, concomitant,

concurring, conflicting, contemporary, contrary, contrasting, correlative, disagreeing, distant, diverging, diverse, identical, inconsistent, interacting, interchangeable, interdependent, inverse, mutual, neighbouring, opposing, opposite, reciprocal, related, remote, separate, simultaneous, symmetric, and synonymous. In some cases, though, splitting with such adjectives was not acceptable to all my informants. In my survey, I have obtained the following judgments: ?*a compatible machine with ours, ?a contiguous garden to ours, ?a distant seat from the scene, ?*an extraneous factor to human language, ?*a far area from the fighting, ?*a remote village from civilization (where ? and ?* indicate that one or two of the informants rejected the examples, respectively).

¹⁵ Jackendoff (1977: 76-77) cites this PP as a ‘complement’ of the adjective, but his usage of the term must be an informal one in that passage, for it obviously fails to satisfy the basic criteria of complementhood.

¹⁶ In fact, there were sound reasons to discard it, even in its own terms, on broader conceptual grounds even before Merge and Bare Phrase Structure emerged, for adjectives constitute an open class, have descriptive content, assign one or more theta-roles, and are not ‘light’ in any sense, so not very plausible as exponents of a functional category, as pointed out by Sadler & Arnold (1994). Abney himself abandoned his early analysis in Abney (1991a, b). However, Stowell’s and Abney’s intuition that pre-nominal adjectives are heads and assign thematic roles to the NP’s they modify is sound and will be preserved in the theory of section 3 below.

¹⁷ The intuition that such AP’s are not thematically saturated, however, is important (cf. González Escribano 1998, 2002b), and will be incorporated in our proposal below.

¹⁷ For completeness’ sake, the generative literature does nevertheless offer precedents of principles that allow complements and modifiers to be attached ‘late’, although not real explanations of when such attachments are possible. The obvious one is the

Complement Principle invoked in Hendrick (1978), Guéron (1980: 642), Guéron & May (1984: 4), Culicover & Rochemont (1990: 41), Rochemont & Culicover (1990: 32-35), etc. According to Rochemont & Culicover (1990), for example, the ‘complement’ to a maximal projection (the ‘antecedent’) is a phrase that holds an argument or adjunct relation to the head X and is governed by XP, where A governs B if it c-commands it and no barrier intervenes. Assuming that the categorial feature of the adjective is not deleted by Merge and remains visible, the Complement Principle will account for the split AP constructions at hand, for there is no barrier involved, the post-nominal XP does bear an argument/adjunct relation to the XP to which it is attached, and the two XP’s are sisters, but, of course, it will also incorrectly license all the ungrammatical splits listed in section 1 above. In the case of adjuncts, the idea that they are attached ‘late’ has been around at least since Lebeaux (1988), but, as Speas (1990) admits, there seems to be no way to constrain late adjunction to just the right cases. Other generative approaches, specially Categorical Grammar, have resorted to broadly equivalent devices (e.g., the ‘Transferable Subcat Principle’ in Flickinger & Nerbonne (1992: 292-293), or Dowty’s (1996: 38) definition of ‘optionally free’ XP’s at the pheno-grammatical level), but they are also too unconstrained. Dowty’s proposal to let unattached post-nominal predicative XP’s float free inside XP’s to be ordered by general Linear Precedence rules, for example, does not specify what PP’s can be post-nominal, and will incorrectly license all AP-splitting unless additional constraints are imposed. The issues are big and cannot profitably be addressed here.

¹⁹ Jackendoff (1972), Larson (1988), Grimshaw (1990), Speas (1990), and Baker (1997) offer representative versions of the Thematic Hierarchy.

²⁰ ‘HFF’ is perhaps the best known name of this mysterious constraint. An earlier one due to Emonds was ‘Surface Recursion Restriction’, and others have been occasionally proposed (e.g., ‘Head Placement for Non-phrasal Modifiers’ in Emonds 1985: 15, the

'Head Adjacency Condition', in Sproat 1985: 199, etc.) but the Head-Final effects have so far resisted explanation, in my view. See Smith (1961), Emonds (1976: 18-19), Hendrick (1978), Stowell (1981: 283), Williams (1982: 160), Fabb (1984: 76-78, 98-133, especially 130-1), Williams (1982: 160), Emonds (1985: 15, 130-1), Sproat (1985: 199), Levin & Rappaport (1986: 644), Abney (1987: 327), Sproat & Shih (1987: 473-7), Abney (1991a, b), Longobardi (1991: 95-100), Liberman & Sproat (1992: 162), Cinque (1993: 268-9), Hawkins (1994: 78-79, 284-290), Neeleman (1994: 242-244), Sadler & Arnold (1994: 113-124), Williams (1994: 39-40, 45), Bernstein (1995: 6-9), Dowty (1996: 40-41, fn. 19), Uriagereka (1998: 220-221), Abeillé & Godard (2000), and Hawkins (2001: 9) for representative discussion of the HF phenomenon, and González Escribano (2002b) for a review of previous research and a new structure-dependent explanation that makes the HFF redundant.

²¹ See e.g., Chomsky (1972), Jackendoff (1977), Stowell (1981), and Chomsky (1986), for classical statements of X-bar principles, and Kornai & Pullum (1990) or Chametzky (2000) for a summary and critical assessment.

²² See e.g. Chomsky (1975[1955]: 540-543, 568-569), (1965: 107, 217), Lees (1960), Smith (1961: 343-344, 362), (1964: 37-47), Ross (1986[1967]: 16-18), Bach (1968: 92-93, 102), Stockwell & al. (1973: 500-501), Stowell (1981), Fabb (1984), and Kayne (1994) as representative references. A problem for this approach, as pointed out in Bowers (1975), Emonds (1976), or Jackendoff (1977), is that it offers no explanation for the existence of pre-nominal A's not derivable from relative clauses.

²³ See Ross (1986[1967]: 174-179), Guéron & May (1984), Rochemont (1986), Larson (1988), Culicover & Rochemont (1990), Rochemont & Culicover (1990), Kayne (1994), and Chomsky (1995b) for representative discussion of the problems involved, and Bühring & Hartmann (1997) for a recent defence of right-adjunction rules.

²⁴ ‘Working space’ is deliberately vague, a way to avoid commitment to the use and implications of problematic concepts like ‘numeration’ or ‘lexical array’ in Chomsky’s recent writings (see Chomsky 1995b, 1999, 2000[1998], 2001) allowing the Lexicon to be dynamically addressed during the computational process (see Epstein & al. 1998).

²⁵ Some ranking of a head’s dependents is empirically unavoidable, and all generative theories of syntax have one, although the implementations vary. In the present context, the use of ‘ranked’ is deliberately broad and non-committal, but meant to be compatible with analyses like those in Hale & Keyser (1993) and elaborate Larsonian XP-shell structures.

²⁶ The theory does not say anything on which heads become active first, presumably a performance matter, but, granted the properties of Merge, unless the selection features of a head H are satisfied before it becomes a complement elsewhere, they will have no chance to be satisfied at all and the derivation will crash.

²⁷ According to a traditional view found in Stockwell et al. (1973), Emonds (1976), Jackendoff (1977), Chomsky (1981), Hornstein & Lightfoot (1981), Stowell (1981), Radford (1988), Andrews (1982, 1983), Gazdar et al. (1985), Chomsky & Lasnik (1993), Baker (1995), McCawley (1998), Bowers (1993, 2001), etc., English modifiers are attached to unsaturated projections. As shown in González Escribano (2002b), that view affords better predictions than theories like Speas (1990), Chomsky & Lasnik (1993), Cinque (1999) or Ernst (2002), in which modifiers modify only maximal projections.

²⁸ See Shieber (1985) Gazdar & al. (1985) and Pollard & Sag (1987, 1994) on categories and unification.

²⁹ For space reasons, only brief allusion is possible here, but see González Escribano (2002b) for details.

³⁰ The concept of ‘specifier’ had little content in the original formulation of X-bar theory in Chomsky (1972a), gained some later on while associated with the subject function (and the complement, in its turn, with the object), and became empty again when Larsonian and Kaynean analyses generalized and not only subjects and objects but also modifiers were allowed to occupy specifier positions. In the present theory, thus, we radically reduce all non-heads to complements and all combination to complementation.

³¹ Actually, major statements like Chomsky (1972a, 1986) did not even provide for them. The idea that they inhabit some ‘parasynthetic’ space has been around since at least Lebeaux (1988) and Speas (1990), but it conflicts with the speakers’ robust intuition that modifiers are predicates which, like all predicates, require subjects, although possibly of a higher type.

³² Certain apparently non-branching AP’s can still be post-nominal, as in the people interested, the resources available, etc., but the adjectives have an associated Focus which is an underspecified lexical item and are actually right-branching in such cases (see González Escribano 2002b).

³³ In the following tree diagrammes, for simplicity’s sake, nodes bear as their ‘labels’ the lexical items that remain unsaturated and potentially active in future computation. Of course, that is an informal expedient, used here for expository convenience, only. Strictly speaking, selection is sensitive to underspecified signs (compare ‘Syn-Sem objects’ in Pollard & Sag’s HPSG). P-features, for example, are not selectionally relevant in syntax.

³⁴ In keeping with the spirit of Chomsky’s ‘Copy Theory of Movement’, traces will be informally represented by parenthesized ‘copies’ of the constituents ‘moved’.

³⁵ In fact, the idea that Focus constitutes the trigger or the inhibitor of certain movements has precedents in the literature. In the case of immediate concern here,

Extraposition is associated with Focus in Jackendoff (1977), Guéron (1980: 659), Guéron & May (1984), Rochemont (1986), Culicover & Rochemont (1990), Costa (1996, 1997), Krifka (1998: 96), etc., apart from many traditional grammars. Conversely, Cinque (1993, 1999) assumes de-accenting or ‘marginalization’, i.e., movement of constituents containing non-focused information to positions of adjunction where they receive weaker stress, Dowty (1996: 23) takes focused XP’s to be ‘bounding categories’ blocking Extraposition, and, according to Krifka (1998: 90) absence of +F forces constituents to be scrambled away from the preverbal Focus position of German and other languages. In general, information-theoretic features like Focus and Topic play an increasing role as triggers of movement in core syntax (e.g., Wh-Movement, Focus Movement, or Topicalization, in Rizzi’s 1997 account of the ‘left periphery’).

³⁶ The pre-nominal position can be contrastively focused, like any other, but that it is inherently a non-focused position has been a common assumption since Chomsky & Halle’s (1968) pioneering work on the Nuclear Stress Rule. Cinque (1993) arrives at the same conclusion by a different, structure dependent, route, and others reach it by semantic reasoning. Lambrecht (1994: 212-216), for example, takes the Focus to be a pragmatic ‘predicate’ identifying a referent, and since, in his restrictive ontology, only entities or states of affairs, but not properties, are possible referents, it follows that nominal modifiers (e.g., attributive adjectives like green in I bought the green shirt) must be presupposed.

³⁷ In the case of non-symmetrical adjectives like prior and subsequent, which split, cf. (9a, b), there is no morphologically related verb, but equivalent ones like precede or follow are unaccusative and have their Theme as a subject.

³⁸ Hereafter, the symbols ‘?’ and ‘?*’ and ‘*’ preposed to an example mean that one, two, or all three of my British informants rejected it, respectively.

³⁹ The difference between (28a) and (28b) is presumably due to some uncontrolled priming factor, but, not being a native speaker, my policy has been not to edit speakers' judgments at all. A moderate amount of idealization of the data is still appropriate, and shows in the decisions made to sort out different cases in this section and in section 4.

⁴⁰ Indeed, according to my informants, ?a sure applicant to succeed is acceptable under the raising interpretation paraphrasable as 'an applicant generally expected to succeed', but not under the 'non-raising' interpretation equivalent to 'an applicant who is sure that he will succeed'.

⁴¹ Observe, nevertheless, that under present assumptions they are not really discontinuous, for the C2 of around is the set {fat, man}, where the 'subject' selected by around, i.e., fat, remains accessible, although, being saturated, it becomes definitively inactive and, according to the Labelling Principle, does not project.

⁴² The meaning of the adjective, nevertheless, adjusts to the structure, just as that of an optionally transitive verb changes from a generic non-telic to a specific telic reading when the verb has a singular complement. Granted the present theory, pre-nominal adjectives just cannot take complements (the HFF), which favours generic (hence, permanent) readings. On the contrary, post-nominal AP's must in general take PP complements which make them 'heavy' and informationally prominent, and such PP's usually contain referential DP's that tie the properties expressed by the adjectives to specific states of affairs. Thus, in the end, there is a close connection between post-nominal position, branchingness-heaviness, informational prominence, and 'non-permanent' (Kratzer's 'stage-level') readings. A related fact is the tendency of 'split' AP's to appear inside predicative DP's, and the corresponding contrast in acceptability between indefinite and definite articles in such cases (cf. a fat man around the waist, vs. *the fat man around the waist).

⁴³ An alternative analysis of the infinitival clause as a modifier of a higher category is implausible if only because, if the adjective is suppressed, the clause must go, too, cf. *an executive to react.

⁴⁴ In this respect, they differ from uncontrolled ones, which may subsist on their own, cf. the (first) person PRO to consult in matters of etiquette is Dr. Reynolds.

⁴⁵ Chomsky used the term ‘complement’, but apparently not implying a strict distinction between complements and modifiers. The same occurs in standard reference grammars like Quirk et al. (1985) or Huddleston & Pullum (2002), which informally adopt analyses equivalent to Chomsky’s in this area.

⁴⁶ Certain WH-Island violations predictable from the WH-Movement account did not arise, though, so Chomsky (1981: 308-314) eventually revised that analysis, too, and proposed to treat easy to please etc. as complex adjectives, which still leaves the infinitive as a complement of the adjective. The details are of mere historical interest and irrelevant to the issues under discussion here.

⁴⁷ An ECP phenomenon, apparently. Note that, after the adjective has been raised, extracting the PP from the lower AP-shell would leave an improperly governed trace, whereas no such problem arises if the complement gap is left contiguous to its A head, as in (67).

⁴⁸ Topicalizing a modifier would be problematic under the classical ECP approach, but need not be so under the present one, where the modifier contains the selecting head of the corresponding phrase and need not be governed by the AP or the NP at all. A consequence which would merit further exploration, however, is that intermediate projections must now be visible to Move, but note that here is no reason why an object visible to Merge should not be visible to Move as well. The issues, however, are marginal to the present discussion, and too big to be summarily disposed of in a footnote.

⁴⁹ To tell the whole truth, appropriate contexts were sometimes provided and explained to informants *a posteriori* whenever they seemed disconcerted by the examples, but the basic material were isolated sentences and no attempt was made to neutralize possible priming effects.

⁵⁰ See González Escribano (2002b, c) for details on how the theory handles other types of modification, including PP's, adverbs, and relative clauses.

⁵¹ González Escribano (2002b) explains how the present theory of modification makes the HFF unnecessary in all other contexts.

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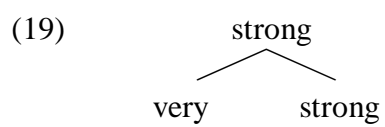
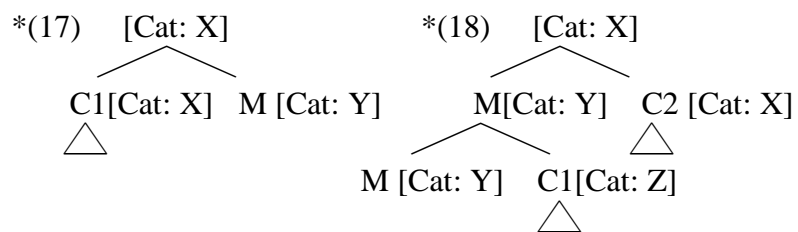
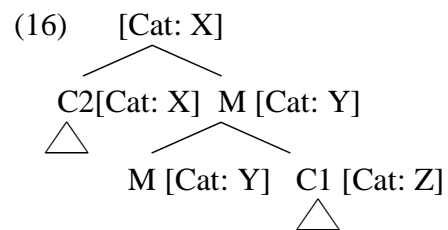
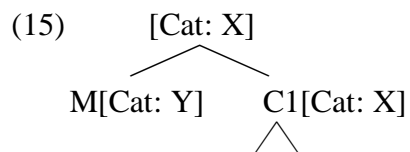
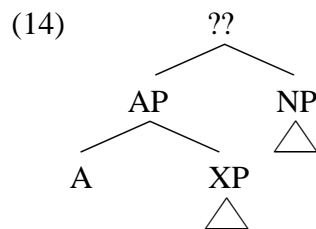
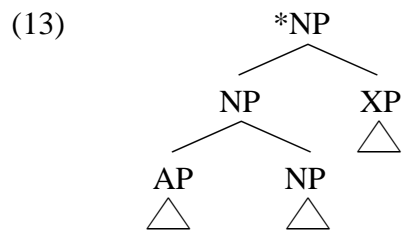
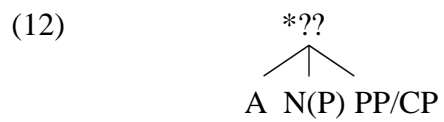
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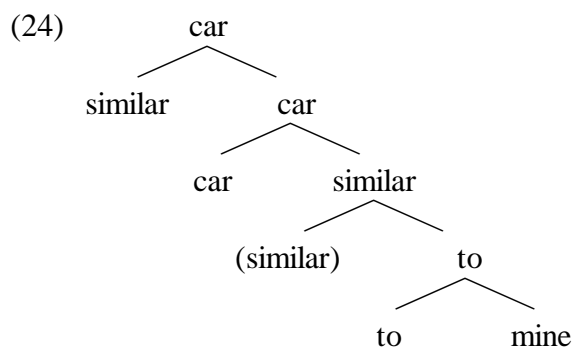
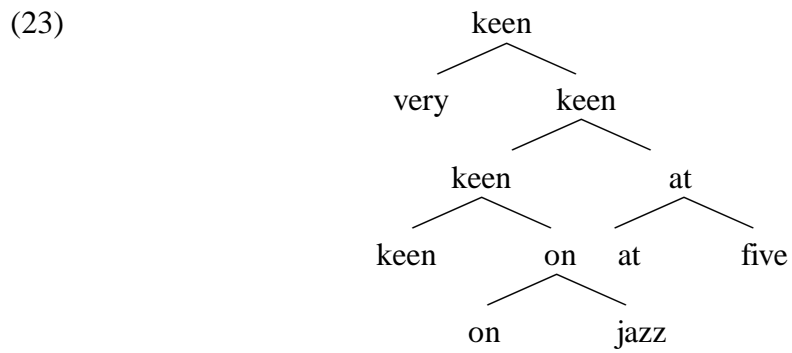
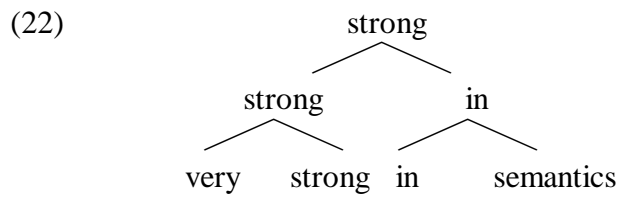
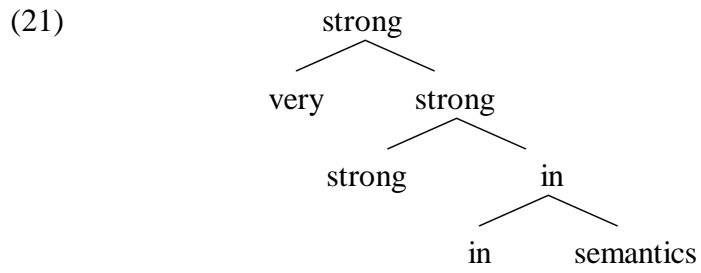
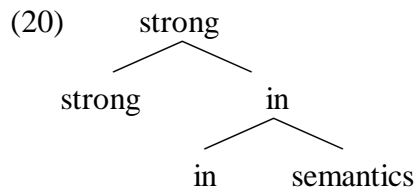
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Figures





(34)

