

AN INVESTIGATION OF VERB-PARTICLE COMBINATIONS IN ENGLISH

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Many grammarians have noticed and commented on the fact that, in English, certain elements bearing some formal or semantic relationship to traditionally classified adverbs and/or prepositions co-occur frequently with certain verbs, the components of the resultant construction bearing a high degree of inter-relationship within the structure. Previous grammars and their exponents have usually encountered difficulty in classifying or describing such an inter-relationship satisfactorily and it has been sometimes argued that the integrity of such a construction within the language may be highly suspect. A fundamental aim of this paper is firstly to substantiate the desirability of treating this construction as a unit and then to establish the practicability of this procedure within a generative transformational framework.

It is desirable that we should be able to isolate the section of data under consideration, preferably through a simple but consistent surface structure principle. The particle movement transformation (hereafter the PMT) may be just such a principle.

1. (a) She worked out the problem. - She worked the problem out.
- (b) I looked up the information. - I looked the information up.
- (c) Mary threw away the paper. - Mary threw the paper away.
- (d) John reeled in the line. - John reeled the line in.

It is acknowledge that there are other apparent compound sequences wherein the component inter-relationships differ from those above; e.g., He went about his business. -
*He went his business about.; but as these are clearly distinguishable as not undergoing the PMT, we will consider them no further.

Quite a number of other properties of this type of combination have been systematically discussed by various grammarians. As early as 1920, Kennedy¹ discussed the "closeness of combination" of such structures and attempted to categorize all known examples on this type of intuitive basis. Fraser,² in 1965, made a more sophisticated attempt at the same

1. Kennedy, A.G. (1920) p.9
2. Fraser, J.B. (1965) p.37-38

type of categorization. However, both of these attempts may be seen to suffer from fairly general types of taxonomic complaint, Kennedy's system being far too detailed and varied in its basic criteria to provide a useful generalization, and Fraser's appearing to be too general and open to both individual and dialectal variance.

Fraser has enumerated several other properties of what we shall now call the verb-particle combination. Among these are the facts that the particle-NP sequence cannot be preposed to the front of the sentence in questioning the NP, the verb and particle may not be separated spatially by an adverb, verb-particle combinations can undergo an action nominalization transformation, particles do not conjoin, the particles carry stress whereas prepositions in similar surface structures do not. Some of these points may be shown to be false in a small number of cases; for example, particles may conjoin under the condition that the selectional and co-occurrence restrictions are consistent for the two structures involved, as in 'He turned the light on and off.' However, the point is made that in many cases the consistencies are valid and that we are largely justified in analysing the structure as a combination, rather than studying the components individually. It can be shown too that some of the exceptions themselves can be consistent. For instance, a particle that is modified in any way, either through conjunction or adverbial addition, must appear in the post-NP position.

2. I switched the light on and off.
* I switched on the off the light.
He tightened the screw right up.
* He tightened right up the screw.

This fact must of course be taken into account in a formal statement of the PMT.

The nature of the 'closeness' of the combination, along with some of its characteristic syntactic properties, having been noted, it should now be pointed out that there are at least four factors contributing to the decision to treat the verb-particle construction as a unit.

These are:-

- (a) The similar syntactic behaviour of a large number of examples, such that consistent principles may be deduced from one set of examples and made to apply to a further sample about which predictions can be made.

- (b) The statistical co-occurrence of the components of the combination; in some cases, such as 'bed down,' 'while away' and 'eke out,' the components do not occur in isolation while performing a consistent function.
- (c) An intuitive desirability to treat the structure as a unit. Numerous explanations have been offered as justification for such an intuition, some making reference to such an idea as transitivity in examples like:-

- 2.
- Jane washed the dishes.
 - Jane washed the dishes up.
 - Jane washed up the dishes.

Others look for a semantic consistency in that there may exist a single word synonym in the same or in some related language, and others go a step further in attempting to diachronically trace the parallel development of the two word combination and its single word semantic equivalent.

- (d) The semantic interdependence of the constituents of the combination in examples such as 'John closed down his business' and 'Bill shut up his shop,' wherein the particles have "almost or altogether sacrificed their individual meanings and by the act of combination have assumed a new meaning."³

Since we have hypothetically accepted the PMT as our principal discriminatory criterion for verb-particle combinations, we should now examine its properties in order to decide whether it is both a necessary and sufficient condition for identification. It should be noted that the PMT is obligatory when the direct object NP is a pronoun; thus we have 'I threw it away,' but not *'I threw away it.' The particle can also appear in the post-NP position when the NP is an indirect object, as in 'I gave John back his book,' or 'Hand me down my walking cane.' The transformation involved in this latter case will probably be identical in all but structural pre-requisites to our PMT.

3. Kennedy, A.G. (1920) p.9

There appears to be some doubt as to whether the PMT can operate when the following NP is complex, as in the examples in 4.

- 4a. He rang up the little old lady who owned the pet shop on the corner where his dog was kept.
- 4b. He rang the little old lady who owned the pet shop on the corner where his dog was kept, up.

However, Chomsky sees this as a problem in degree of acceptability, rather than grammaticality. He suggests that both forms are grammatical with the doubtfulness in acceptability of the latter probably being due to such a factor as memory limitation.⁴ In accordance with this suggestion, it may be claimed that our PMT will remain valid for these examples.

A major difficulty arises when we find that there are apparently elements other than 'prepositional adverbs' that can undergo a shift that is almost identical to that involved in the PMT. In some cases, these verb-adjective sequences also aspire to being intuitively judged units. Consider the following examples:-

5. a.(i) He cut short his speech.
(ii) He cut his speech short.
(iii) He cut it short. * He cut short it.
- b.(i) The Goths laid waste the countryside.
(ii) The Goths laid the countryside waste.
(iii) The Goths laid it waste. * The Goths laid waste it.
- c.(i) I painted green the fence, windows and doors.
(ii) I painted the fence, windows and doors green.
(iii) I painted them green. * I painted green them.

Some of these examples seem to be more acceptable than others, c.(i) in particular seeming to me to be doubtful. It would certainly be ruled unacceptable if the following NP were not complex.

* I painted green the fence.

4. Chomsky, N. (1965) p.10-11

As well, it is unlikely that the sequence 'paint green' should be regarded intuitively as a unit. However, 'cut short,' 'make good' and 'lay waste' seem to have attributes which suggest unity of a type similar to that involved in our verb-particle examples. Fraser has pointed out that there is a 'be' relationship between the subject NP and the adjective in these cases,⁵ but since the structure can be shown to be otherwise indistinguishable from that of the verb-particle, (i.e., it conforms to the properties previously mentioned in this article) the 'be' relationship may be judged non-significant with regard to the PMT (a further feature, perhaps (+ adj.), may make such examples exclusively amenable to a transformation that results in the 'be' surface structure, but there is no reason to suppose that the presence of this feature should disqualify the examples from the verb-particle class) and the 'cut short' cases may thus be included within the area of data that we designate as containing the verb-particle class) and the 'cut short' cases may thus be included within the area of data that we designate as containing the verb-particle construction. Such examples as those that have structures like 5.c. would probably be dealt with by an adjective placement rule. If we suppose that adjectives are usually generated in the post-NP position, perhaps being derived from an underlying S, the placement rule will operate in a direction opposite to that of the PMT and would apparently contain a restriction allowing it to occur only in the case of complex NP objects.

A further complication concerns those apparent verb-particle combinations that have no following NP object around which the particle may be transposed. If we choose this ability to undergo transposition as a unique identifying criterion, we are faced with the prospect of excluding from the set of verb-particle constructions all those sequences wherein there is no noun phrase present. Clearly, this is intuitively inconsistent, as can be seen by comparing the sentences in 6.

6. (i) Eliza washed up the dishes.
- (ii) Eliza washed the dishes up.
- (iii) Eliza washed up.

It seems clear that sequences wherein an NP direct object can be added, (it may even be judged to be present at a deeper level) and wherein the PMT can consequently occur, must be admitted to the class of verb-particle constructions. This decision is important since it

5. Fraser, J.B (1965) p.65

implies that our identification procedure, the PMT, should perhaps occur at a level preceding the transformation which deletes the NP object, a state of affairs which would be found to be undesirable when placing the PMT in relation to lexical insertion. However, in view of the fact that the deletion transformation would ultimately have little effect on the surface structure, (compare the applications of this transformation to 6.(i) and 6.(ii)) and that such a deletion may possibly occur at a level close to lexical insertion anyway, we may regard this apparent implication of our decision to include examples like 6.(iii) as being non-significant.

There are still further cases of verbs which cannot, under any circumstances take a direct object NP but which can combine with a particle-like element in a manner apparently similar to that of the verb-particle combination. e.g. -

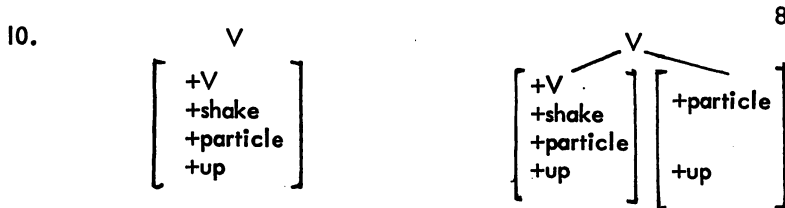
7. He went away.
(c.f. He threw away the can. He threw the can away.
which are clearly to be regarded as verb-particle
combinations.)

However it appears to be the case that these are just the examples wherein the element may be transposed to the front of the sentence; viz., 'Away he went.' (c.f. x Away he threw the can.), and this will distinguish such structures from those involved in instances like 6.(iii) - x Up Eliza washed. This transposition seems to eliminate many such intransitive examples from the class of verb-particle structures, yet there still remain other examples whose status is not so easily decided. Such cases include:-

8. (i) He set out on his journey.
(ii) He set off up the mountainside.
(iii) The bird flew away.

It is possible that 8.(i) and 8.(ii) may be compared to such transitive examples as 'He set out his project' and 'He set off the explosives' respectively; the semantic differences are to be seen as non-significant so that the question then becomes one of the syntactic significance of transitivity relative to the formulation of this category. I have decided to exclude these intransitive examples from the verb-particle class on the consideration (admittedly a negative one) that there can be little gain from including them, apart from a minor lexicon change, and on the further suggestion that examples like 'Off he set up the mountainside' and 'Out he set on his journey' are at least higher on the scale of acceptability than the corresponding transposition applied to 6.(iii). The fact that this exclusion must necessarily result in there

It seems clear that the PMT should be a comparatively late operation conducted at almost surface level, since the statement above deals with features rather than nodes and since it must follow any pronominalization procedures. (This of course assumes that pronouns are not lexical items.) It has also been pointed out⁷ that a particle segment transformation is required before the structural description that appears above is possible. This PST is approximately of the following nature:-



An almost trivial point to be considered here is the presence of the feature $[+particle]$, a general feature, rather than the 'trigger' for the PST being of the particular type $[+up]$. It seems clear that a reliance on the latter type of feature would require the statement of any transformation to be repeated for each particle, a situation that appears fairly obviously to be uneconomical.

A further point to be looked at here is the fact that the PST appears to be an unusual type of transformation in that it retains and duplicates features rather than transferring them. It is important too to distinguish between generated features, which are those associated with strict subcategorizations, and applied features which are largely selectional. The feature $[+particle]$ is clearly of the former type and will be associated with a pattern, in the same way as a feature like $[+transitive]$ would be associated with the pattern $[+ \text{ ——— NP object.}]$. What is unusual about $[+particle]$ is that it will be associated with two patterns, one of which must feature an interrupted lexical 'unit' at the surface level. This makes normal lexical application very difficult. Fraser however in making the segmentation, believed that no constituent structure beyond that shown in



7. By Fraser, J.B (1965) p.69; Also Jacobs, R.A. & Rosenbaum P.S. (1968) p.104

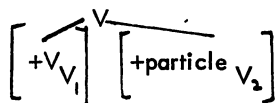
8. Adapted from Jacobs, R.A. & Rosenbaum, P.S. (1968) p.104

9. Fraser, J.B (1965) p.71

was necessary to account for the syntactic fact that the particle can be separated from the verb. However, in strictly formal terms, this structure presupposes a separate entry in the lexicon for the feature bundle $[+particle]$ and particularly after application of the PMT, there would be little or no evidence in a pre-terminal string about to undergo a lexical application that the two feature bundles, $[+V]$ and $[+particle]$ were at all related.

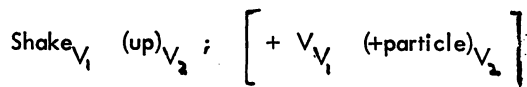
One could probably imagine several ad hoc methods of overcoming the problem. For instance, the two feature bundles may possibly be indexed in such a way that their relationship is clearly signified. The duplication of features as shown in diagram 10. is probably just such an attempt. Fairly clearly though, this structure would require some unduly complicated conditions to be present in a lexical entry to allow the elimination of the duplicated conditions in one bundle or the other. A simplification of a similar type of technique might involve a structural indexing of each bundle, as in:-

12.



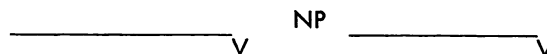
and an inclusion in the lexical entry of a structural description as a condition to be applied during a lexical application. Thus, the entry would look something like:-

13.



and would probably also include a structural description of a co-occurrence or selectional nature to allow the unit to be fitted to a pre-terminal interrupted string; i.e., one on which the PMT has already acted. This description would probably appear as:-

14.



The method is a seemingly ad hoc suggestion wherein it appears we are attempting to both retain unity and still be able to make a structural division in the sequence.

Another conceivable notion would perhaps be to make a partial lexical application to the structure before the segmentation transformation is applied. We could thus apply a normal lexical entry to a sequence or bundle of the nature $[+V +particle]$, yet retain the features that would be relevant for the transformations, these features carrying their morphophonemic counterparts with them as they undergo segmentation and the PMT. A

later rule of surface structure deletion would then presumably eliminate the structural features. This, in effect, is probably similar to the Jacobs and Rosenbaum attempt,¹⁰ wherein [+up] was apparently regarded as a structural feature rather than a lexical one, but in our present instance, the abovementioned problems of lexical application with special conditions in the entry have to some extent been eliminated. This second notion also smacks to some extent of a surface level transformation, but it does involve the general feature [+particle], which eliminates the problem of having to repeat the statement of the PMT for each individual particle, as would almost certainly be the case if we hypothesized the surface level operation.

Once again, however, we are faced with divergences from normal practice that appear to be of a suspiciously ad hoc nature. To even begin to justify such methods, we would have to look carefully at other apparent units that appear at surface level as interrupted sequences. The classical traditional case is, of course, the split infinitive, as in:-

15. (i) I don't want to even think about it.
 (ii) We have to carefully dissect the organism.

Traditionalists would probably classify this type of structure as being non-grammatical, a decision that would hardly be endorsed by present day native speaker acceptability standards. However, it is quite probable that the infinitive may not be regarded as a unit under a modern analytic system, particularly when it is examined in the light of such examples as:-

16. (i) I don't want to.
 (ii) We have to.

which appear to suggest that the element "to" may be as closely related to the preceding verb as to the second part of the infinitive. Example 17, which operates a question transformation on a part of the supposed unit, seems to indicate that the infinitive is, at the very least, not as closely unified as the verb-particle combination.

17. a.(i) He had to run.
 (ii) He had to what? Run!
 (iii) * He had what run? * To!
- b.(i) She washed up the dishes.
 (ii) * She washed what the dishes? * Up!
 (iii) * She what up the dishes? * Washed!

10. Jacobs, R.A. & Rosenbaum P.S. (1968) p.194 foll.

The statement of a question transformation, an optional deletion transformation of the type, to + 0, and a movement transformation, all of which would operate on only a component of the infinitive unit, would probably be uneconomical, as similar operations exist already for application to complete units. As well, the acceptance of the infinitive as a lexical unit is open to intuitive doubt, due to the fact that such surface structures as 16(i), 16(ii), and 17a.(ii) exist in our language environment.

If we then eliminate split infinitives from consideration on the grounds of their lack of unity, the idea that there are other lexical items that will appear as interrupted surface sequences is, as one native speaker so bluntly put it, extremely un-bloody-likely. This particular example may be regarded as being generated from such a structure as:-

Neg + NP + BE + LIKELY

rather than through the use of a lexical item 'unlikely'. The insertion of the expletive in the above structure would offer no methodological problem, but would require that 18(i) and 18(ii) be synonymous.

18. (i) It is not likely
(ii) It is unlikely

While this may be so, such is clearly not the case with items such as 'disappear', 'disappointed', 'antipodes' and 'antipathy', and any expletive insertion in these lexical items would be largely artificial, relying on phonological interstices than on breaks between units that are intuitively grammatical. Perhaps the existence of just such artificial structures as these may lend some weight to the suggestion that our apparently ad hoc mechanisms can be partially justified in the generation of the verb-NP-particle sequence. It can be shown that such a sequence once occupied a position in our language that was probably quite similar in 'prestige' to that presently held by our manufactured example. In 1926, for instance, Poutsma¹¹ pointed out that such an example as "He called the military out" simply would not be said. Clearly, language values have changed since then and, fairly obviously, are likely to remain in a state of flux. This trite but relevant fact is, however, likely to have important implications on the methods shown above for the generation of the verb-particle unit.

11. Poutsma, H. (1926) p.25

Stated in its broadest terms the problem is one of whether a formal statement of a grammar should be sufficiently flexible to make allowances for linguistic change of the nature of the verb-particle example - or whether, being formal, and thus necessarily restricted to some degree, the grammar should be prepared to cover only a certain corpus and ignore any change whose structure is not only a certain corpus and ignore any change whose structure is not catered for within the formal statement. Ideally, the former alternative is not only preferable but is almost a doctrinal prerequisite in a generative system. The problem now is to decide, on a particular level, whether the machinations shown in this paper are examples of formal flexibility or of ad hoc procedures that in fact tend to negate part of the formalization. The degree of divergence of our machinery from present practice casts grave doubt on the idea that such procedures are merely variations within a system, and one is led to hypothesize that perhaps some radical reorganization, of the type involving surface structure transformations or divisible lexico-structural items, may be required in order to approach a fully adequate set of machinery for generating language.

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