

Just how interesting a construction is this?

Explorations in the matching of internal and external syntax

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- A. Exercise in the foundations of syntax: pre-theoretical, but systematic -
minimum of special assumptions, especially about universals;
minimum of theory-bound terminology;
no explicit formalism (but, ideally, enough precision so that proposals could be formalized directly, though not necessarily with a formalism “off the shelf”, and with no claim that this formalism is the right/best one);
in fact, not about representations;
aim is to lay out what a good theory ought to be able to do;
method is detailed analysis of some subpart of the syntax of one language (English adnominal modifiers, here), though cross-linguistic surveys provide another method;
not an alternative to approaches positing strong universals or relying on assumptions about formalisms (and so applying a theoretical framework to a set of data), but a complement to such approaches.
- B. Still, some assumptions and terminology are necessary (though even those will eventually need close examination); a few crucial items -
the objects being described are **expressions** (pairings of phonological content with meaning);
expressions may be composed of other expressions,
down to the minimal parts for syntactic purposes, (syntactic) **words**;
a **construction** is, extensionally, a set of expressions, and, intensionally, a generalization about form-meaning pairings that picks out this set;
for the purposes of syntax, words group into **word categories** (including something like the traditional “parts of speech”, though the relevant classes might well form a network of including, included, and overlapping sets);
for the purposes of syntax, expressions group into **syntactic functions**, which can be thought of as constructional rôles, or as sets of positions or slots in constructions.
[None of these are definitions; definitions can’t be provided at this level]
As a rule of thumb, what you see (well, hear) is what you get -
no invisibilia;
only one level of analysis;
it’s all properties of expressions (and their parts) and relations between expressions (or among their parts).
- C. The morass of terminology -
some very standard terms have to be avoided, since they come with theoretical commitments I’m not willing to make in advance, or have different uses for different syntacticians (in particular, **phrase** and **head** will have to be avoided);
and I’ll have to provide a certain number of neologisms for concepts that are not ordinarily distinguished.

D. The central problem of syntax is how the composition of an expression is related to its distribution. All the conceptual apparatus of syntax arises from trying to describe how the internal syntax and the external syntax of expressions fit together.

E. Classes/categories C_1, C_2, \dots, C_n of words and the expressions built up around C_i Ws (words of category C_i), that is, the set of C_i -centered expressions, or C_i Xs for short.

F. For each C_i , there is also a set of syntactic contexts, or functions, associated with C_i Xs: the set of C_i functions, or C_i Fs for short. In a sense, the classes of words (the C_i s) and classes of syntactic environments (the C_i Fs) are mutually defining, with the C_i Xs serving as the interface between them.

G. N, Adj, Deg, V (for “verb”), Adv (for “adverb”), D (for “determinative”), and P (for “preposition”), among others.

(1.1) The class N (for “noun”) is associated with a set of syntactic functions that includes Subject, Vocative, Direct Object, and Prepositional Object, with the class of NXs (*linguists, famous linguists, very famous linguists, the famous linguists, all the famous linguists, etc.*) serving as the interface between them; the NXs are built on NWs and fill NF (Subject, Vocative, etc.) slots in larger expressions.

(1.2) The class Adj (for “adjective”) is associated with a set of syntactic functions that includes Predicative and Adnominal, with the class of AdjXs (*famous, very famous, much more famous, etc.*) serving as the interface between them; the AdjXs are built on AdjWs and fill AdjF slots in larger expressions (Predicative *much more famous* in *Your linguists are much more famous*, Adnominal *much more famous* in *much more famous linguists*).

(1.3) The class Deg (for “degree word”) is associated with a set of syntactic functions that includes Adadjectival, Adadverbial, and Addegradual, with the class of DegXs (*very, so extremely, etc.*) serving as the interface between them; the DegXs are built on DegWs and fill DegF slots in larger expressions (Adadjectival *so extremely* in *so extremely famous*, Adadverbial *so extremely* in *so extremely quickly*, Addegradual *so* in *so extremely within so extremely famous*).

H. Details I: Each C_i has many subclasses, each subclass comprising C_i Ws from which C_i Xs can be built that have more restricted distributions than C_i Xs in general; e.g. auxiliary VWs vs. other VWs.

(2.1) Some AdjWs, like *asleep*, can serve only as Predicatives, not as Adnominals, and other AdjWs, like *former*, can serve only as Adnominals, not as Predicatives.

(2.2) Some AdjWs, like *rainy*, when serving as Predicatives, are compatible only with certain Subjects - dummy *it* (*It was rainy in our town last week*) and NXs denoting locations in space (*Our town was rainy last week*) or time (*Last week was rainy in our town*), in particular.

(2.3) The N class splits into several subclasses (at least, common N, proper N, and pronominal), and the class of common Ns itself splits into three subclasses - N_I (singular count nouns), N_{PL} (plural count nouns), and N_M (singular mass nouns) - both with respect to the way “bare NXs” (like *famous linguist, famous linguists, and beautiful shrubbery*) combine with Determiner modifiers (*a* combines only with N_I , *several* only with N_{PL} , and *much* only with N_M) and also with respect to the distribution of “full NXs”, in particular

as Subjects (*the famous linguist* and *the beautiful shrubbery* require singular predicates, while *the famous linguists* requires a plural predicate; *a famous linguist*, with its N_I central word, is incompatible with the predicates *be plentiful/abundant*, while *famous linguists* and *beautiful shrubbery* are compatible with them.).

I. Details II: The word classes not only divide into subclasses, but also group together into superclasses with respect to their distribution, or with respect to the distribution of the expressions built on them.

(3.1) As noted above, Adj, Adv, and Deg group together by virtue of their ability to combine with preceding DegXs; most DegXs go with all three: *too famous*, *too quickly*, *too extremely* (in *too extremely tall*).

(3.2) N, Adj, Adv, and P group together by virtue of the ability of expressions built on them to occur as clause-initial phrases in WH questions (while V is denied this possibility): NX *Which linguists did you meet?* AdjX *How tall must your soldiers be?* AdvX *How soon must you finish your essay?* PX *To which linguists did you give awards?* - but VX **How soon finish your essay must you?* / **Finish your essay how soon must you?*

(4) The class membership of the central word in an expression goes hand in hand with a set of contexts that expression can occur in.

J. The ability of an AdjX to serve as Predicative or Adnominal or both can be predicted from the corresponding ability of the central AdjW; *completely asleep* is Predicative-only, just like *asleep*, and *putatively former* is Adnominal-only, just like *former*. Similarly, the count/mass and singular/plural properties of the NXs *the very beautiful shrub/shrubs/shrubbery* follow the properties of the NWs in these expressions. And so on.

K. Internal-external mismatches. There are, however, straightforward cases where C_iXs serve a non-C_iF.

(5.1) In inverted WH-clefts, some PXs, AdjXs, and VXs can serve in the NF Subject: PX *Under the bed is where I put my slippers*, AdjX *Very happy is how I felt this morning*, VX *Eat sushi is what I planned to do*.

(5.2.1) Some idiomatic NXs centered on the NWs *lot*, *bit*, and *deal* can serve in the DegF Adadjectival, modifying comparative AdjXs (*a whole lot bigger*, *lots bigger*, *a little bit more famous*, *a very great deal happier*), and also modifying the (comparative) Determiner Adj *more* (*a whole lot more bushes/shrubbery*, *lots more bushes/shrubbery*, *a little bit more shrubbery*, *a very great deal more shrubbery*).

(For my purposes here, “comparative AdjXs” include both one-word, inflectional, comparatives like *bigger* and also two-word, periphrastic, comparatives like *more famous*.)

(5.2.2) These same NXs can serve in the DF Determiner, modifying N_{IS}, in which case a linking P *of* is required: *a whole lot of bushes/shrubbery*, *lots of bushes/shrubbery*, *a little bit of shrubbery*, *a very great deal of shrubbery*. Note that the NXs *a whole lot of bushes/shrubbery* and *lots of bushes/shrubbery* have the count/mass and singular/plural properties of their central NWs, *bushes* or *shrubbery*, in accordance with (4).

((5.3.1)[Parallel to 5.2.1] AdjXs centered on the AdjWs *much* and *little* can serve in the DegF Adadjectival, modifying comparative AdjXs (*so very little bigger*, *pretty much more famous*); and AdjXs centered on *many* and *few* (as well as *much* and *little*) can serve in

the DegF Adjectival, modifying the (comparative) Determiner Adj *more* (*so very little more shrubbery*, *pretty much more fame*, *so very few more bushes*, *pretty many more honors*).

(5.3.2) [Parallel to 5.2.2] These same AdjXs can serve in the DF Determiner, modifying N_{IS}: *so very little/much shrubbery*, *pretty few/many bushes*.

L. A mismatch between the (internal) category for some set of expressions and one or more of the (external) functions of those expressions; the functions cannot be (entirely) predicted from the category and must be specially stipulated. That is, the general principle of category-function association in (4) has to be supplemented by a considerable number of construction-specific associations, each of them of the form: in some context, certain C_iXs can serve the non-C_iF F_j.

M. Size properties. (2.3) above, “bare NXs” like *(famous) linguist* vs. “full NXs” like *alone/the/that (famous) linguist*. The ad-hoc terminology is meant to suggest a size difference, at least for N_I-centered expressions.

(6) (a) Bare NXs fill the NF Vocative (*Hey, famous linguist, when are you speaking?*); full NXs are, in general, not possible in this function (**Hey, a/the famous linguist, when are you speaking?*).

(b) Full NXs fill the NFs Subject, Direct Object, and Prepositional Object (*A famous linguist put this bizarre example in some recent book*); bare NXs are, in general, not possible in these functions (**Famous linguist put bizarre example in recent book*).

(c) Both full and bare NXs can fill the AdjF Predicative, but their distributions in this function are almost complementary; the large-scale generalization is that full NXs are used for Predicatives in the predicate (*Kim is a famous linguist*. **Kim is famous linguist*), bare NXs for fronted Predicatives (*Famous linguist though/that Kim is,...* **A famous linguist though/that Kim is,...*).

(7) Suppose we have a definition of Bare NXs (with no semantics of (in)definiteness associated with them), then what counts as a Full NX is defined by a number of clauses, among them:

(a) A N_{PL}- or N_M-centered Bare NX (*(famous) linguists*, *(beautiful) shrubbery*) can be used as a Full NX (with the semantics of indefiniteness).

(b) A Bare NX combined with a preceding compatible Determiner modifier (*a famous linguist*, *these bizarre examples*, *some beautiful shrubbery*) can be used as a Full NX.

(c) Certain definite Full NXs combined with a preceding compatible Determiner modifier (*all (of) the famous linguists*, *some of that beautiful shrubbery*) can be used as a Full NX.

N. Smaller Bare NXs (without Determiner modifiers) vs. larger Full NXs (with them). More generally, externally relevant distinctions between (smaller) C_iXs that lack some type of modifier and (larger) C_iXs that have them - between NXs without Adjectival modifiers and those with them, e.g. Even more generally, externally relevant distinctions between (smaller) C_iXs that lack some sort of satellite (in particular, an argument) and (larger) C_iXs that have them - between intransitive and transitive predicate VXs, between predicate VXs and clausal VXs, or between subjectless and subjectful clauses, for instance.

Somewhat more complex “missing/present satellite” case: division of predicate VXs in English into those with an auxiliary VW (*will eat sushi, has been singing madrigals, did know how to swim, etc.*) and those without one (*eat sushi, sings madrigals, knew how to swim, etc.*) - “extended” vs. “plain” predicate VXs. For the most part, both subtypes can be used interchangeably. But

(8.1) There are contexts that require an Extended VX - for instance the inversion construction, in which the parts of a predicate are split around the subject: *When did Kim eat sushi?* vs. **When ate Kim sushi?* and *Had Kim eaten sushi, then...* vs. **Eaten Kim sushi, then...*

(8.2) And there is at least one context that requires a Plain VX, one without an auxiliary: in the complement of “supportive do”: *When did Kim eat sushi?* vs. **When did Kim have finished?* and **When does Kim be happy?*

O. Another type of missing-satellite case: A size distinction is an externally relevant property of C_iX s whenever there is a “marker word” for C_iX s, for which marked C_iX s (larger) are sometimes in alternation with, sometimes in complementary distribution with, unmarked ones (smaller), as with infinitive VXs marked (or not) with *to*, finite clauses marked (or not) with *that*, and NXs marked with *of*, which are in alternation with unmarked NXs for the Determiner modifier *a couple* (*a couple bushes, a couple of bushes*) but in complementary distribution for the Determiner modifiers *a dozen* (*a dozen bushes* but **a dozen of bushes*) and *a lot* (*a lot of bushes* but **a lot bushes*). [From here on, I will say simply “determiner”, instead of the more cumbersome “Determiner modifier”.]

P. Possibility that the distinction between a one-word C_iX and a multi-word C_iX can be relevant to the external distribution of C_iX s.

Q. Joint determination of properties: Situations in which more than one constituent word has properties that contribute to the properties of a larger expression.

Q1. Extended predicate VXs in (8): *will dissolve* or *have eaten sushi*.

In several ways, the non-auxiliary V in such combinations acts like the central element in determining the external syntax of the VXs. In particular, the Plain VX *be rainy* constrains the external syntax of the Extended VX *has been rainy* to combination with Subjects like those enumerated in (2.2) (e.g. *It has been rainy in Palo Alto this week* but **This has been rainy in Palo Alto this week*); and the Plain VX *been abundant* constrains the external syntax of the Extended VX *might have been abundant* to combination with Subjects like those enumerated in (2.3) (e.g. *The bushes/shrubbery might have been abundant* but **The famous linguist might have been abundant*). And so on for a huge range of subject-predicate compatibility requirements, which range from the clearly semantic to the at least partially syntactic.

On the other hand, with respect to all facts that have to do with the inflectional forms of these predicate VXs, it's the first auxiliary V in such combinations that determines the external syntax of the VXs. There's subject-verb agreement: it's *The bushes have/*has been abundant* and *The shrubbery has/*have been abundant*. And there's government of forms, for instance the form requirements of the infinitive marker *to*, which modal verbs are incompatible with: *I expect to have to go* but **I expect to must go*.

Q2. Full NXs like *the famous linguist* and *some famous linguist*. The NW in the position of *linguist* predicts the count/mass and singular/plural properties of the larger NX. On the other hand, it's the determiner that predicts the definite/indefinite properties of the larger NX - *the famous linguist* is definite (??*There is the famous linguist on your porch*), *some famous linguist* is indefinite (*There is some famous linguist on your porch*) - so that insofar as (in)definiteness is syntactically (as opposed to semantically) relevant to the distribution of NXs, the determiner is the key element of the NX.

In addition, particular determiners are associated with quite specific possibilities for the external syntax of the NXs they occur in: the comparative determiner *more* (in *more linguists*), for example, allows for postnominal modifiers in *than* (*more linguists than I'd ever seen before*), which aren't available with other determiners (**the/those/some/all/many linguists than I'd ever seen before*).

(9) a. [have [be [eat *sushi*]]] : *have been eating sushi*

b. [lots [the [big bushes]]] : *lots of the big bushes*

Q1&2. In both cases, it's the first, and highest, element in these structures (singly underlined) - what I will call the "link" - that serves as a second source of prediction of external syntax, in addition to the element (doubly underlined) that I'd earlier labeled as the center. So (9a), with the link *have*, has one distribution; but with *has* it has another. Similarly, (9b), with the link *lots* (or *some*), has one distribution; but with *most* (or *all*) it has another. In structures like those in (9), the properties associated with the center persist through successive embeddings; *bushes*, *big bushes*, *the big bushes*, and *lots of the big bushes* are all plural count expressions. In contrast, the properties associated with the link determine only the immediate external syntax; *the big bushes* is a definite expression (because of *the*), but *lots of the big bushes* is an indefinite expression (because of *lots*).

Q3. Comparative AdjXs with *more*, like *more famous*. Internal structure involves the comparative AdjW *more* (serving the DegF Adjectival) plus a base-form AdjW that serves as the center of the larger AdjX; but since the comparative AdjW *more* requires a base-form AdjW, we could view the base-form AdjW as an argument of *more*. And, once again, two constituents contribute to determining the external syntax of the expression comprising them: *more* contributes the comparative property to the AdjX, which is then eligible to combine with *than*-expressions (the same way that comparative NXs like *more linguists* are); and the base-form AdjW contributes all other syntactically relevant properties (in particular, it predicts whether the AdjX is available in Adnominal and Predicative functions). In inflectional comparatives like *bigger*, both sorts of properties inhere in a single word; in periphrastic comparatives like *more famous*, the properties are split between the two words, the center *famous* and the link *more*.

R. "Edge determination": Properties of whichever word happens to be first (or last) in an expression are also properties of the entire expression, as when possessive marking on the last word of a NX in English is associated with the possessive property belonging to the

NX as a whole, or when initial consonant mutation on the first word of an expression in Welsh is associated with the mutation status of the expression as a whole.

- S. Containment properties. An expression has some property by virtue of its containing a subexpression - of any category, at any level of structure, in any function - with that property.

The “containing a WH word” property required of clause-initial expressions in information questions: *Who did you see?*, *Which people did you see?*, *From which people did you get those ideas?*, *Just how far from Paris did you travel?*, *Just how many miles from Paris did you travel?* (vs. **Anyone did you see?*, **Those people did you see?*, **Just three miles from Paris did you travel?*). Though the crucial WH word cannot be embedded very far, the large-scale generalization is still that a WH word is a WH-containing expression, and if any constituent of an expression is a WH-containing expression, then that larger expression is too; otherwise, it is not a WH-containing expression.

- T. Ellipsis. Expressions with a missing, omitted, or elliptical element - a central word, or an argument that is otherwise “obligatory” - quite generally have a more restricted external syntax than do expressions where this element is intact, or overt. There are often multiple constructions allowing such ellipsis - Gapping, VP Ellipsis, and Pseudogapping constructions of English, all of which allow for VXs that have no overt central VW.

(10.1) The main principle. Determination by the central word..

(10.2) Specially stipulated category-function associations.

(10.3) Distinctions in size properties:

(10.3.1) Having vs. lacking some type of satellite, either
a. a modifier expression,
b. an argument expression, or
c. a marker word.

(10.3.2) One-word vs. multi-word expressions.

(10.4) Determination by a specific non-central word, in particular by a link word or by an edge word.

(10.5) Determination from a contained property.

(10.6) Determination from a missing element.

U. Type O and Type X AdjXs. Adjectival expressions in English fall into two subtypes, O (for “ordinary”) and X (for “extraordinary”). Some representative expressions of each subtype:

(11) O: *very, rather, quite, pretty*; Adj-ly (*extremely, surprisingly*, etc.);
absolute *most*; comparative *more*; *much, little*;
almost, somewhat, nearly, barely, etc.; *completely, totally*, etc.

X: resultative or emphatic *so, that, this, as, too, how, however*

U1. Adnominal AdjXs with O modifiers have the same external syntax as one-word AdjXs:

(12) Type O AdjXs:

- (a) can combine with a following Bare NX,
 - (b) with no restriction on the N-type of the modified NX, which can be N_I, N_{PL}, or N_M,
 - (c) to yield a Bare NX.
- (12.1) The Type O AdjX *beautiful*:
- (a)/(b) *beautiful bush* (N_I),
beautiful bushes (N_{PL}),
beautiful shrubbery (N_M);
 - (c) *beautiful bush* is a Bare NX [*beautiful bush*]:
It cannot serve as a Subject: **Beautiful bush attracted my attention.*
It can combine with a preceding determiner: *a/the/some beautiful bush*.
- (12.2) The Type O AdjX *very beautiful*:
- (a)/(b) *very beautiful bush* (N_I),
very beautiful bushes (N_{PL}),
very beautiful shrubbery (N_M);
 - (c) *very beautiful bush* is a Bare NX [[*very beautiful*] *bush*]:
It cannot serve as a Subject: **Very beautiful bush attracted my attention.*
It can combine with a preceding determiner: *a/the/some very beautiful bush*.

U2. Adnominal AdjXs with X modifiers exhibit quite different external syntax:

(13) Type X AdjXs:

- (a.1) combine only with a following Full NX, not a Bare NX,
 - (a.2) where the link determiner in the modified NX is restricted to *a(n)*,
 - (b) with the modified NX restricted to the N-type N_I,
 - (c) to yield a Full NX.
- (13.1) The Type X AdjX *so beautiful*:
- (a.1) **a so beautiful bush*, but *so beautiful a bush* (N_I);
 - (a.2) *so beautiful a/*one/*some/*the bush* (determiners other than *a(n)*);
 - (b) **so beautiful bushes* (N_{PL}), **so beautiful shrubbery* (N_M);
 - (c) *so beautiful a bush* is a Full NX [[*so beautiful*] [*a bush*]]:
It can serve as a Subject: *So beautiful a bush would please anyone.*
It cannot combine with a preceding determiner:
**a/*the/*some so beautiful a bush.*
- (13.2) The Type X AdjX *how beautiful*:
- (a.1) **a how beautiful bush*, but *how beautiful a bush* (N_I);
 - (a.2) *how beautiful a/*one/*some/*the bush* (determiners other than *a(n)*);
 - (b) **how beautiful bushes* (N_{PL}), **how beautiful shrubbery* (N_M);
 - (c) *how beautiful a bush* is a Full NX [[*how beautiful*] [*a bush*]]:
It can serve as a Subject: *How beautiful a bush would please you?*
It cannot combine with a preceding determiner:
**a/*the/*some how beautiful a bush.*

Digression on U2: The *a* in *how beautiful a bush* is actually an occurrence of the indefinite article of English, not just a distinct marker word, so that *a bush* in *how beautiful a bush* is in fact a Full NX. My claims are, at first glance, remarkable, given the total inability of determiners with distributions that are otherwise somewhat similar to the distribution of the indefinite article - indefinite *one* and *some* and, more distantly, definite *the* - to

replace *a* in examples like *how beautiful a bush*. However, there are at least two lines of evidence suggesting that this word is indeed the indefinite article. The first is that it contributes indefiniteness to the resulting NX; *how beautiful a bush* is an indefinite NX, not merely a NX unspecified for (in)definiteness, as can be seen by its occurrence in existentials (*I can't imagine how beautiful a bush there was in that garden*). The second is that it shows the morphophonemic alternation seen in undoubted occurrences of the indefinite article, and only there: *how beautiful a bush*, *how beautiful an animal*, *how beautiful an ornamental flower*, etc.)

Summary for U: These very familiar facts would seem to indicate that the external syntax of Adadjectival + AdjX combinations is in part determined by the link Adadjectival word (underlined above), and not only by the central AdjW - joint determination.

V1. More levels of modification:

- (14) The Type O AdjX *more beautiful*: *a more beautiful bush*
 [[more beautiful] bush]:

V2. Comparative AdjXs, both inflectional and periphrastic, can themselves be modified by various Adadjectivals. Some of these, like *much* and *vastly*, are of Type O, but a few, like *any* and *no*, are of Type X:

- (15) The Type O AdjX *much more beautiful*: *a much more beautiful bush*
 [[much [more beautiful]] bush]:

- (16) The Type X AdjX *any more beautiful*:
 **an any more beautiful bush*, but *any more beautiful a bush*
 [[any [more beautiful]] [a bush]]:

V3. The Adadjectival *much* that can modify comparative AdjXs is itself subject to modification, by some Addegradual elements, the inventory of which largely overlaps the inventory of Adadjectivals modifying simple, non-comparative, AdjXs. In particular, among these Addegraduals are words like *very* and *enormously* that otherwise are Type O and words like *so* and *that* that otherwise are Type X. And in fact their O/X behavior carries over to these Addegradual uses:

- (17) The Type O AdjX *very much more beautiful*: *a very much more beautiful bush*
 [[[very much] [more beautiful]] bush]:

- (18) The Type X AdjX *so much more beautiful*:
 **a so much more beautiful bush*, but *so much more beautiful a bush*
 [[[so much] [more beautiful]] [a bush]]:

V4. Indeed, *very much* as in (17) can be modified by X-type modifiers like the *so* in (18), and the result is a Type X AdjX:

- (19) The Type X AdjX *so very much more beautiful*:
 **a so very much more beautiful bush*, but *so very much more beautiful a bush*
 [[[so [very much]] [more beautiful]] [a bush]]:

W. Summary so far: The word determining X vs. O behavior (underlined in (17)-(19)) is not necessarily the topmost element, not necessarily what we would expect to be the link

word, given the auxiliary and determiner examples we saw in section 2.2. The internal structure for the AdjX *so much more beautiful* in (18), for example, is

(a) [[so much] [more beautiful]]

rather than

(b) [so [much [more beautiful]]]

In the structure in (b), *so* is in the position of the link word and could be expected to contribute to determining the immediate external syntax of the entire AdjX. But in the structure in (a), *so* is in position to contribute to determining the immediate external syntax of only the modifier expression *so much*, not the whole AdjX *so much more beautiful*. I conclude that **the scheme of determination for degree modifiers is not the same as for auxiliaries and determiners (involving central and/or link words).**

X. Linear position? In all the examples so far it is the first word in the AdjX that determines its external syntax. Linear position turns out to be a red herring, however. The problem is merely that Type X AdjXs don't allow for a great many modifiers, so they tend to close off expressions to the addition of initial elements of Type O. But they do allow some Type O modifiers, in particular *scarcely*, *barely*, and *just*, and we can use these to investigate the significance of initial position.

First, *scarcely*, *barely*, and *just* are indeed Type O modifiers:

(19.1) *a barely comprehensible idea*

[[barely comprehensible] idea]

(19.2) *a scarcely very comprehensible idea*

[[[scarcely [very comprehensible]]] idea]

(19.3) *a just tolerable shock*

[[just tolerable] shock]

But when they modify Type X expressions, they do not determine Type O behavior; instead, the Type X behavior, attributable to the underlined words below, persists:

(20.1) **a barely that beautiful shrub, barely that beautiful a shrub*

[[barely [that beautiful]] [a shrub]]

(20.2) **a scarcely any more beautiful shrub, scarcely any more beautiful a shrub*

[[[scarcely any] [more beautiful]] [a shrub]]

(20.3) **a barely that much more beautiful shrub, barely that much more beautiful a shrub*

[[[barely [that much]] [more beautiful]] [a shrub]]

(20.4) **a just how much more beautiful shrub, just how much more beautiful a shrub*

[[[just [how much]] [more beautiful]] [a shrub]]

Conclusion: **O/X determination is not an edge effect.**

Y. Containment: O/X behavior can be predicted quite simply from the composition of an AdjX: some words serving in DegFs are of Type X, and if either constituent in a combination is Type X, then the resulting expression is also Type X; otherwise, AdjXs are of Type O. Consider the AdjX *so very much more beautiful* in (19): neither *more* nor *beautiful* is Type X, so *more beautiful* is Type O; neither *very* nor *much* is Type X, so *very much* is Type O; but *so* is Type X, so *so very much* is Type X, and so is *so very much more*

beautiful. Or consider the AdjX *barely that much more beautiful* in (20.3): again, *more beautiful* is Type O; *much* is not Type X, but *that* is, so *that much* is Type X; *barely* is not Type X, but *that much* is, so *barely that much* is Type X, and so is *barely that much more beautiful*.

That is, **O/X determination is a containment effect**.

Z. Final remarks: Many of the facts about English I've referred to here are not at all new discoveries, though I've "made them strange" by discussing them in fresh terms, in a ground-up survey of phenomena. So far as I know (I could well be wrong), the facts about predicting O/X behavior are new, and they should suggest caution in analyzing the ways in which properties of individual words can contribute to predicting the external syntax of expressions containing those words. (These particular facts were a surprise to me.) There seem to be several possible schemes, and it's not yet clear whether it's possible to predict which one applies in which circumstances.

Theorizing is good, but maybe not too fast.

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