

STUDIES IN ANALOGICAL PSEUDO-SYNTAX.1.1

THE COMPLEX NATURE OF ENGLISH LEXICAL CATEGORIES

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There is a difference in the form and position of degree modifiers of adjectives and verbs (as McCawley notes (1970)) and nouns. This is quite consistent and regular, as is exemplified in (1).

- 1A. A) Flash was as agile as Worm.
ii) Flash was more agile than Worm.
iii) Flash was too agile for Worm to catch her.
iv) Flash was so agile that Worm could never catch her.
v) Flash was agile enough to always evade Worm's clutches.
vi) Flash was very agile indeed.
- B. i) Flash liked fish as much as Worm.
ii) Flash liked fish more than Worm.
iii) Flash liked fish too much for Worm to ever get any.
iv) Flash liked fish so much that Worm never got any.
v) Flash liked fish enough so that Worm went hungry.
vi) Flash liked fish very much indeed.
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- C. i) Flash ate as much fish as Worm.
ii) Flash ate more food than Worm.
iii) Flash ate too much fish for Worm to ever get any.
iv) Flash ate so much fish that Worm never got any.
v) Flash ate enough fish so that Worm starved.
vi) Worm didn't eat ^{very} much fish at all.¹

Manner adverbs exhibit exactly the same paradigm as adjectives do.

The reader may balk at the inclusion of very in this class of degree modifiers. Firstly, it cannot have a complement, while the others do, obligatorily in fact, except for so, too and enough;² but the fact that these only optionally have complements weakens the argument, for if the complement is obligatory for two members of such a small set, and is optional for three, it can easily be obligatorily absent for the last. Secondly,³ and more substantially, none of the first five adverbs in the set can modify each other, as is shown in (2):

A good amount of work has been done recently within the general methodological framework of generative grammar showing evidence of the similarity between verbs and adjectives in English. Lakoff's Irregularity in Syntax and Ross's "Adjectives as Noun Phrases" provide the best known examples of such work. Very little evidence has been given of the differences between the two categories. Chomsky (1970) devotes one or two paragraphs to a critical discussion of Lakoff's conclusion that adjectives are a sub-class of verbs, pointing out that each of Lakoff's distributional arguments holds for a small class of nouns as well, and nouns are not plausibly a sub-class of verbs. McCawley, in his introduction to Lakoff (1970), suggests that some space should have been devoted to the differences that do exist, but no-one to my knowledge, has taken up the suggestion, at least in print. I have done so, and found some phenomena which I hope will be of interest.

The first section of this paper is devoted to an investigation of one of these differences, that demonstrated by the behavior of a class of degree modifiers (as, more, so, too, enough, very). The second section deals with passive participles, and in the last I will show that conclusions drawn from these two small areas can serve to illuminate several little understood, but important, aspects of English syntax and morphology. Throughout the entire course of the work some general theoretical notions will be exposed which will hopefully prove to be of use in further investigations into the character of English and universal grammar.

is merely a variant of so, which also accounts for the facts of (3) and (5). The objection that (8) below is bad, as it should not be if very is a member of the class of degree adverbs that modify "intensity" adverbs, can be met by (9); i.e. not all degree adverbs can modify "intensity" adverbs.

*8. Flash ran very incredibly fast.

*9. Flash ran too incredibly fast for me.

These are the only objections I have been able to discover to the inclusion of very among the degree adverbs; the first is only minor, and the second brings out a set of facts, especially those in (5), which only provide added strength to the hypothesis that very is indeed a member of this set, the primary motivation for which was the consistency of its patterning in (1).

More and enough do not pattern consistently with the others.

Neither of them can be followed by much with nouns and verbs, as the others can. Selkirk (1970) has suggested that more be derived from -er+much, and enough may similarly be derived from enough much; this problem will be touched upon later. The post-adjectival position of enough can most plausibly be tied to its final stress.

I shall now turn to the general pattern of the degree adverbs in (1). If we designate any one of the degree adverbs as D, we have schematically the following distribution:

10. i) D A
- ii) D much N⁴.
- iii) V NP₀² D much

If, now, we wish to provide a uniform base position and form for the degree adverbs, and I think it will gradually emerge in the course of the paper that we must, there are several choices open, at first glance: much may either be deleted in (i), or inserted in (ii) and (iii); D (much) may either be postposed in (iii), or preposed in (i) and (ii). I shall adopt the position ~~the position~~ outlined in (11), and bring forth a number of arguments in support of it.

11. D much X where X= N,A, or V

T1. [D much] [V NP¹⁷] (postposing over the verb and its objects)

SD	1	2	
SC	0	2	1

T2. D much A (much deletion before adjective)

SD	1	2	3
SC	1	0	3

The ordering will not be ~~justified~~ ^{discussed} until the section on Passive Participles.

T2 is supported by an argument first developed in Selkirk(op. cit.) which I will present here in a slightly modified and expanded version: An adjective can be pronominalized by so, as in (12):

12. Flash was agile, so much so that Worm could never catch her. If much is deleted before adjectives, as T2 claims, and so- Pronominalization precedes T2, then (12) can be accounted for. Even stronger evidence of the same sort is furnished by (13):

13. Q:Are you happy
A1: Yes,very much so
A2: Yes,very happy
A3: Yes,very
*A4: Yes,very so

A1 is produced by so-Pronominalization, A2 by much-Deletion(T2). A3 is the result of an as yet unanalyzed process that deletes repeated

material in answers. If this deletion follows T2, then A3 and A4 are both explained. The only other way to account for the data in (12) and (13) is by a rule that would insert much before an occurrence of so that is produced from the Pronominalization of an adjective, a very awkward Derivational Constraint.

The derivation of more suggested earlier(more= -er+much), also accords with T2; for if much is incorporated very early into more(at Deep Structure, perhaps), then we expect never to get (14), but always (15), and this is so:

*14. Flash ~~is~~ agile, more much so than Worm

15. Flash is agile, more so than Worm

The Derivational Constraint that inserts much would need to have a condition on it that Much is not inserted after more in order to assure the deviance of (14)⁵.

T1, which moves very much over the verb and its objects, is not supported by such conclusive evidence, but the evidence is interesting, though perhaps of such a nature that it will not be construed by the more formally minded reader as evidence at all.

Firstly, showing that adjectives must be preceded by D much at an early stage in the derivation has only increased the similarity between the basic forms of the degree modifiers of the major categories, and with it the likelihood that they all occupy a similar position at some early point.

Second, Haj Ross has noted in lectures (1972), that, in general

deletions and movements around lexical heads is most restricted when the head is a noun, and least restricted when the head is a verb. One example which Ross gives is the rule of Preposition Deletion; verbs rarely demand a preposition before their Direct Objects, adjectives generally do, and nouns always do. T1, as it is stated, moves D much over the verb, and not over the noun or adjective. This type of rule is in accord with Ross's principle, while its reverse would not be.

The third bit of evidence depends on a principle which I have borrowed from the field of Comparative Historical Reconstruction. The principle goes roughly like this: given two distributional sets which can be related by a rule, if one set is homogeneous, it is this set which has undergone the rule, i.e. exceptional forms, if they can not be shown to have been borrowed, are relics of an earlier stage. This principle stems from the observation that rules apply generally, and not to isolated lexical items. In generative phonology too, it is only strictly minor rules⁶ that should apply to only individual marked items. Now, there is a small number of lexically specified environments in which D much may optionally show up pre-verbally. In order to relate the pre-verbal to the parallel post-verbal occurrence, we must, in these cases, posit a rule to move D much, which will be either T1, or its inverse. Since D much shows up post-verbally with all other verbs, the Comparativists' principle dictates that the pre-verbal occurrences be seen as relics, and that T1 is indeed the correct

rule, not only for these few examples, but for all the other occurrences of post-verbal D much as well. T1 will then be optional only in a few exceptional environments, and obligatory elsewhere.

I will now state the exceptional environments which I have found.

I. so much, as much, very much, can precede the polite Modal would with the verbs like and prefer, not however with a co-occurring negative or Q. There are additional constraints on whether the verb is in a main clause, and on the person and number of the Subject, but these are hard to pin down. Examples are given in (15):

-
15. i) I would very much like to meet him.
ii) I would like to meet him very much.
iii) I would very much have liked to meet him.
iv) I would have liked to meet him very much.
v) Would you have liked to meet him very much?
*vi) Would you very much have liked to meet him?
*vii) I wouldn't very much like to meet him.
viii) I wouldn't like to meet him very much.
*ix) Wouldn't you very much like to meet him?

II. In a limited number of negative environments, much may occur pre-verbally.

Before specifying these environments, one preliminary

fact must be pointed out. When very much modifies a verb or noun which is questioned or negated, very may delete, as in (16):

- 16. i) I don't like beer (very) much.
- ii) Do you like beer (very) much?
- iii) Don't you like beer(very)much?
- iv) I never drink beer (very) much.
- v) Do you have (~~very~~) ~~much~~ money?
- vi) I don't have (very) much money.

The much that results from Very Deletion may occur pre-verbally, but only under special conditions, viz:

- A. Not must directly precede much. (never can, but not as well)
- B. No modal may co-occur.
- C. The construction is limited to certain verbs.

Examples are given in (17):

- 17. i) I don't much care if he goes or not.
- ?ii) Do you much care if he goes or not?
- ?iii) I don't really much care if he goes or not.
- *iv) I wouldn't much care if he went.
- ?v) He never much cared if he went.
- *vi) He doesn't much worry about such things.

Environments I and III are not statable by any general use of semantic or syntactic features. They are not in any way collapsible, since I prohibits a negative, while II demands one. If I may appeal to intuition, the acceptable sentences of (15) and (17) seem "frozen", and idiomatic; by our Comparativist principle, they provide good evidence for T1.

By now, the reader is probably saying to himself, "so what."
And I must admit that what has been presented so far is not terribly earth-shaking, or even interesting. At best it provides some support for the Lexicalist Hypothesis of Chomsky(1970), for I have shown that Degree adverbs most plausibly have the same form and position, D-much X, no matter what major category X is a member of, at some early point in the derivation of a sentence. Only in the Lexicalist framework can ~~be said to be expected~~ this type of phenomenon be said to be expected, for in that framework, Selectional Restrictions are easily stated on X, where X ranges over Deep Structure Lexical categories. In another theory, without Deep Structure, this exact sort of restriction, though not impossible, is purely a chance phenomenon. Furthermore, if quantifiers and adverbs are higher verbs, and are lowered by Transformations, as is generally assumed by theories without Deep Structure, it is very odd that they should be lowered first into the position D much X, and then moved about, though again, even this is not impossible.

More important for the purpose of this paper, however, are the two Transformations, T1: D-much Postposition, and T2; Much Deletion, for they serve to distinguish the two categories, verb and adjective⁷. The rest of this section, and all of the next, will be concerned with the behavior of two classes of items in relation to these transformations, and the positions ^{and forms} defined by them. I should note here that all aberrant behavior of D much can and will be defined as exceptions to T1 and T2, which only strengthens the analysis presented so far.

There is a small class of adjectives, all beginning in a, whose members have the property that they only appear in Predicate position. Some of these are listed in (18):

18. afraid, aware, alike, alive, asleep, awake

Morphologically, these adjectives are peculiar, in that they are all decomposable into a mora or less independent stem, and an adjective-, perhaps Predicate-adjective, prefix, #a-. The construction is not productive, though, and some of the stems are odd. -fraid cannot be phonologically related to fear in any non-idiosyncratic way (there is a non-standard variant afeared). -ware occurs elsewhere only in beware, a verb with very strange distributional properties. Also, some of the members of the class are beginning to lose their restriction to Predicate position, as in (19):

19. ?i) Alive bait for sale.

ii) He is a very aware person.

This class has, finally, one very interesting property: those of its members that allow Degree modification do not always trigger Much Deletion(T2)

20. i) I am very much aware of his intentions.

ii) Flash is very much alive.

??iii) I am very aware of his intentions.

?iv) Flash is very aware.

??v) Flash is very alive.

One might say that this property is purely accidental, but if it is, then why is it restricted to Predicate position, as (21) shows.

*21. He is a very much aware person.

One could then counter that these Predicate adjectives are secretly verbs

at the point where T2 applies. but they are not verbs when T1 applies, for they do not allow post-position of D much.

*22 i) I am aware of his plans very much.

ii) Flash is alive very much.

There is no motivation for claiming that between T1 and T2 an item changes its category label, from adjective to verb, or, if T2 precedes T1, from verb to adjective.

Is there an explanation? A close look at some other facts about aware in particular, which fall together in an interesting fashion, will, I think, lead to one. First, aware triggers Much Deletion more easily when it doesn't have a complement, as can be seen by comparing 20iii and 20iv.

20iii) I am very aware of his intentions

20iv) Flash is very aware

The meaning of aware is slightly different in the two. The fact that only those speakers who allow aware in Apposative position will allow complementless aware in Predicate position at all indicates that we are really dealing with two senses of aware; the one that is restricted to Predicate position does not allow Much Deletion(T2), and must have a complement. I will call it aware1.

Aware1 is the only adjective that tolerates Very Deletion, discussed above (16).

23. I wasn't much aware of his activities.

Lastly, aware1 tolerates it S, as in (24):

24. I wasn't aware of it that Bill had shot his grandmother.

Haj Ross has pointed out that a good number of verbs allow it S, (hate, like, see to, regret, resent...), but aware is one of the few adjectives that do.

We now have at least five strange facts about aware1:

- A. It only occurs in Predicate position
- B. It must have a complement
- C. It allows Very Deletion
- D. It allows it S
- E. It does not trigger Much Deletion

None of these facts would be strange if aware1 were a verb, and yet it cannot be a verb, since it does not tolerate D much^hPost-position(T1). There is also the small problem of it's being an adjective in its morphology. Is it then almost a verb? I think so.

How can the notion "almost a verb" be captured, for are lexical categories not distinct? Or are they? Ross has already shown that they are hierarchically arranged, in the order noun-adjective-verb⁸; it is only one step from this to a continuum. In fact, the notion of such a continuum is implicit in a remark of Chomsky's(1970). After commenting on Lakoff's(1970) proposal that adjectives are a sub-class of verbs, he suggests that "It is quite possible that the categories noun, verb, adjective are the reflection of a deeper feature structure, each being a combination of features of a more abstract sort. In this way, the various relations among the categories might be expressible."

If lexical categories are indeed combinations of features, then a given lexical item might have some features characteristic of one major category, let us say "verb", and some features of another, let us say adjective. Furthermore, in such a system, transformations

could be triggered not by categories, but by features. Our hypothetical lexical item could then trigger some "verbal" transformations, and some "adjectival" transformations.

Aware1 would be just such an item. Facts A and B, that it occurs only in Predicate position, and that it has an obligatory complement, are "verbal" features, and in the system just outlined, it is these "verbal" features which might allow C,D,and E. Alive, on the other hand, has only feature A; Predicate position, and not B. Perhaps it is for this reason that it doesn't allow Very Deletion:

*25. Flash isn't much alive.

Obviously this sort of system is very powerful, and must be highly constrained, especially as to possible features, but I can see no other framework in which it would be possible to give a unitary account of such items as aware1 and alive. If these were the only items that behaved in this manner, one might be willing to sacrifice an explanation of their behavior in exchange for a less complex theory, one in which lexical categories are not complicated combinations of features. However, they are not the only items that behave in such a manner; in the next section I will discuss another, much larger, class of items, passive participles, and show that the same kind of system must be appealed to if their complex and consistent behavior is to be accounted for in a meaningful fashion.

In the very first part of this paper, it was shown that the form and position of the degree modifiers, D-much, varied systematically with the category membership of the lexical item it modified, and that this variation could best be captured transformationally, each proposed Transformation being triggered by the category label of the head. The form and position of D-much could thus be used as a test for the category membership of a given item. With this in mind, I took up a small set of adjectives, whose behavior was aberrant, in that its members did not readily trigger the Transformation whose environment was defined by the category Adjective. A closer look at the subcategorization properties of one of these items in particular, showed that its behavior could be explained, if lexical categories were seen as feature complexes, for though morphologically an adjective, it enjoyed many verbal properties. In this section, I will use D-much as a test for the category membership of Passive Participles, and show that the simple category hypothesis fails for this large class too.

(26) contrasts the distribution of D-much modifying a passive with that of D-much modifying a bare verb.

26. i) Flash impressed me very much with her agility.

ii) I was impressed very much by Flash's agility.

iii) I was very much impressed by Flash's agility⁹.

iv) I was very impressed by Flash's agility.

All (and only) the three positions and forms of D-much defined by the analysis of D-much which was proposed earlier, are possible with the Passive.

With no other form of the verb is anything but the postposed position, defined by T1, possible:

27. *i) Flash so much impressed me with her agility that I
gave her a sardine.
- ii) Flash impressed me so much with her agility that I gave
her a sardine.
- *iii) Flash has so much impressed me on so many occasions,
that I no longer give her any sardines.
- iv) Flash has impressed me so much on so many occasions,
that I no longer give her any sardines.
- *v) Flash hasn't as much been impressing me lately, as
she used to.
- vi) Flash hasn't been impressing me as much, lately,
as she used to.

The fact that D-much must post-pose over the Progressive auxiliary in (vi), shows that the distribution in (26) can not be caused by the presence of the verb be. Similarly, the fact that D-much must post-pose over have-en in (iv), shows that the cause of the distribution cannot be attributed to the -en Participle; in fact, one might wish to argue that the two -en Participles, though morphologically identical, are distinct syntactic and semantic entities, one bit of evidence for which would be that the Passive of certain non-stative verbs can be used statively, while the Perfect cannot. In any case, the facts of (27) provide conclusive evidence that the distribution of (26) is intimately connected with the entire Passive construction.

Perhaps the Passive Participle is an adjective of some sort, and this accounts for (26). After all, a Participle is a verbal adjective (according to The Oxford Universal Dictionary). The term Active Participle is then somewhat misleading, for the Active

Participles in (27), like obedient verbs, obligatorily postpose D-much, and are therefore verbs by our test. I will return to these below; for now let us say that they are not adjectives.

Before providing evidence which might indicate that Passive Participles are adjectives, I will give two small arguments to show that they cannot be Deep Structure adjectives.

The first is an argument from Derivational Morphology: no Passive Participle can have an adverb in -ly derived from it, though most Deep Structure adjectives can. Decidedly, though a superficial exception to this rule, is not systematically derivable from the verb decide.

Secondly, a Passive Participle maybe modified by manner adverbs that never modify Deep Structure adjectives, but do modify verbs, as in (28):

28. i) The doctors treated Flash very well.

ii) Flash was very well treated.

*iii) Flash was very well big.

These facts, by themselves, would support an analysis, according to which, the Passive Transformation changed the category label of the passivized verb, from Verb to Adjective; for, since -ly adverb formation is a Derivational process of the ^(N)lexicon, restricted to lexical adjectives, the Passive Participle, being a Deep Structure verb, would never undergo it; and since the Passive Participle is a Deep Structure verb, it may have the same sub-categorizations as a verb, in this case a manner adverb, and must have different sub-categorizations from an adjective, but since it is a derived adjective, then the manner adverbs, like the the degree adverbs,

may precede, though they obligatorily follow the normal verb.

I will now give a few examples of how Passive Participles resemble adjectives. The first phenomenon is treated at length in a very interesting paper by Dorothy Siegel (1971). Siegel noticed that a generalization could be made about the negative prefix un-. This prefix (which must be distinguished from the homophonous privative prefix which occurs in undo, for example) has the property that it may only be attached to adjectives, or to nouns which are synchronically derived from adjectives (the only counter-example I have been able to find is unconcern). She therefore posits that un- is only attached to adjectives, and that the related nouns are actually derived from un-adjective. However, there are Passive Participles which have the un- prefix:

29. Antarctica is uninhabited by man.

The corresponding active verb can not have the un- prefix:

*30. Man uninhabits Antarctica.

This un- prefix cannot be derived from not:

31. America is not uninhabited by man.

The only way to account for (29) and (30), and still preserve the generalization about un-, is to say that (29) and (30) both contain an underlying un+inhabit, but that the Passive Transformation changes the verb inhabit into an adjective. Some version of the un- Attachment constraint then allows (29), but disallows (30).

A very similar phenomenon to the above is exemplified in (32):

32. i) I was extremely surprised by his action

fii) His action surprised me extremely.

Extremely is an adverb which appears easily with adjectives, but not so readily with verbs. However, it does appear preposed to Passive Participles, not a strange fact, if Passive Participles are adjectives.

The next and last, set of facts, was brought to my attention by Alan Prince. The deletion of Complementizers is freer with verbs, than with other categories, as in (33):

- 33. i) I hope that he'll come.
- ii) I hope he'll come.
- iii) I am hopeful that he'll come.
- iv) I am hopeful he'll come.

Complementizer deletion is also much more difficult with a Passive than with a corresponding Active sentence:

- 34. i) They say that he went to the store.
- ii) They say he went to the store.
- iii) It is said that he went to the store.
- iv) It is said he went to the store.

With some verbs, the deletion is obligatory in the Active, and impossible in the Passive:

- 35. i) I saw him run.
- *ii) I saw him to run.
- iii) He was seen to run
- *iv) He was seen run.

This last fact can be correlated with the fact that the deletion of to is also generally impossible after adjectives.

- 36. i) I will be happy to leave.
- *ii) I will be happy leave.

So, with Complementizer deletion too, all the facts about Passives can be explained, if Passive Participles are adjectives.

But what a strange adjective the Passive Participle would be. Remember that a regular old run-of-the-mill adjective allowed only a preceding D. The a- type predicate adjectives allowed a preceding D-much as well. Passive Participles allow all three possibilities, preceding D-much, preceding D, and post-posed D-much. Other verbal modifiers may also appear pre- and post-participially:

37. ~~ii~~) They treated her well.

*~~ii~~) They well|treated her.

iii) She was treated ~~her~~ well.

~~ii~~

iv) She was well treated.

v) She beat them soundly.

*~~vi~~) She soundly beat them.

~~vii~~) They|were soundly beaten.

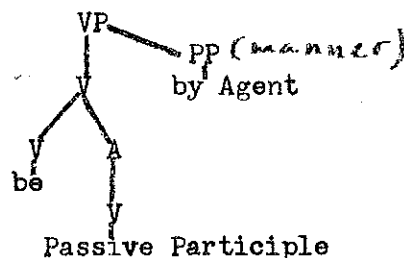
~~viii~~) They were beaten soundly.

Now, the aberrant behavior of the a- type adjectives was seen as a consequence of their "verbal" nature; can that of the Passive Participle be similarly explained? The idea that the a- type adjectives could be verbs at one point, and adjectives at another, and that this could explain their behavior, was dismissed as ad-hoc. There is good evidence, however, that Passive Participles do change their category label. One might then seek to explain their behavior as a result of this label change. Specifically, one might say that the Post-position of D-much(T1), is done before the Passive Transformation applies, and Much Deletion(T2) is done after Passive has applied, and changed the category label from Verb to Adjective.

Tempting, but awkward. First of all, in order to provide the pre-participial D-much, for T2 to apply to, T1 would have to be made optional in the environment of by-passive (or, if you don't like by-passive, a Derivational Constraint would state that T1 is optional, just in case the Passive Transformation is going to apply later). Secondly, this type of explanation cannot account for the occurrence of pre-participial D-much, just as it could not account for the occurrence of unpost-posed D-much with a- type adjectives.

The point is that simply erasing one label, and replacing it with another, explains nothing. An alternative tack is to propose that the Passive Transformation does not change the label of the verb, but rather adds one so that the Derived Structure of the Passive looks something like (38):

38.



What the A/V device does, is preserve the history of the Passive Participle; it makes it a verb and an adjective at the same time, since it partakes of the features of both. Because the Passive Participle is dominated by both A and V, it is expected that it can undergo either T1 or T2; if, further, there is no extrinsic ordering placed on these rules, it would probably be very simple to allow for the fact that either T1 or T2 may apply. However, the same problem that under the previous analysis suspect still remains: how to account

for the output in which neither Transformation has applied? Another problem arises when we look a bit more closely at the Derived Constituent Structure of (38). There is good reason for placing be under V, rather than any other node, for this be behaves exactly as the copula be: it can be preceded by the be+ing Auxiliary:

39. i) Flash is being a showoff again.
 ii) Flash is being recalcitrant again.
 iii) Flash is being torn to bits by that big tom.
 *iv) Flash is being going crazy.

This be, as opposed to the Progressive be+ing, is not an Auxiliary Verb. It is not optional in any sense, but rather has the function of carrying tense and person markers for all Predicates which, morphologically, are not equipped to do so themselves.

Now, this very fact would seem to strengthen the analysis, for if the regular copular construction is of the form (40),

40.



condition: Z is not a Verb (with some further restrictions which should not concern us here).

and if be is inserted at a very late point into all positions where Δ is a V, then a unitary account can be given all non-Auxiliary occurrences of be: if the Passive Participle is dominated by A¹⁰.

But the Derived Structure of a Passive is distinct from the Structure of the Copular Construction. The distinguishing factor is the presence of the Agent Phrase under the Manner Adverbial node. Lakoff(1970) to the contrary, only a verb may subcategorize a

manner adverbial, and consequently (as Chomsky (1965) so astutely remarked), an Agent Phrase. One, might propose that the Agent Phrase be dominated by the lowest V node in (38), i.e. the Passive Participle, a move which would lessen the structural difference between (38) and (40). Aside from the fact that this is impossible in any as yet formalized theory of syntactic structure, Edwin Williams (1971) has provided good evidence that this cannot be, but rather that the Agent Phrase must be dominated by Predicate Phrase (essentially equivalent to the VP in (38)), in order to account for such things as ease of preposing, ellipsis, and Equi-NP Deletion.

Why quibble over Agent Phrases? The answer to this query is that the presence or absence of an Agent Phrase determines whether a Passive Participle is more like a Verb, or more like an Adjective. I will now give three separate examples of this correlation.

First, the pre-participial appearance of the manner adverbs mentioned in (37) is governed by the absence of an Agent Phrase.

41.i) She was treated well.

ii) She was well treated.

iii) She was treated well by the doctors.

*iv) She was well treated by the doctors.

Frozen adjectival expressions which are participles morphologically do not allow the adverb to be post-posed.

42. i) My father is well read

*ii) My father is read well.

This correlates well with the hypothesis, mentioned and implied in scattered places above, that postposing is a characteristic of verbs.

The badness of (41iv) could be explained if the Passive Participle was a verb, and since the Agent Phrase is the only thing that distinguishes (ii) from (iv), it must be this which determines that the participle is a verb in (iv), and not necessarily one in (ii). That (41i) is good, while (42ii) is not is similarly explained if the latter is only a participle morphologically, while the former is a real one, ambiguously either an adjective or a verb.

Secondly, the Agent Phrase can be correlated with the perfectivity of certain Passive Participles. Contrast (i) and (ii):

43. i) I was depressed.

ii) I was depressed by your action.

Though the difference may be fine, (ii) seems perfective, and (i) not, or at least ambiguously stative. Since depress is normally not very stative in the Active, the stativity of (i) can only be correlated with two things: the Passive, and the absence of an Agent Phrase; but, since (ii) is Passive, and not stative, then it must be the absence of an Agent that determines the stativity. Just as adverb preposing can be associated with verbs, so can stativity be associated with adjectives. The ambiguity of (i) can thus be seen as a consequence of its categorial bi-valence, exactly as was that of (i) and (ii) in (41).

The last, and for our purposes, most striking, bit of evidence, comes from the problem at hand, the behavior of D-much. For some verbs, the form and position of D-much can be connected with the appearance of an Agent Phrase.

44. i) I was surprised very much by his action.

??ii) I was surprised very much.

iii) I was very much surprised by his action.

iv) I was very much surprised.

??v) I was very surprised by his action.

vi) I was very surprised.

The readings here may be confused somewhat somewhat by the perfective/stative distinction discussed in regard to (43). A look at just the even-numbered examples will reveal, I think, that the position and form of very-much, without the Agent, is itself connected with this distinction. So, (ii) may have a good reading for some, if they interpret the participle as perfective. The argument may thus seem to turn in on itself. However, if the reader can filter out this auxiliary matter, he will see, I believe, that a correlation does hold between the various forms of very much and the Agent Phrase. Changing the by of the PP into at should obliterate its Agent reading; this should, in turn, force the participle into an adjectival reading, and affect the distribution of very much. I think that it does, as (45) demonstrates:

45. i) I was very surprised at his action.

??ii) I was very much surprised at his action

*iii) I was surprised very much at his action.

In fact, if (45iii) is even slightly worse than (44ii), we have yet another bit of evidence that sub-categorization is basic to category membership. For on the strict adjective reading which the sub-categ-

orization of the PP with at forces, should force the application of the adjective triggered Much Deletion Transformation T2, making (45iii) completely out, while the ~~possible perfective reading~~ of (44ii) should marginally allow (44ii). (This last remark begs the question of what, if any, relation holds between semantic features and category membership, which will be discussed in the last section of the paper).

There is some evidence that the degree to which an agent is obligatory for a given passive verb, which seems to be idiosyncratic, is also a factor in determining the acceptability of the various forms and positions of D-much. The verb like, for example, does not appear easily in the Passive without an agent.

? 46. Flash was liked.

If we modify liked by D-much, and apply T2, an "adjectival" Transformation, the sentence gets worse:

*47. Flash was so liked that Worm never got any attention.

If, on the other hand, we apply T1, the corresponding "verbal" Transformation, the sentence gets better:

48. Flash was liked so much that Worm never got any attention. This example is doubly interesting. Like is a decidedly stative verb. Because of the correlation between stativity and adjectives, one might expect the Passive of like, which is stative, to be very "adjectival". However the examples above show that this is not so, and that sub-categorization can override other factors.

All these phenomena are very similar in nature to those which motivated a complex analysis of the a- type adjectives. In both cases, it is the strict subcategorization of an element which determines whether it may trigger a given Transformation, and in both cases, the particular strict subcategorization feature can be associated with a

lexical category-Verb. I have dealt with two aspects of subcategorization, that of tokens, or a particular occurrence of a given item, and that of types, the inherent obligatory subcategorizations of a lexical item. The verb surprise, for example is not obligatorily subcategorized for an Agent Phrase, and whether an Agent Phrase does actually appear in a given occurrence of the Passive of surprise determines whether the Passive Participle is itself more "verbal" or more "adjectival". The verb like, however, strongly demands an Agent, therefore all token occurrences of its participle are "verbal".

The behavior of various Passive verbs with D-much and other adverbs is a complicated and sometimes messy matter. I will not dwell any further on it here, but I hope the reader is convinced that though (38) is a step toward the Structural Description of a Passive, it does not tell the whole story, and that as long as lexical categories are seen as unanalysable entities, no real explanation is possible.

NOTA BENE

THANK YOU FOR READING THIS MUCH. YOU MAY BE LOOKING FOR THE PUTATIVE LAST SECTION. WELL ITS NOT HERE, NOT YET AT ANY RATE. IN IT, I WILL DEAL WITH OTHER KINDS OF FEATURES AND THEIR RELATIONSHIPS TO THE COMPLEX CATEGORY IN HYPOTHESIS. I WILL HAVE MORE TO SAY ABOUT THE SEMANTIC FEATURES LIKE STATIVITY AND ASPECT WHICH WERE MENTIONED BRIEFLY IN THE LAST SECTION. I WILL ALSO DISCUSS MORPHOLOGICAL FEATURES, LIKE THE A- PREFIX, AND THE -ED PARTICIPIAL SUFFIX, AND TRY TO SHOW THAT THESE TOO ARE RELEVANT TO SYNTACTIC CATEGORY ASSIGNMENT.

NOTES

1. As a rule, a noun may only be modified by very much if it is in the scope of an Affective(see Klima(1964)). Cvi is good, because of the presence of not. The positive version of this sentence is out:

* Flash ate very much fish.

The positive question is fine:

Did Flash eat very much fish?

The negative question is also good, a fact which may disconcert the more arithmetically minded, for in this case, at least, two negatives a positive do not make.

2. As Bowers(1970) notes, complementless so and too(so Δ , too Δ) differ slightly in meaning from their complementful counterparts. Too Δ seems to favor negative contexts:

It wasn't too interesting.

So Δ has a slightly different meaning in negative contexts; contrast (i) and (ii) below:

i) She is so pretty.

ii) She isn't so pretty.

All this variation serves only to weaken further the objection against including very in this set.

3. This argument comes from Bowers(op. cit.).

4. Count nouns select many instead of much.

5. Selkirk(op. cit.) observes that less can be derived from -er+little in a similar fashion to more, but that little never occurs before

adjectives, though much can:

too
*i) so little interesting
as

ii) less interesting

This fact is in accord with the notion that lexical items freeze up.

Little was presumably lost before adjectives, perhaps because it is the weaker pole of the little/much opposition, just as short is awkward in (iii)

*iii) He is three feet short.

Less, however, as an indepent lexical item, is impervious to this process.

6. By "strictly minor rule" is meant a rule which is minor to another more general rule, and covers items which do not undergo the major rule.

7. The existence of a distinction does not by itself disprove Lakoff's assertion that adjectives are Remote Structure verbs, for it is only at the point of application of T1 that the categories must be distinguished.

8. In a paper delivered at CLS VIII.

9. Pre-head very much can have a slightly different meaning, something like "indeed". This is true of all occurences of pre-head very much, including those discussed earlier.

10. The Passive Transformation does not, under this analysis, insert a copula.

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