

On the Syntax of Quantity in English

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1. *few* and NUMBER

Let me begin by expanding on a proposal made in Kayne (2002) concerning *few*, *little*, *many* and *much*. As is well-known, *few* has regular comparative and superlative forms that make it natural to take *few* to be an adjective, as in Jespersen (1970a, 106):

- (1) John has fewer books than Bill.
- (2) John has the fewest books of anybody I know.

Given this, the general parallelism between *few* and *little*, *many*, *much*, combined with the more specific fact that they, too, have comparative and superlative forms,¹ leads to the natural conclusion that *little*, *many* and *much* are also adjectives.

The weight of (1) and (2) in supporting this conclusion is related to the observation that nouns do not allow comparative *-er* or superlative *-est*:

(3) John has more money than Bill.

(4) *John has monier than Bill.

(5) John has the most money of anybody.

(6) *John has the moniest of anybody.

and similarly for prepositions:

(7) John is more for the Democrats than the Republicans.

(8) *John is forer the Democrats than the Republicans.

(9) This argument is the most to the point of all of them.

(10) *This argument is toest the point of all of them.

and for adverbs:²

(11) John spoke more slowly than anybody else.

(12) *John spoke slowlier than anybody else.

(13) It was John who solved it the most quickly of anybody.

(14) *It was John who solved it the quickliest of anybody.

Adverbs might seem to allow counterexamples:

(15) John spoke faster than anybody else.

(16) It was John who spoke the fastest.

But a more reasonable interpretation is that *fast* and *quickly* are not of the same category. *Fast* is an adjective used adverbially in (15)/(16), whereas *quickly* is not an adjective (although it contains the adjective *quick*). This distinction between *fast* and *quickly* is supported by:

(17) John is a fast/*quickly runner.

and by:³

(18) John ran quickly/*fast away.

Prepositions (or particles) might appear to provide counterexamples, too, thinking of *inner*, *outer* and *upper* (though not **innest*, **outest* or **uppest*), but these are arguably not true comparative forms, given:

(19) John lives on a much lower/*upper floor than Bill.

(20) *John has a much inner/outer office than Bill.

The well-known case of *near* is somewhat different:

(21) Robin Hood lived nearer the forest than the lake.

(22) It was Robin Hood who lived nearest the forest.

(23) He lived very near the forest.

Given these, it seems clear that *near* is an adjective (in which case the forms *nearer* and *nearest* are not surprising), albeit an irregular one (relative to English) in that it can take a non-prepositional complement (with an unpronounced counterpart of *to*).⁴

Since only adjectives can combine with *-er* and *-est*, the possibility of (1) and (2) strongly supports the adjectival status of *few*.

Adjectives also differ from nouns in allowing a preceding *too*, as in:

(24) John is too rich.

(25) *He has too money.

In this way, *too*, *few* acts like an adjective:

(26) John has too few friends.

In some cases, prepositions are clearly incompatible with *too* (and contrast with the adjective *near*):

(27) He lived too near the library.

(28) *He lived too by/in/at the library.

In other cases, one can to some extent have:

(29) John is too in love.

(30) John is too into linguistics.

There is still a difference between these and adjectives:

(31) John is too much in love/into linguistics.

(32) *John is too much rich.

Again, *few* patterns with the latter:

(33) *John has too much few friends.

Thus, the contrast between (26) and (33) reinforces the adjectival status of *few*.⁵

This much seems uncontroversial, but there is a further conclusion imposed, I think, by the similarity between (1)/(2) and:

(34) John has a smaller number of books than Bill.

(35) John has the smallest number of books of anybody I know.

These suggest that although *few* is an adjective, it does not directly modify *books* in (1) or (2), or in:

(36) John has few books.

Instead, we should take *few* to be a modifier of an unpronounced noun that I will represent as NUMBER and that is strongly similar to the pronounced noun *number*. This means that (1), (2) and (36) are to be represented as:

(37) ...fewer NUMBER books...

(38) ...fewest NUMBER books...

(39) ...few NUMBER books...

From this perspective the adjective *few* itself is very much like the adjective *small*, except that *few* is by and large restricted to modifying NUMBER.⁶

I note in passing that the postulation of unpronounced NUMBER in (37)-(39) is further supported by the observation that to some degree, *few* can in some cases also modify overt *number*. Although this is not at all possible with bare *few*:

(40) *John has few number (of) books.

it becomes a bit better for me with *too*:

(41) ??John has too few a number of books to qualify for a fellowship.

and superlative *fewest* seems to me moderately acceptable:

(42) ?John has the fewest number of books of anybody I know.

2. The preposing of *few* within DP.

Having *small* in place of *few* in (42) would of course yield a fully acceptable sentence, as seen in (35). Similarly *small* itself is fully acceptable in:

(43) John has a small number of books.

(44) John has too small a number of books to...

(45) John has a smaller number of books than Bill.

On the other hand, *small* is impossible in the counterpart of (40), without *a*:

(46) *John has small number (of) books.

Similarly:

(47) *John has smaller number (of) books than Bill.

The contrast between (46)/(47) and (36)/(1) with respect to *a* (necessary with *small* but not with *few*) needs to be addressed, given the hypothesis embodied in (37)-(39), which assimilates *few* and *small* to a significant degree.

At first glance it would seem that (46) and (47) are perfectly regular and (36) and (1) irregular, in that English count nouns very generally require an overt article in the singular:

(48) John bought a/the (good) book.

(49) *John bought (good) book.

Thus (46) and (47) are regular on the assumption that overt *number* is an ordinary count noun. Correspondingly, (36) and (1) look irregular on the parallel assumption that NUMBER is a count noun. Put another way, (37) and (39) might lead one to expect an obligatory *a* in (36) and (1) (repeated here), which is not the case:

(50) John has few books.

(51) John has fewer books.

whereas in fact *a* would be impossible in the comparative example:

(52) *John has a fewer books.

(I return later to *a few*).

The assumption that *number* is an ordinary count noun is less straightforward than it might appear, given:⁷

(53) *John has three (hundred) numbers of books in his library.

On the other hand, we do have:

(54) There are enormous numbers of books in this library.

which contrasts with:

(55) *There are enormous waters in this barrel.

Taking this contrast to indicate that *number* should not be considered a mass noun, I conclude that the unacceptability of (46) and (47) can in fact plausibly be assimilated to that of (49).

If despite (53) we treat *number*, given (54), as a subtype of count noun, we must say something specific about (50) and (51). These are now unexpected (on the assumption that unpronounced NUMBER shares the count property of *number*) in that they fail to contain an article and yet are acceptable. A similar absence of article is found in:

(56) John has too few books.

with as a first approximation the representation:

(57) ...too few NUMBER books

In the case of (57), the question arises as to where *a* would be expected to appear, given:⁸

(58) John has too small a number of books.

(59) *John has a too small number of books.

Pursuing the parallelism between *small* and *few*, this suggests that (57) should be revised to:

(60) ...too few A NUMBER books

where A is an unpronounced counterpart of *a*. One question is now that of understanding why overt *a* is not possible in that position:

(61) *John has too few a books.

A plausible answer is that overt *a* requires a singular noun (which *books* is not) and that NUMBER (as opposed to overt *number*) is neither singular nor plural.⁹

In contrast to *a*, the unpronounced A of (60) evidently does not require a singular noun (again taking NUMBER to be neither singular nor plural, so that there is no truly singular noun in (60)). Now this account of (61) (in terms of a singular requirement on *a*) will clearly carry over to:

(62) *John bought too big a houses.

with an adjective (*big*) less specialized than the adjective *few* (which only occurs with NUMBER).

There is, however, a sharp contrast elsewhere between *few* and adjectives like *big*, as follows. The well-formed singular counterpart of (62) is (cf. (58)):

(63) John bought too big a house.

Surprisingly, this has no well-formed plural counterpart at all, neither (62) nor:¹⁰

(64) *John bought too big houses.

Whereas with *few* we do have (56), repeated in essence here:

(65) John bought too few houses.

Any analysis that recognizes the adjectival character of *few* (which is very difficult to avoid - see the discussion of (1)-(23) earlier (as well as the remainder of the paper)) must attempt to come to grips with (64) vs. (65).

3. AP movement within DP.

My attempt will take advantage of the presence of NUMBER in (65) vs. its absence in (64). Consider first Hendrick's (1990) proposal that in:

(66) How big a house did John buy?

there has been wh-like movement of *how big* within the larger object phrase *how big a house*. From this perspective, it is natural to take the contrast between (63) and:

(67) *John bought big a house.

to indicate, on the one hand, that *too big* in (63) has moved leftward within *too big a house* in a way parallel to the movement of *how big* in (66), and on the other, that it is *too* that is responsible for the movement of *too big*. Put another way, *how* pied-pipes *big* (within the DP) in (66), as in Hendrick's proposal. Correspondingly, *too* pied-pipes *big* in (63). (The landing site of *too big* might be different from that of *how big*, thinking of Rizzi (1997).) The reason for the impossibility of (67) is that there is no pied-piper present.¹¹

Movement of AP past a determiner of the sort postulated by Hendrick is arguably to be assimilated to the movement of relative clauses past D proposed by Kayne (1994, 94) for prenominal relatives in languages that have them.¹² In fact, it seems to me that English allows at least (63) fairly well even in clear cases of reduced relatives:

(68) (?)The trouble is, he was reading too recently arrived a letter.

That this is essentially similar to (63) is supported by the fact that the plural counterpart is not possible, just as (64) is not:

(69) *The trouble is, he was reading too recently arrived letters.

The DP-internal movement seen in (63) and (66) is obligatory:

(70) *A how big house did John buy?/*John bought a how big house?

(71) *John bought a too big house.

Therefore, the plural counterparts, namely (64) and:

(72) *How big houses did John buy?

would be expected to be possible with comparable (obligatory) movement of *too big* or of *how big*.

To understand why they are not, let me take over an idea from Bennis et al. (1998), generalizing it from their discussion of cases like:

(73) What a (beautiful) house he' s bought!

to the AP-movement cases that are our primary interest here (and which are not found in Dutch¹³). Like Hendrick, they take (73) to involve DP-internal wh-movement (of *what*). They add the crucial idea that in such exclamatives the *a* is on the one hand located in the head position into whose Spec *what* has moved,¹⁴ and secondly that the presence of *a* in that position is necessary to meet a requirement akin to the V-2 requirement.

In direct contrast to (72), the plural counterpart of (73) is possible in English:

(74) What (beautiful) houses he' s bought!

I take the difference to depend on the difference between movement of AP (*how big*) and movement of something that is closer to a bare determiner (*what*). In (66) and (72), *how big* has moved into the wh-Spec within DP. In the singular case, the head of that projection must be realized as *a*:

(75) *How big house did John buy?

Assume now that in English that head position must always be filled by an overt element. In the plural example (72) *a* is not possible because English *a* (unlike its Dutch counterpart, as Bennis et al. show) strictly requires a following singular N (cf. the discussion of (61) and (62)):

(76) *How big a houses did John buy?

Assume further that English has no other element capable of filling that head position (and compatible with plural). Then it follows that English cannot express (72).

Why then should () be possible? Let me speculate that this difference in behavior between *how big* and *what* (whereby *what* in () apparently does not require the corresponding head position to be filled) should be stated as follows. *How big* is lexical (i.e. contains *big*) and needs a filled head position, *what* is not lexical, and does not.¹⁵

Pursuing the parallelism between *how big* and *too big*, we can now say that *a* in (63) plays the essential role of filling the head position into whose Spec *too big* has moved. In the plural counterpart (64), *a* would not be possible since it requires a singular; nor does English have any other element capable of doing so, with the result that (64) is impossible.

This brings us back to (65) (repeated here), i.e. to the acceptability of *too few houses* and similarly *how few houses*:

(77) John bought too few houses to qualify...

(78) How few houses did John actually buy?

contrasting with **too big houses* in (64) and with **how big houses* in (72). Thinking back to (41) and to similar (marginal) examples:

(79) ??John bought too few a number of houses to qualify...

(80) ??How few a number of houses did John actually buy?

it seems clear that we want to say that in (77) and in (78) there has taken place (the by now familiar) movement of *too/how+Adj* (here, *too few* and *how few*) to some DP-internal Spec. The question is, then, why the associated head position does not need to be filled, in the case of *few*.

The relevant structure (simplified) is (and similarly for *how*):

(81) ...too few X^0 NUMBER houses...

where X^0 is the head in question. I think the answer to why these are possible lies in looking more carefully at the reason for the impossibility of **too big houses* (as seen in (64)). The idea was that in:

(82) **...too big X^0 houses...*

English has no appropriate X^0 . Assume now that the general requirement imposed by UG is that X^0 have appropriate syntactic features, but not necessarily that it be phonologically overt. As stated before, *a* is inappropriate because it requires the following N to be singular.¹⁶ In the spirit of Bennis et al. (1998), let me take English to have an zero allomorph of *a*, call it A, that is similar to *a* in excluding plurals, but differs from *a* in being slightly more generous, in the sense that A requires non-plural (rather than singular, as *a* does).

If by an 'elsewhere' effect,¹⁷ the presence of a following singular N forces the choice of *a* over A, A itself will be in effect limited to cases in which the following N is neither plural nor singular. Thinking of the discussion of (61) and (62), we note that NUMBER has exactly the property of being neither plural nor singular. Consequently, A can fill X^0 in (81),¹⁸ but not in (82), thereby making (77) possible, but not (64), as desired.

4. Bare *few*

The contrast between (63)/(66) and (67), with the adjective *big*, illustrates the fact that AP (or reduced relative) movement to Spec,X⁰ depends on pied-piping by *too* or *how* or some similar element. The same should hold, then, if the adjective is *few*. AP movement to Spec,X⁰ must take place in (77)/(81), but not in:

(83) John bought few houses.

despite the fact that this example looks just like (77) apart from the *too*.

This different in movement between *too/how few* and *few* is, I think, what underlies the (marginal) contrast between (79)/(80) and (40), repeated here:

(84) *John has few number (of) books.

The generalization seems to be that *few* can (marginally) cooccur with overt *number* only if such movement has in fact taken place.

From this perspective, and from the fact that comparative adjectives in *-er* do not show evidence of such movement:

(85) *John has bigger a house than Bill.

it follows that *fewer* should not be able to cooccur with *number*:

(86) *John has fewer (a) number of books than Bill.

except, given the improvement in:¹⁹

(87) John doesn't have any bigger a house than Bill.

in:

(88) ??John doesn't have any fewer a number of books than anybody else.

which seems correct (to the marginal degree of (79)).

Conversely, the greater acceptability of superlative *fewest* in combination with *number* ((42), repeated here):

(89) ?John has the fewest number of books of anybody I know.

suggests that superlative adjectives/AP in *-est* must in general raise to some higher Spec (almost certainly not the same one as for *too/how+Adj.*). Put another way, the contrast between (89) and:

(90) *John still has the few number books I lent him.

means that *biggest* must have raised in:

(91) John has the biggest house of anybody.

in a way that *big* does not in:

(92) John bought a/the big house.

Although the head into whose Spec *biggest* has raised in (91) cannot be realized as *a*:

(93) *John has the biggest a house of anybody.

the raising of *biggest* may be showing through in:

(94) John has the biggest of houses.

as opposed to:

(95) *John has the big of houses.

but I will not pursue this any further.

5. *A few*.

Returning to (83) and (84), and more specifically to the conclusion that bare *few* does not raise, we are not at all surprised by the impossibility of:

(96) *John has few a houses.

which is excluded first, because without raising, *few* could not come to precede *a*, and second, because this *a* would require a following singular N (which holds neither of *houses* nor of NUMBER).

On the other hand, if bare *few* does not raise, we might wonder if it could be preceded by *a*. The exact expectation also depends in part on the licensing conditions for *a*. The fact is, of course, that the following is possible:

(97) John has a few houses.

If this *few* is the same as those previously discussed (which were not preceded by *a*), then it must be an adjective followed by the unpronounced noun NUMBER:

(98) ...a few NUMBER houses

But now there is a paradox. If the *a* of (97) is itself the same as the other instances of *a* that we have seen, it must, as before, require the presence of a singular noun, which is apparently lacking in (98) (recall that NUMBER has been taken to be neither singular nor plural - see the discussion of (81)).

What this paradox suggests is that *few* and *a few* are not as simply related to each other as it might seem at first glance, a conclusion that is supported by several considerations. First, *a few* has no corresponding comparative

(99) John has fewer books than Bill.

(100) *John has a fewer books than Bill.

Second, there is a difference in interpretation between *few books* and *a few books* that can be brought out simply with polarity items:

(101) Few physicists know anything at all about linguistics.

(102) *A few physicists know anything at all about linguistics.

Third, *few* pairs with *many*, but alongside *a few* there is no *a many*:²⁰

(103) Many physicists know something about linguistics.

(104) *A many physicists know something about linguistics.

Fourth, for me, although not for some other speakers of English, there is also a (smaller) difference with *very*:

(105) Very few linguists went to that conference.

(106) A (?very) few linguists went to that conference.

although I find (106) better with *only*:

(107) Only a very few linguists went to that conference.

The acceptability of (107) means, given that *very* is normally excluded with nouns:

(108) *Very linguists go to conferences.

(109) *John ate very bread yesterday.

that the *few* of *a few* is a not a noun.²¹

Let me suggest, then, that that the way to understand *few* vs. *a few* is to say that English allows NUMBER to optionally be singular.²²

When NUMBER is singular and modified by *few*, *few* will necessarily be preceded by *a* (yielding *a (very) few*), just as *small* is necessarily preceded by *a* in:

(110) A (very) small number of linguists went to that conference.

(Overt *number* is singular.)

When NUMBER is not singular (as before, NUMBER is never plural), it cannot be preceded by *a* (since *a* requires a singular), in which case we have (when there is no AP movement) just *(very) few*.

We have now reached an account of the contrast between:

(111) Few people left.

and:

(112) *Small number of people left.

which we can see to be due to the presence of non-singular, non-plural NUMBER in (111) vs. singular *number* in (112). (Overt *number* can never be non-singular.) The article *a* is called for by the singular noun *number* but not by the non-singular NUMBER.

We thus have, for *few books* vs. *a few books*:

(113) ...few NUMBER(non-sing.) books

(114) ...a few NUMBER(sing.) books

with *few* an adjective in both.

6. *Many*.

Generalizing to *many* our proposals concerning *few*, we should now think of:

(115) John doesn't have many books.

as:

(116) John doesn't have many NUMBER(non-sing.) books.

where *many* is an adjective with an interpretation like that of *large* or *big*.²³ As noted earlier in (104), there is no:

(117) *John has a many books.

Given the proposal in (114), this would seem to mean that the following is unavailable (in contemporary English - see note 20):

(118) *...a many NUMBER(sing.) books

A natural way to express the difference between *a few* and **a many* is to say that NUMBER(sing.) is favored by the 'small' component of interpretation²⁴ that distinguishes *few* from *many* ('small' is closer to 'singular' than is 'non-small').

This difference between *a few* and **a many* appears to be of relevance to the marginal possibility mentioned earlier (e.g. (79)):

(119) ??John bought too few a number of houses to qualify for assistance.

(120) ?John has the fewest number of houses of anybody I know.

for which there is for me no (even marginal) counterpart with *many* or *most*:

(121) *John bought too many a number of houses to qualify for assistance.

(122) *John has the most number of houses of anybody I know.

We can account for these by noting that all four of them contain *number*, which is singular. But by (114) vs. (118) only *few* is compatible with singular NUMBER. Generalizing from NUMBER to *number*, we expect that *few*, but not *many*, will be compatible with singular *number*, which is the desired result that will account for (119)-(122).²⁵

Conversely, given that the proposal to elucidate (118) revolved around the notion 'singular', there is no expectation that the *a few*/**a many* contrast will be found with plural *numbers*. This seems to be true:

(123) *John bought (too) few/many numbers of houses.

(124) *John has the fewest/most numbers of houses...

These all seem bad.

Similar to (119)/(120) vs. (121)/(122), on the other hand, are:

(125) The first few classes went well.²⁶

(126) *The first many classes went well.

(127) The same few students are always arriving late.

(128) *The same many students are always arriving late.

(129) They' ll be here in another few days.

(130) *They' ll be here in another many days.

(131) They come by every few days.

(132) *They come by every many days.

which suggests that these pairs all necessarily contain singular NUMBER (and cannot contain non-singular NUMBER).

Of special interest is (131), given that *every* is known to require a singular noun. That requirement is met by singular NUMBER.²⁷

The disfavoring of *many* with NUMBER(sing.) can for some reason be overridden in the context of the two adjectives *great* and *good*, but not others. Thus (133) and (134):

(133) John has a great many books.

(134) John has a good many books.

contrast with:²⁸

(135) ...a *large/*big/*small/*bad many books.

In some varieties of English (though not mine), *a few* can also appear with *good* (and *fair*):²⁹

(136) John has a good few books.

7. GOOD.

The fact that *a* can go with *many* only if *good* (or *great*) is present, combined with the existence of (136), suggests the following hypothesis, namely that *a few* is like (*)*a many* in requiring an extra adjective (in addition to *few/many* itself). The difference is that with (*)*a many* that adjective must be overt. With *a few*, the required adjective can be overt (in some varieties of English), as in (136). Otherwise it can be left unpronounced (but must be present):

(137) ...a GOOD few NUMBER(sing.) books

In effect, when NUMBER is strictly singular, it calls for an adjective (of a very limited kind) above and beyond *few/many*.³⁰ (I am taking this unpronounced adjective to be closer to *good* than to *great*.)

We are now in a position to return to (100), repeated here:

(138) *John has a fewer books than Bill.

On the assumption that *-er* cannot play the licensing role of GOOD, (138) would have to be:

(139) *...a GOOD fewer NUMBER(sing.) books...

Thus to exclude (138), it would suffice to show that this GOOD is incompatible with comparatives. As an initial step, note that the corresponding overt *good* of:

(140) A good many linguists went to the conference.

is incompatible with an immediately following comparative form of *many*:

(141) *A good more linguists went to this conference than that one.

This would be:

(142) *...a good more NUMBER(sing.) linguists...

The GOOD and *good* in question seem close to the *good* of:

(143) John wants a good large box of candy for his birthday.

where the interpretation is approximately that of *very large* or of *real large*. A similar instance of *good* is found in:

(144) The box of candy he got was good and large.

Now in neither of these can *large* be replaced by a comparative:

(145) *John wants a good larger box of candy for his birthday.

(perhaps interpretable with the literal reading of *good*, but not with the reading *very much larger*). The same holds for:

(146) *The box of candy he got was good and larger (than mine).

While possible with the literal *good* (as in ...*was both good and larger than mine*), (146) is impossible with the *good* of (144).

If I am correct to take the *good* of a *good many* to be close or identical to that of (143) and (144), then the impossibility of (141)/(142) will reduce to that of the relevant interpretation of (145) and (146). Since (138) is almost certainly to be assimilated to (141), it, too, is now accounted for, given the postulation of GOOD in (137).

Just as *large* in (144) cannot be replaced by *larger* (holding the interpretation of *good* constant), so can it not be replaced by *too large*:

(147) *The box of candy he got was good and too large.

(* in the special interpretation of *good* at issue). Transposing to (140), we now correctly expect the unacceptability of:

(148) *A good too many linguists went to the conference.

Transposing further by replacing *many* by *few* and *good* by GOOD, as in (137), we account similarly for:

(149) *A too few linguists went to the conference.

On the assumption that the incompatibility of this *good*/GOOD with other than a bare adjective is unlikely to be affected by movement of AP, we also account for:

(150) *Too many a good linguists went to the conference.

(151) *Too few a linguists went to the conference.

As in (147), the special interpretation of *good* under consideration is not available in:

(152) *The box of candy he got was good and so large.

(possible with the literal interpretation of *good*). Parallel then to (148) and (149) are:

(153) *A good so many linguists went to the conference.

(154) *A so few linguists went to the conference.

This last example reflects the ill-formedness of:

(155) *a GOOD so few NUMBER(sing.) linguists...

which will almost certainly also yield an account of the otherwise surprising:

(156) *Such a few linguists went to the conference that it was considered a failure.

on standard assumptions about *such*.³¹

The contrast between (156) and:

(157) So few linguists went...

is due to the absence of GOOD with *so few linguists* (cf. (81)) - GOOD appears with *many* and *few* only when *a* does, as suggested also by:

(158) *Good many linguists went to the conference.

Like (157) vs. (156), I think, is:

(159) Why did they invite so many linguists?

(160) *Why did they invite such a good many linguists?³²

8. *Numerous*.

Although sentences with *numerous* and sentences with *many* are very similar in interpretation in pairs like:

(161) Many linguists find syntax fascinating.

(162) Numerous linguists find syntax fascinating.

numerous and *many* differ sharply in certain respects, for example:

(163) As many/*numerous linguists like syntax as like phonology.

This is part of a more general difference. Just as *as many* is possible, so are *so many*, *too many*, *how many*, and *that many*. Whereas when *numerous* is part of a larger DP as in (162) and (163), no such combination is possible.³³

(164) *So numerous linguists like syntax that...

(165) *Too numerous linguists like syntax for...

(166) *How numerous linguists like syntax?

(167) *Do that numerous linguists really like syntax?

It is not that *numerous* itself is incompatible with these degree words, since in predicative contexts, we can perfectly well have:

(168) John's friends are as numerous as Bill's.

(169) ...are so numerous that...

(170) ...are too numerous for...

(171) How numerous are John's friends?

(172) John's friends aren't all that numerous.

The contrast between (163)-(167) and (168)-(172) is of course a familiar one that holds for ordinary adjectives, e.g.:

(173) *How intelligent linguists is the search committee looking for?

(174) How intelligent are those linguists?

There is also a contrast between (173) and its singular counterpart:³⁴

(175) How intelligent a linguist is the search committee looking for?

In the discussion beginning at (64), I proposed, largely following Hendrick (1990) and Bennis et al. (1998), that (173) is impossible because DP-internal movement of the AP *how intelligent* must be licensed by a head X^0 that is available (as *a*) in (175) but that is unavailable in (173). It is clear that that account will carry over to *how numerous* (and to *as/so/too/that numerous*), on the assumption that *numerous* is an adjective whose occurrence within DP is strongly similar to the occurrence of other adjectives, like *intelligent*, within DP.

The acceptability of (168)-(172) is straightforwardly assimilable to that of (174) (and parallel sentences like *John's friends are as/so/too/that intelligent...*). They do not involve the DP-internal AP movement seen in (163)-(167), so the problem faced by (173) does not arise.

In the discussion beginning at (81), I proposed that the well-formedness of examples like (163) with *as many* (and similarly for *so/too many*, *so/too few*, etc.) is due to the fact that in such examples there is an unpronounced NUMBER:

(176) as many NUMBER linguists...

that is not present with ordinary adjectives. (This NUMBER provides a non-plural noun that the licensing X^0 is compatible with.) The point now is that for (163)-(167) to be assimilated to the case of ordinary adjectives, *numerous* must differ from *many* (and *few*) in not occurring with NUMBER:³⁵

(177) many/few NUMBER linguists

(178) numerous (*NUMBER) linguists

A potentially interesting way of expressing this difference between *many* and *numerous* would be to say that *numerous* actually incorporates *number* (and that *many* and *few* do not):³⁶

(179) number_i+ous \bar{t} linguists

in which case the difference in behavior between *many* and *numerous* seen in (163), etc. would be due to the inability of the trace of *number* to count as a non-plural noun (nor would incorporated *number* itself be accessible to the X^0 in question).

The difference between (177) and (179) might also be responsible for:

(180) Many linguists like phonology, but many don't.

(181) *Numerous linguists like phonology, but numerous don't.

Here again, *numerous* patterns with ordinary adjectives (despite not being one):

(182) *Good linguists like phonology, and good like syntax, too.

(183) *Good linguists like phonology, but bad don't.

A plausible proposal is that *many*, and similarly, *few*:

(184) Many linguists like phonology, whereas (very) few like chemistry.

allow the 'unpronounced NP' construction of (180)/(184) specifically as a function of the presence of covert NUMBER (vs. its absence in (182)/(183)), just as an unpronounced NP is possible with overt *number*:

(185) A large number of linguists like phonology, but a large number don't.

It may be that adjectives and reduced relatives:

(186) Old letters should be read quickly, but recently arrived *(letters) shouldn't be.

generally need to be licensed by a noun/NP, that the unpronounced lexical NP in all these examples has been moved,³⁷ and that the trace of that NP is not sufficient for or interferes with the licensing of the adjective/reduced relative.³⁸ (Whereas in (180) and (184) the adjectives *many* and *few* can be licensed by unmoved NUMBER, just as *large* is licensed by *number* in (185).)

In a partially similar way, the trace of *number* in (179) may not suffice to license the adjective *-ous* in (181), though the deviance of (181) may be less severe than that of (182)/(183).³⁹ (This somewhat lesser deviance would reflect the fact that *numerous* is unlike *many/few* in that *numerous* is not followed by unincorporated NUMBER; but neither is it like ordinary adjectives, in that *numerous* has incorporated the noun NUMBER found with *many* and *few*.)

9. Polarity and modification.

There is also a polarity difference between *many* and *numerous*. Despite their being similar in interpretation, *many* and *numerous* differ sharply in polarity. As Pullum and Huddleston (2002b, 827) have noted, bare *many* is to some extent a familiar type of (negative) polarity item. Differential judgments are sometimes quite clear (though less so than with *much*):

(187) He hasn't gone to many classes this semester.

(188) ?He's gone to many classes this semester.

(189) Not many students are into chemistry these days.

(190) ?Many students are into chemistry these days.

Whereas *numerous* is more like (or very much like) a positive polarity item. It is natural where *many* is not:

(191) He's gone to numerous classes this semester.

(192) Numerous students are into chemistry these days.

and either impossible:

(193) *Not numerous students are into chemistry these days.

or strange:⁴⁰

(194) ?He hasn't gone to numerous classes this semester.

where *many* is natural.

If we replace *many* in (187)-(190) by *very many*, the polarity judgments become sharper, e.g.:

(195) Not very many students are into chemistry these days.

(196) ??Very many students are into chemistry these days.

Moreover, it is very difficult to see a difference in interpretation between (189) and (195), raising the possibility that the former contains an unpronounced counterpart of *very*:

(197) not VERY many students...

and similarly for the 'not many' interpretation of (187):

(198) ...hasn't gone to VERY many...

More generally put, it may be that scalar reversal with adjectives (as opposed to universal quantifiers) always depends on the presence of either *very* or VERY.

If so, then (193) reduces to:⁴¹

(199) *Not very numerous students are into chemistry these days.

which contrasts sharply with (195).

The positive counterpart of (199) is worse than (196):

(200) *Very numerous students are into chemistry these days.

This is almost certainly related to:

(201) Incredibly many students are into chemistry these days.

(202) *Incredibly numerous students are into chemistry these days.

(although the marginality of (196) is in need of explanation). The impossibility of (200) and (202) does not reflect a simple general property of *numerous*, given:⁴²

(203) John's enemies are very/incredibly numerous.

To distinguish (203) from (202) and (200), let me propose tying the unacceptability of (202) and (200) to the earlier discussion of (164)-(172) (and to that following (64)), e.g.:

(204) *So numerous linguists like syntax that...

which contrasted with:

(205) John's friends are so numerous that...

The proposal there was to tie (204) to the corresponding (familiar) fact about ordinary adjectives:

(206) *So smart linguists like syntax that...

and to exclude both (204) and (206) by saying that *so numerous* and *so smart*, etc. have to raise within DP in English, that that raising must be licensed (following Hendrick (1990) and Bennis et al. (1998)) by an appropriate head, and that an appropriate head is unavailable in English in plural cases like (204) and (206) (although available in the singular and with *many/few*).

We can therefore exclude (202) and (200) on the assumption that *very numerous* and *incredibly numerous* must raise within DP in a way parallel to *so numerous* and *so smart*. Now in the case of *so smart*, the raising in question must depend on *so* (similarly, *too, as, how, that, this*), given:

(207) John had never met so smart a linguist.

(208) *John had never met smart a linguist.

(209) *John had never met very/incredibly smart a linguist.

In light, especially, of (209), the conclusion must be that the raising of *very/incredibly numerous* must depend on some property specific to *numerous* (since *very* and *incredibly* by themselves do not trigger raising).

On the other hand, not all instances of DP-internal modified *numerous* are ill-formed:

(210) John's very numerous friends are preparing a surprise party for him.

(211) We're planning to invite all of John's incredibly numerous friends.

The key would appear to be that in (210) and (211) the scope of *very/incredibly numerous* is DP-internal.⁴³ Whereas in (202) and (200) the scope of *very/incredibly numerous* is meant to be sentential/DP-external.

10. Scope in English vs. French.

This suggests that the raising of *very/incredibly numerous* in (202) and (200) (to a high Spec position within DP) is to be understood in terms of scope. Without such raising, scope would remain DP-internal. Sentential scope of *very/incredibly numerous* is achievable only via such raising. But the result of such raising is ill-formed, because of the unmeetable licensing requirement in question. Hence (202) and (200) are impossible with a sentential scope interpretation.⁴⁴

The question now is how to understand the bare *numerous* of (192), repeated here:

(212) Numerous students are into chemistry these days.

which contrasts with (202) and (200) in that bare *numerous* is possible with sentential scope. Since I have taken (202) and (200) to be excluded for essentially the same reason as (206) (although the motivation for raising is distinct in the two cases), it is natural to take (212) to be well-formed for the same reason as the 'bare' counterpart of (206), namely:

(213) Such smart students like syntax that...

It may be that the licensing requirement on bare *such* is different from that holding with phrasal *so smart*, as in the discussion of exclamative *what* vs. *how big* following (74), in which case the licensing requirement on bare *numerous* is plausibly distinct from that on phrasal *very/incredibly numerous*. Alternatively, as in note 15, *such* (and

exclamative *what*) can, as heads, adjoin to the head X^0 in question and fulfill the licensing requirement that way, in which case *numerous* can be taken to do the same.⁴⁵

The exclusion of (204) has been claimed to depend on the specifics of AP movement and licensing heads in English. As we have seen in (200) vs. both (203) and (210), *very numerous* is excluded in similar fashion when it must move for scope reasons. On a narrow (DP-internal/relative-clause internal) scope reading, it does not move (at least not as high) and there is no violation.

French differs from English in allowing *so numerous* and *very numerous* with sentential scope:

(214) Jean connaît de si nombreux linguistes que...

(215) Nous avons invité de très nombreux linguistes.

The word-for-word English counterparts (setting aside the *de*⁴⁶) are not possible:

(216) *John knows so numerous linguists that...

(217) *We've invited very numerous linguists.

From our perspective, this is not surprising, since French also has a counterpart of (206):⁴⁷

(218) Jean connaît de si belles filles! (‘J knows *de* so beautiful girls’)

Again, English rejects:

(219) *John knows so beautiful girls!

In all likelihood, these French-English differences are related to others found with indefinite singulars. English pairs like:

(220) *We saw a so beautiful painting that...

(221) We saw so beautiful a painting that...

in which *so beautiful* precedes *a* and cannot follow it, do not transpose to French, which positions phrases like *so beautiful* after the indefinite article *un* (just as with bare adjectives):

(222) Nous avons vu un si beau tableau que... (‘we have seen a so beautiful painting’)

(223) *Nous avons vu si beau un tableau que...

If I am correct in thinking that the French-English contrast seen in (215) vs. (217) (which involves scope but no degree *so/si*) is of the same ilk as those in (218)-(223), then the natural conclusion is to interpret all of these in terms of scope, and to say that

just as *very numerous* must raise DP-internally for sentential scope in (217),⁴⁸ so must *so beautiful* (in which the need for scope comes from the presence of *so*) raise in (219) and (221) for scope reasons (with (219) then in violation of licensing requirements previously discussed).

From this perspective, French differs from English in that French can assign proper scope to *si beau* in (222) and to *très nombreux* in (215) without raising them in the English fashion.⁴⁹ (As seen in (223), raising in French in such a case is impossible; the same is probably true of (215), though the absence of a visible article there makes the question more complex.)

If this French-English proposal is on the right track, it supports the suggestion made earlier that English (200) and (202) are to be assimilated to (206). The contrast between *numerous* and *many* with respect to *very* ((200) vs. (196)) and *incredibly* ((202) vs. (201)) is now seen to reduce to (216) vs.:

(224) John knows so many linguists that...

As in the discussion of (176), *many*, because it occurs with unmoved NUMBER, can raise in a way that *numerous* cannot.⁵⁰

In the discussion of (212) and in note 15, I mentioned the possibility that bare *numerous* must raise, too, via head movement. If so, then it is natural to take bare *many* and *few*, too, to raise when they have sentential scope. In other words, (DP-internal, head) raising could well be necessary in:⁵¹

(225) John knows many/few linguists.

as opposed to the case of ordinary adjectives, as in:

(226) John knows smart linguists.

Assume now, as in the discussion of (213), that in such examples, *such* raises alone, i.e. without the adjective itself raising. Assume further that this is the only derivation available for *such smart N*, i.e. that *such* must raise without the adjective doing so at all. Then from the fact that *numerous*, *many* and *few* must themselves raise (for scope reasons), there would follow the impossibility of:⁵²

(227) *Such numerous people bought a car last year that...

(228) *Such many people bought a car last year that...

(229) *Such few people bought a car last year that...

11. *Many a*.

Although *numerous* and *many* (and *few*) act alike in (227)-(229), we have seen, starting at (187), a number of ways in which *numerous* and *many* differ. *Many* (but not *numerous*) is followed by unincorporated NUMBER, a property of *many* that

plays a crucial role, as mentioned in the discussion of (224). The raising operative in (225) should therefore be understood as the raising of ‘*many/few* NUMBER’.

This ability of *many* to raise within DP along with NUMBER, i.e. in a way not open to *numerous*, seems relevant to:

(230) Many a linguist has published an article in *LI*.

Although not colloquial, this contrasts with:

(231) *Numerous a linguist has published an article in *LI*.

In addition to the pre-article position of *many*, (230) is distinguished by the singular noun (as opposed to *many linguists*):

(232) *Many a linguists...

which appears to correlate with the fact that *many a* imposes distributivity:⁵³

(233) That linguistics society is made up of many linguists/*many a linguist.

(234) We have seen many ants/*many an ant disperse and then reassemble.

The absence, alongside (230), of:

(235) *Few a linguist...

is exactly the opposite of the earlier discussed *a few books* vs. **a many books* (see (114) and (118)). To allow for *a* in *a few books* in the presence of plural *books* and adjectival *few*, I proposed that *a* was licensed there by the presence of singular (as opposed to non-singular/non-plural) NUMBER, which is not normally available with *many*, whence **a many books*.

Given this, plus (230) vs. (235), it seems clear that (230) does not contain singular NUMBER. The presence of *a* is, rather, keyed to that of the singular noun.

Furthermore, (230) vs. (231) suggests that (unincorporated) NUMBER (of the non-singular/non-plural type) again plays a role, probably as:

(236) many NUMBER a linguist

with the non-plurality of (unincorporated) NUMBER licensing (but not imposing) the singularity of *linguist*.⁵⁴ (The impossibility of (235) remains to be understood.) The presence of NUMBER before *a* will in addition distinguish *many* from ordinary adjectives (that do not occur with NUMBER):⁵⁵

(237) *Famous a linguist...

12. *Quite a few*.

In taking *few* to be an adjective modifying NUMBER (and under special conditions *number*), I have adopted a hypothesis that makes *few* look a lot like a restricted variant of the *small* of *small number*. A discrepancy arises, however, in:

(238) John has quite a few friends.

(239) John has quite a small number of friends.

Put informally, *quite a few* is readily taken to be more than *a few*, whereas *quite a small number* is not more than *a small number*. The same discrepancy holds to some extent for the mass counterparts of these:

(240) John has quite a little money saved up.

(241) John has quite a small amount of money saved up.

John's wealth seems greater in (240) than in (241).

Although *few* is an adjective that never modifies any noun other than NUMBER/*number*, the *little* of *a little money*, which by parallelism with *a few* must more exactly be:⁵⁶

(242) a little AMOUNT money

is an adjective that can also modify other nouns than AMOUNT, as in:

(243) a little dog

In addition to increasing the plausibility of taking *few* to be an adjective, *little* provides a window into (238) vs. (239), in that one also finds the effect seen in (238) and (240) in:⁵⁷

(244) John has quite a little bit of money saved up.

(245) That's quite a little discovery you've made there.

The congratulatory effect felt in (245) disappears in:

(246) That's quite a small discovery you've made there.

Since *discovery* is clearly a count noun (*three/many discoveries* vs. **a lot of discovery*), the *little* of (245) must be directly modifying *discovery*, i.e. there is no AMOUNT there.

Put another way, *little*, whether modifying AMOUNT or not, has some property (absent with *small*) that allows *quite a little* to yield the interpretive effect seen.⁵⁸ I conclude that in *quite a few friends*, *few*, rather than being parallel to *small*, is to be grouped with adjectival *little*, i.e. that *quite a few friends* is to be thought of as comparable to *quite a little+NUMBER+friends*.⁵⁹ I take this to be true despite the fact that with overt *number*, *quite a little* is marginal:

(247) ?John has quite a little number of friends.

Although the discussion of this section has been limited to *quite a few/little*, the conclusion should almost certainly be generalized. All instances of *few* are closer to *little* than to *small*.

13. Polarity and *few/little*.

As is well known, *a few* does not license polarity items in the way that *few* does:

(248) Few people know anything about cosmology.

(249) *A few people know anything about cosmology.

Similarly for *a little* and *little*:

(250) Little money is spent on anything worthwhile.

(251) *A little money is spent on anything worthwhile.

In Kayne (2002, sect. 1.5) I suggested that this polarity licensing was due to the presence of an unpronounced ONLY. Let me here scale that back to the postulation of an unpronounced NOT with bare *few* and bare *little*.⁶⁰

(252) NOT few people...

(253) NOT little money...

This is to be kept distinct from the possible claim that *few* is itself the spellout of NOT+MANY, which would create difficulties for (249) (and by extension (251)), as well as for *quite a few* (and similarly for *quite a little*). The idea is rather that bare *few* and *little* are parallel to:

(254) Not many people know anything about cosmology.

(255) Not much money is spent on anything worthwhile.

although in (248) and (250) *not* is unpronounced.⁶¹

Recalling the proposal in (137) to the effect that *a few books* is really:

(256) a GOOD few NUMBER(sing.) books

in which case *a little money* is:

(257) a GOOD little AMOUNT money

we reach the conclusion that *few* and *little* are sometimes preceded by GOOD and sometimes by NOT,⁶² an alternation less exotic than it might appear, to the extent that it recalls the pair *not* and *well* in:

(258) John may not have made a mistake.

(259) John may well have made a mistake.

(This `affirmative' *well* is more widely found in French (*bien*) and Dutch (*wel*).⁶³)

14. Conclusion.

I have tried to spell out an analysis that takes *many* and *few* to be adjectival modifiers of an unpronounced noun NUMBER (or occasionally, in the case of *few*, of overt *number*). (The same holds for *much* and *little* as modifiers of AMOUNT.)⁶⁴

The claim that in *many books* or *few books* *many* and *few* modify NUMBER rather than directly modifying *books* can be elevated to a claim about UG:

(260) In all languages, modifiers with the interpretation of *many* or *few* necessarily modify NUMBER (or *number*).

Another way of putting this, thinking also of *a large/small number (of) books*, is to say:

(261) UG excludes the possibility that a single adjective could simultaneously express what is expressed by *large/small* and what is expressed by *number*.

15. Appendix.

A possible generalization of this within UG would be:⁶⁵

(262) UG imposes a maximum of one interpretable syntactic feature per lexical item.

This principle, call it PD (Principle of Decompositionality), is not as precise as it might be, since the notion `interpretable syntactic feature' is not. Yet it is clear what kinds of (decompositional) implications PD is likely to have if it or something like it is true.⁶⁶

In the area of syntax directly relevant to this paper, one can ask whether there are other cases where an adjective that appears to be modifying one noun must rather be taken to modify another noun that is unpronounced, i.e. where an adjective appears to be simplex, but in fact provides an example of the applicability of PD.

A good candidate is the case of color adjectives. Although *red* in *a red car* appears to be a modifier of *car*, it may well be better analyzed as a modifier of COLOR:

(263) a red COLOR car

thinking of sentences like:

(264) That car is red in color.

(arguably parallel to *Those cars are few in number*)

and of:

(265) What color car did you buy this time?

Similarly for:

(266) That car is small in size.

(267) What size car are you renting this week?

suggesting:⁶⁷

(268) a small SIZE car

A further potential extension would be, thinking of:

(269) New York is a great city/has 8 million inhabitants.

and:

(270) New York City/The city of New York...

to say that (269) is really:

(271) New York CITY...

and the same for 'California STATE/the state of California', 'the Hudson RIVER/river', all the way to:

(272) Fido DOG...

(273) Mary/John PERSON...

By (some version of) PD, a proper name cannot simultaneously express both what distinguishes it from other proper names and at the same time the category to which it is intended to apply. The latter must therefore appear as a separate lexical item (often unpronounced).

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Notes.

1 Even though they are partially irregular. Instead of **manier*, **maniest* and **mucher*, **muchest*, one has *more* and *most* (which show the initial *m-* and also *-r* and *-st*).
Instead of (i) and (ii):

(i) **John has littler money than Bill.*

(ii) **John has the littlest money of anybody.*

one has *less* and *least*, which both have the initial *l-*; *least* in addition has the *-st*. See Bresnan (1973, 276).

2 As opposed to (many) adjectives in *-ly*, e.g.:

(i) John is lonelier now than he's ever been.

(ii) That's the liveliest he's ever been.

See Aronoff (1976, 93). (I leave open the question of other varieties of English that seem to allow adverbial *-lier/-liest* - Jespersen (1974, 357).) Thinking of Katz and Postal (1964, 105, 164) and Emonds (1976, 157), a plausible proposal is that

adverbial (but not adjectival) *-ly* is an affixal noun, so that (12) and (14) reduce to (4) and (6).

This would make superfluous recourse to the idea (see Emonds (1985, 201n)) that (12) and (14) are excluded because English has the property of disallowing more than one inflection per word. That that property is derivable will probably also turn out to hold for the other two cases he mentions:

On the incompatibility of English *-s* and past tense in:

(i) John talked(*s) a lot.

note that the same holds of German *-t*:

(ii) Er spricht. (‘he speaks’)

(iii) Er sprach(*t). (‘he spoke’)

and similarly for Persian *-ad* (Moshiri (1988, 39)). The point being that German and Persian both allow their past tense inflectional suffix to cooccur with other agreement endings (just as English arguably does, if the others are all zero). This suggests that there is something very specific about the *-s* (and *-t/-ad*) ending that is at issue, rather than any counting of inflectional suffixes in Emonds’ s or in Bobaljik and Thráinsson’ s (1998, 59) sense. On English *-s*, see Kayne (2000, chaps. 10, 11), Postma (1993, 34) and Solà (1994).

On the incompatibility of plural *-s* and possessive *-s* in English, see Kayne (2000, 211).

3 On (18), see Kayne (1985, 106).

4 On unpronounced prepositions, see Emonds (1976, 79), Kayne (1984, chap. 9) and Larson (1985; 1987). On *near*, note also *very near*, *pretty near* and *nearness*; *right near* might suggest a second unpronounced P. Adjectives taking a complement with no visible preposition are more common in Swedish - see Platzack (1982).

5 The acceptability of:

(i) John speaks too quickly.

probably indicates:

(ii) ...[too quick] *-ly*

thinking of (see note):

(iii) John speaks in too quick a manner.

(In any event, noone would take *few* to be an adverb.)

6 The Swedish counterparts of *small* and *few* share the (apparently) idiosyncratic property of lacking superlative forms - see Holmes and Hinchliffe (1994, 108, 115, 207).

The postulation of unpronounced NUMBER is parallel to that of unpronounced PLACE in Kayne (to appear), based in part on Katz and Postal (1964, 133) (cf. also Chomsky (1965, %) on the English plural indefinite article and Longobardi (1994) on Italian).

The text proposal is similar to Muromatsu's (1998, 105, 158) proposal that weak determiners like *many* are adjoined to a classifier and that English has an unpronounced 'pro' classifier. On the other hand, NUMBER seems closer to a 'measure' in her terms than to a classifier.

7 See Payne and Huddleston (2002, 352). Note in this regard:

- (i) *J has a small number of friends and B has a large one.
- (ii) *Given the small number of friends that J has and the large one (of friends/enemies) that B has,...
- (iii) *The linguists were there in large numbers and the physicists were there in large ones, too.

For recent discussion of *one*, see Llobart-Huesca (2002).

I leave aside the question of the relation between the *number* under discussion and that in:

- (iv) There are three numbers written on this piece of paper.

Probably related to (iv) is:

- (v) John says he has one number of books in his library, but his wife will give you a different number.

8 Note that this question is specific to English, among the Germanic languages, in that English seems to be the only one to have (58), with AP preceding the indefinite article. The specificity of English here might be derivable from the absence in English (as opposed to the rest of Germanic) of any adjectival inflection - cf. Jespersen's (1970a, 111) similar proposal concerning *a delightful three weeks* and Kester's (1996, chap. 5) on the English need for *one* in cases like *an intelligent *(one)*.

9 One way to express this would be to say that NUMBER is incompatible with Num⁰.

10 The impossibility of (64) was noted by Bresnan (1973, 308n).

The singular/plural contrast is not affected by *of*:

- (i) John bought too big of a house.

(ii) *John bought too big of houses.

This would not be surprising if *of* comes into the derivation outside VP (cf. Kayne (2002)), but there are many details to be worked out that I will not pursue.

11 Therefore the *-er of*:

(i) *John bought bigger a house.

must not be a legitimate pied-piper. As Bresnan (1973, 288) notes, better is:

(ii) ?John didn't buy big enough a house.

From my perspective, this means that *enough* can to some extent pied-pipe *big* even though it follows it - cf. Webelhuth (1992, 128).

Turkish has the equivalent of **big a house* even with bare adjectives - cf. Kornfilt (1997, 109).

12 See also Whitman (1981, 415).

13 Henk van Riemsdijk (p.c.) - see Corver (1990).

14 They argue in addition that this *a* moves up from within a lower small clause - that idea is probably orthogonal to the text discussion.

15 Thinking of Wood (2002, 108) on English *such* and Poletto (2000, 74) and Poletto and Pollock (2002) on North Italian dialects, it may be that *what* in () and () actually fills (adjoins to) the head position in question itself, which *how big* could not do. (This leaves open the impossibility of the word-for-word equivalent of () in Dutch.)

16 For Bennis et al. (1998), this would reflect a Spec-head relation holding when *a* is in a lower position - see note 14.

I am leaving aside questions about mass nouns.

17 For syntactic examples, see Kayne (2000, 189) and the references cited there.

18 In addition, NUMBER must be licensable by *few* (and *many*), but not by *small* (or *big/large*). Otherwise (72), e.g., would be possible with the interpretation of:

(i) How large a number of houses did John buy?

19 See Bresnan (1973, 288).

20 In contemporary English. Curme (1977a, 32, 58) has *a many* as once common, but now poetic or archaic or popular - see also Jespersen (1974, 431).

On *a good/great many*, see below.

21 Contrary to Jespersen (1970a, 107), who seems to take *few* to be a noun in phrases like *a select few*; alternatively, there is an unpronounced PEOPLE (in addition to NUMBER) - see in particular the discussion of (180)-(186); also Pollock (1998, 323). In Jackendoff's (1977, 130) *A miserable few people showed up*, I take *miserable* to be modifying NUMBER.

Note that *very* in (107) is clearly the intensifying *very* of:

(i) Only a very small number of linguists...

and not the *very* of:

(ii) The very person just walked in that I was telling you about.

unless *very* in (ii) is really modifying an unpronounced adjective such as EXACT, which seems plausible, even for examples like Pullum and Huddleston's (2002a, 533) *the very picture of innocence*.

22 This implies that 'singular' cannot be equated with 'unmarked for number'.

23 The fact that *of* is obligatorily absent:

(i) *John doesn't have many of books.

can, in the spirit of Kayne (2002), be attributed to NUMBER (as opposed to *number*) allowing its Case to be shared by the following NP, so that *of* is unnecessary (and impossible).

24 This is related to the well-known difference between *many* and *few* seen in:

(i) How many books does John have?

(ii) How few books does John have?

whereby (i) is more 'neutral' than (ii).

The difference between *a few* and **a many* is paralleled by:

(iii) John has a little money.

(iv) *John has a much money.

suggesting:

(v) ...a little AMOUNT(sing.) money

whereas without *a*, as in *John has little money*, we have:

(vi) ...little AMOUNT(non-sing.) money

On AMOUNT, see Kayne (2002).

25 The impossibility of:

(i) *John has a few number houses.

might be at least in part related to the possibility of *a few houses* (with NUMBER(sing.)), in that (119) has no counterpart with NUMBER(sing.):

(ii) *John bought a too few houses.

The incompatibility of *many* and singular *number* does not hold in (see Higginbotham (1987, 68)):

(iii) ?John's enemies are many in number.

which contrasts with:

(iv) *His friends are/were small/large/a large number/a small number in number.

I will not pursue this here.

Given *a great/good many*, one also needs to pursue:

(v) *John has the greatest/best many number of houses...

26 Note the contrast between NUMBER and AMOUNT:

(i) The first few days he spent there went well.

(ii) *The first little time he spent there went well.

There is a marginal possibility of non-restrictive *many* in (126) and (128) that should be set aside.

27 In:

(i) They come by every three days.

either the numeral must be a singular noun, as in Jackendoff (1977, 128), or else singular NUMBER must be present.

28 Like (135) is **a very many* and **quite a many*.

In part like *many* here is:

(i) John has a great/good deal of money.

which is impossible with other adjectives:

(ii) John has a *large/*big/*small/*bad deal of money.

and impossible with no adjective:

(iii) *John has a (very) deal of money.

(iv) *John has quite a deal of money.

This suggests:

(v) ...a great/good MUCH deal of...

with *deal* a noun - see Kayne (2002) on *lot* (which also takes *of*) and on unpronounced MANY/MUCH.

Why overt *much* contrasts with *many*:

(vi) *John has a great/good much money.

remains to be understood.

29 See Payne and Huddleston (2002, 392).

30 It may be the case that *very* in *a very few* plays the same role as *good* or GOOD, so that *a very few books* is:

(i) a very few NUMBER(sing.) books

without the extra adjective. Alternatively, *very* might itself be an adjective of an unusual sort.

On unpronounced GOOD, see Kayne (2002) on *a number of*.

31 See Bresnan (1973, 299) and recently Wood (2002).

32 Worse still is:

(i) **Why did they invite so good a many linguists?

suggesting that this *good* is by itself very sharply incompatible with *so/such* (whereas in (160) *such* can be construed with *many*, although that still yields (one) *, for the reason given).

33 As noted by Pullum and Huddleston (2002a, 540).

34 The fact that *numerous* does not go with a singular:

(i) *How numerous a linguist are they planning to hire?

(ii) *John' s friend is numerous.

is orthogonal to the present discussion.

35 The GOOD of (137) is found only in combination with *a* and so does not appear in (176) or in (177).

36 In which case (i) would be excluded parallel to (ii) with a modifier:

(i) *Large numerous people like syntax.

(vs. *A large number of people...*)

(ii) John is (*linguistic) bookish.

On incorporation, see Baker (1988).

It might be interesting to ask why there is no suffix such that *'num(b)er+suffix'* is interpreted as *few*.

37 See Pollock (1998, 324).

38 In the spirit of Kester (1996), adjectival inflection, which English lacks, may also suffice to license adjectives or reduced relatives.

39 Probably related to this is the fact that Curme (1977a, 32) gives an example with *numerous of his comrades*, which is marginal for me.

40 (194) is somewhat possible with *numerous* having scope over negation, or with contrastive stress on *numerous* (with *numerous* being contrasted with, e.g., *a fair number*), or with irony, as in:

(i) He hasn't exactly gone to numerous classes this semester.

For recent discussion of positive polarity, see Szabolcsi (2002).

41 In all the examples with *numerous*, I am abstracting away from the (for me, somewhat marginal) possibility of interpreting *numerous* as if it were part of a (reduced) relative. Payne and Huddleston (2002, 393) give:

(i) Numerous tiger populations...

in the sense of:

(ii) Tiger populations that are numerous...

42 Similarly:

(i) John's enemies are pretty numerous.

(ii) *Pretty numerous students are into chemistry these days.

Pretty is for me fairly incompatible with *many*, although worse with *not*:

(iii) *?Pretty many people appreciate linguistics.

(iv) *Not pretty many people...

Better than (iii), for unclear reasons, is:

(v) (?)Pretty few people appreciate linguistics.

Given (203), it is unlikely that (202) is significantly similar to:

(vi) *Incredibly all students...

(vii) *Incredibly every student...

See also:

(viii) Almost all students...

(ix) Almost every student...

(x) *Almost numerous students...

43 And arguably internal to a reduced non-restrictive relative, parallel to:

(i) ...John's friends, who are very/incredibly numerous,...

44 In some examples, a DP-internal scope interpretation may be marginally available:

(i) ?John gets frightened by very numerous ants.

See note 41.

45 Alongside:

(i) John has numerous admirers.

there is no:

(ii) *John deserves amountous admiration.

This may be related to:

iii) *John has an amount of intelligence.

See Kayne (2002, §1.6).

46 For recent discussion of this *de* ('of'), see Pollock (1998, notes 21,24). This *de* may well be like those discussed in Kayne (2002) in having the property of entering

the derivation outside VP, rather than forming a constituent with *si/très nombreux linguistes* - see Kayne (2001).

47 I have chosen an adjective that is prenominal to enhance the contrast with English.

48 On *so/si* having sentential scope in (221) and (222), see Rouveret (1978); also Kayne (1994, 24) on:

(i) Nobody's children ever have anything bad to say about them.

in terms of c-command out of a larger phrase.

49 One needs to ask why. One type of answer, in the spirit of Kayne (1998), would be that French actually does raise *si beau* and *très nombreux*, with the raising obscured by subsequent movement(s). A second would be that French *un* and English *a* do not have the same syntactic status (and similarly for their unpronounced plural counterparts). A third might attempt to relate all this to the difference in relative position of noun and adjective. (These three possibilities are not mutually exclusive.)

On the impossibility of (223), see also note 8. Relevant, too, is the absence in French of any exact counterpart to English *such a linguist*, *what a linguist!*, *many a linguist* or *quite a linguist*. (French *un* can be preceded by *tout* ('all') and by *pas* ('not').)

Potentially important here is Wood's (2002, 109) discovery (for certain varieties of English, not including mine) of:

(i) ...a such a...

Cf. perhaps *a half a dozen eggs*, noted by Schibsbye (1970, 285).

50 Similarly for:

(i) John bought fewer houses than Bill did.

(ii) Of all the linguists, it's John who's written the fewest articles.

vs.:

(iii) *John bought less numerous houses than Bill did.

(iv) *Of all the linguists, it's John who's written the least numerous articles.

with *few* patterning like *many*, as expected, since *few* is like *many* with respect to NUMBER.

Like *very* is *pretty*:

(v) John's friends are pretty numerous.

(vi) *Pretty numerous linguists have published in *LI*.

51 The generalization concerning (84) now needs further thought.

52 Recall from note 44 that to some extent DP-initial *numerous* also allows DP-internal/relative-clause-internal scope:

(i) Anybody would be frightened by such numerous ants.

Since the scope of *numerous* is not sentential, it need not raise in the way it must in (212) or (227).

The contrast between (i) and:

(ii) *Anybody would be frightened by such many/few ants.

is related to:

(iii) ...by ants that are so numerous/*many/*few.

Similar to the text examples are:

(iv) * What numerous/many/few people bought a car last year!

I leave open the question of scope assignment to *a (good) number of*.

53 In these two respects, *many a* recalls *every*, which might therefore be:

(i) every A linguist

with A = an unpronounced counterpart of *a*. The plausibility of (i) is enhanced by Kurdish having an indefinite article (suffixed to the noun) with its *every* (v. Abdulla and McCarus (1967, 36, 51, 145)). This fits in with Beghelli and Stowell's (1997, 101) taking *every* to be a kind of indefinite.

Whether (i) also contains NUMBER is left an open question.

54 Note that in Turkish *many* takes a singular noun - v. Kornfilt (1997, 433).

55 Leading to the question of:

(i) *Large number a linguist...

56 On AMOUNT, see Kayne (2002). The apparent complementarity of *number* and *amount*:

(i) He has a large amount/*number of money.

(ii) He has a large number/*amount of admirers.

has some interesting twists:

(iii) ?He has a large amount of books in his library.

(iv) He doesn't have very many/*much books in his library.

In these two, it is as if AMOUNT is less flexible than *amount*. Yet:

(v) He doesn't have very much/*a large amount in the way of books in his library.

57 In:

(i) John has quite a bit of money.

there is probably an unpronounced GOOD.

58 Curme (1977b, 135) characterizes this effect as 'ironic popular American'.

59 More exactly, given (137), to:

(i) quite a GOOD little NUMBER friends

in which case *quite a few friends* is, strictly speaking:

(ii) quite a GOOD few NUMBER friends

60 The two hypotheses are not necessarily full competitors, given analyses of *only* as involving negation.

61 Whether NOT should be postulated for *fewer, fewest, as few, too few*, etc. is left an open question. It probably should be for *very few* and *incredibly few*.

Overt *not* does not always license polarity items, even when DP-initial:

(i) Not a few people know something/*anything about cosmology.

(Jespersen (1970b, 460) had noted *not a few* to be "nearly synonymous" with *many*.) This recalls Klima (1964, 300, 307) on auxiliary inversion - as if *not* in (i) only has DP-internal scope.

62 See note 61. This GOOD may play a role in the interpretation of (238) and (240), thinking of the difference between those and:

(i) ?Quite few people came to the party.

which has an interpretation more like that of (239).

63 On Dutch, see van Riemsdijk (1970). For recent discussion, see Cinque (1999, 126).

64 Partitives of the sort in:

(i) We' ve read few/a few of your books.

must also clearly contain NUMBER. Relevant to the question of their broader analysis (outside the scope of this paper) is the fact that in Turkish they look like possessives - see Kornfilt (%).

65 Depending on the status of `uninterpretable syntactic features' (cf. Sportiche (2002)), (262) will be more or less closely related to the prohibition against multiple specifiers of Kayne (1994); see also Rizzi (1997).

66 Note that Fodor' s (1970) and Ruwet' s (1972, chap. 4) arguments against causative decomposition depended on the assumption (no longer held, given small clauses) that the complement of a causative verb would have to be a full sentence.

67 Note that (i) is actually slightly more natural than (ii):

(i) That car' s small size is a problem.

(ii) That car' s smallness is a problem.

The impossibility of:

(iii) *You bought too red cars.

(iv) *You bought so small cars.

implies that COLOR and SIZE cannot be non-singular in the way that NUMBER can be in (81).

The possibility of:

(v) What color/size cars are people buying this year?

will need to be integrated.

Left open, too, is *?narrow in width, ?short in length*

****ENDNOTES****