

On the VP Structure of Phrasal Verbs in English*

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0. Introduction

There seems to be two structurally parallel sentences in English as in (1), (2) and (3) below :

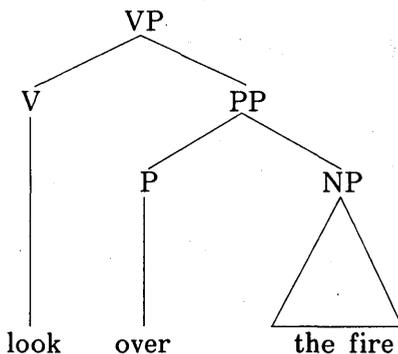
- (1) a. Harry will look over the fire.
b. Harry will look over the client.
(Fraser (1976 : 1))
- (2) a. Drunks would get off the bus.
b. Drunks would put off the customers.
(Radford (1988 : 90))
- (3) a. The question of a reprieve may turn on the age of victim.
b. John turned on a bar of the electric fire.
(ODCIE¹)

Radford (1988) claims that the crucial difference between (a) and (b) sentences above is that in (1a), for example, the preposition *over* 'goes with' the following noun phrase [the fire] to form the prepositional phrase [over the fire], whereas in (1b), the preposition or the particle² *over* 'goes with' the verb *look* to form the complex Phrasal Verb [look over]. In traditional terms, *look* in (1a) might be called a *prepositional verb* (because it is a verb which takes a prepositional phrase after it), whereas *look* in (1b) is a *phrasal verb* because the sequence [look over], which may have almost the same meaning as 'examine,' seems to form some kind of 'compound verb.'

Generalizing somewhat, we might claim that prepositional verbs have a consistent, componential meaning, that is, the meaning of the whole expression is a simple function of the meaning of its component parts, whereas phrasal verbs tend to have an idiosyncratic or idiomatic meaning.

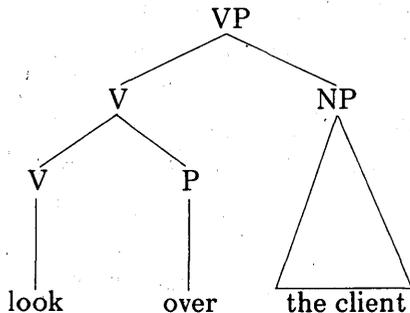
In previous studies, it has been suggested that the two sentences in (1), (2) and (3) above differ in the internal structures of the VPs which they contain; for instance, (1a) may have the VP-structure (4a)³ below :

(4) a.



whereas (1b) would have the VP-structure (4b) :

(4) b.



The crucial difference we can see from the tree diagrams above is that the sequence [over the fire] in (4a) is a full phrase (prepositional phrase), whereas the sequence [over the client] in (4b) isn't a phrase and it isn't even a constituent.

Many syntactic arguments have been offered to support such an analysis as in (4a), (4b). Major syntactic arguments among them are from (A) VP-Adverbs Insertion, (B) Preposing Phenomena and (C) Applicability of Particle Movement⁴. We'll see, however, that these syntactic grounds are too weak to support the previous syntactic arguments.

In the following sections, the two failings in the treatment of Verb-Particle constructions will be presented. First, it will be verified that the syntactic status of a node which dominates the particle should not be P, but P". Secondly, it will be argued that the internal structure of the VP as in (4b), assigned to Verb-Particle constructions, cannot have enough explanatory adequacy. Furthermore, it will be suggested that the argument of P" status of a particle at D-structure would lend a strong support to the rightward movement of NP, rather than the movement of particles.

1. Syntactic Grounds for Preposition/Particle Distinction

In this section, we are going to look at three types of syntactic tests in support of the claim that prepositional and phrasal verbs have different syntactic behaviors, thus they have different constituent structures.

The first such evidence comes from the phenomenon known as PP Preposing. The relevant generalization governing Preposing is that only phrasal constituents, that is, whole phrases, can undergo Preposing:

- (5) a. John climbed up the ladder.

- b. John walked up the hill.
- c. John sped up the pole.

In the sentences in (5), the whole PP (Prepositional Phrase) can freely undergo preposing as in (6) below :

- (6) a. Up the ladder, John climbed.
- b. Up the hill, John walked.
- c. Up the pole, John sped.

By contrast, in the case of sentences such as (7) :

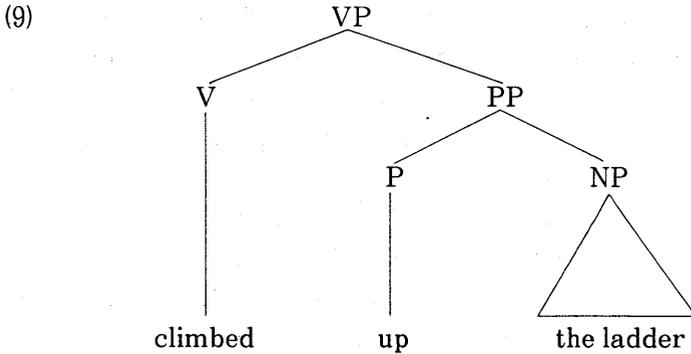
- (7) a. John rang up his mother.
- b. John stood up his date.
- c. John looked up her phone number.

(Radford (1988 : 70))

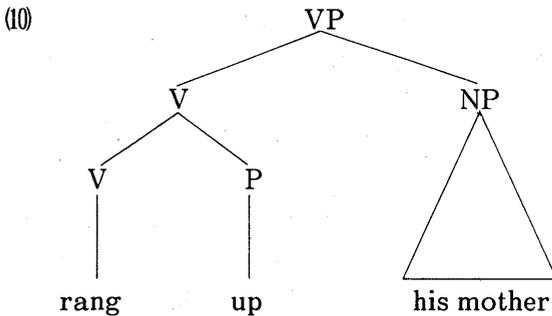
the particle *up* together with the NP cannot be preposed, as we can see from the ungrammaticality of :

- (8) a. *Up his mother, John rang.
- b. *Up his date, John stood.
- c. *Up her phone number, John looked.

Radford argues that in each of the sentences in (7), the particle *up* forms a constituent together with the verb, not with the immediately following noun phrase: since the *up* + NP does not form a phrasal constituent, it cannot therefore be preposed⁵ 'for emphasis.' Hence, it might seem reasonable to suppose that (5a) has the VP-structure (9) below :



In (9), the preposition *up* goes with the following noun phrase [the ladder] to form the prepositional phrase [up the ladder], that is, a single constituent. On the other hand, it might be assumed that the sentence (7a) would have the VP-structure (10) below :



As we can see from the diagram (10), the particle *up* and NP [his mother] cannot be analyzed as a single constituent and cannot therefore be preposed, violating the general principle (11) :

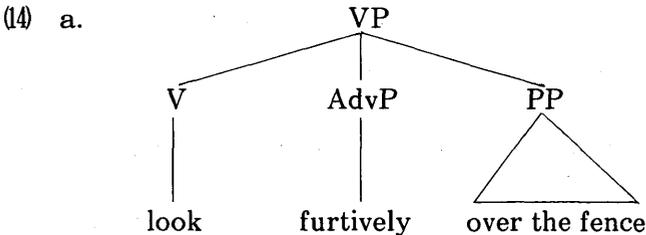
- (11) Only phrasal constituents can undergo Movement (from one position in a sentence to another).

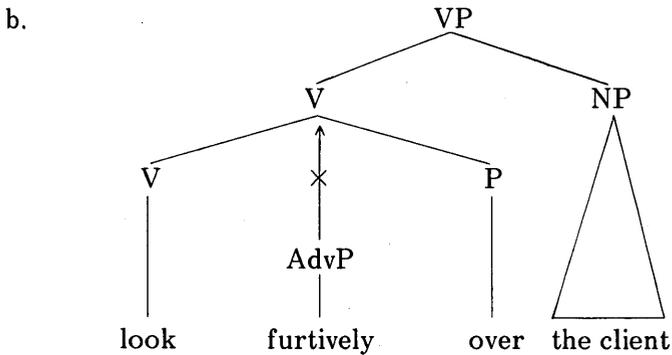
(Radford (1988 : 71))

Our second syntactic test to differentiate verb-preposition constructions from verb-particle ones is related to the distribution of Adverbial Phrases. Traditionally speaking, a distinction can be drawn between S-Adverbs (which occur in positions where they are attached to an S node), and VP-Adverbs (which occur in positions where they are attached to a VP node⁶). Since VP-Adverbs can occur internally within VPs, then such an adverb could be positioned between the verbs and the prepositional phrases as in (12), whereas it is not possible to position VP-Adverbs between the verbs and the particles, as in (13) below :

- (12) a. Harry looked furtively over the fence.
 b. John ran quickly up a huge hill.
 c. John turned suddenly off the road.
 d. Drunks would get slowly off the bus.
- (13) a. * Harry looked furtively over the client.
 b. * John ran quickly up a huge bill.
 c. * John turned suddenly off the light.
 d. * Drunks would put completely off the customers.

Here again, if we assigned different internal structures to each of the verb phrases in (12) and (13) above, the answer might immediately be obtained. The structures of the VPs in (12) and (13) could be stipulated as in (14a) and (14b) below :





Since *furtively* is a VP-Adverb, it can only attach to a VP node, as in (14a), but cannot attach to a V node, as in (14b). Thus, the crucial difference in the grammaticality of the sentences in (12) and (13) might be reduced to the difference in the constituent structures of both VPs.

A third syntactic argument to differentiate the verb-preposition constructions from verb-particle ones comes from the following evidence :

- (15) a. Harry will look over the client.
 b. Harry will look the client over.
- (16) a. John sped up the process.
 b. John sped the process up.
- (17) a. Tom reeled in the line.
 b. Tom reeled the line in.
- (18) a. Drunks would put off the customers.
 b. Drunks would put the customers off.
- (19) a. Harry will look over the fence.
 b. * Harry will look the fence over.
- (20) a. John sped up the pole.
 b. * John sped the pole up.

- (21) a. Tom reeled in the street.
 b. *Tom reeled the street in.
- (22) a. Drunks would get off the bus.
 b. *Drunks would get the bus off.

Many linguists have suggested that the sentences from (15) through (18) involve *Particle Movement*⁷: the particle adjacent to the verb undergoes movement to the right across the NP, yielding the [Verb-NP-Particle] configuration. By contrast, each (a) sentence from (19) to (22) (which has the verb-preposition combination) cannot undergo Particle Movement, as the ungrammaticality of each (b) sentence illustrates. This syntactic behavior has been considered to be one of the important aspects in differentiating between the verb-preposition and verb-particle constructions.

Thus far, we have seen the three major syntactic criteria that have been employed to support the distinction between the verb-preposition constructions and verb-particle ones: Preposing Phenomena, the Insertion of VP-Adverbs and the applicability of Particle Movement. One question to ask at this point is to what extent or how adequately these syntactic criteria work to explain the various data in present-day English. We will see many examples whose syntactic behavior cannot be adequately explained in terms of the criteria established thus far.

2. Problems

Now, let's look at the first syntactic criterion suggested in the previous section; Preposing phenomena. This criterion seems to fail in explaining the ungrammaticality of (23b), (24b) and (25b) below:

- (23) a. Willie insisted on his innocence.

- b. * On his innocence Willie insisted.
- (24) a. You can bank on this creamy-white wool.
 b. * On this creamy-white wool you can bank.
- (25) a. There's no need to turn on me just because rain spoiled the picnic.
 b. * On me there's no need to turn just because rain spoiled the picnic.

(ODCIE)

In (23a), for instance, the sequence [on his innocence] is a PP but cannot be preposed, as we can see from (23b). The same syntactic phenomena can be seen in (24b) and (25b).

Secondly, there are quite a few examples in which VP-adverbs can be inserted between the verb and the particle, as we see from the following :

- (26) a. They put carefully out the fire.
 b. The electricity supply went straight off when the cable was cut.
 c. The prices came right down when people started buying elsewhere.
 d. The studio will blow well up your photograph.

(ODCIE)

On the other hand, the following verb-preposition combinations do not allow the insertion of the adverbs :

- (27) a. * Olive gets frequently at her husband.
 b. * Mary cares furtively for my children.

Now we can find the third piece of evidence which casts a strong doubt upon the syntactic criterion in differentiating be-

tween the verb-preposition and the verb-particle constructions. The third criterion suggested in the previous section is that the verb-particle constructions permit the two alternations in the word order; the sequences [verb-particle-NP] and [verb-NP-particle]. This generalization, however, fails to explain the ungrammaticality of the following :

- (28) a. The visiting team of athletes carried off most of the medals.
 b. * The visiting team of athletes carried most of medals off.
- (29) a. John let out a spontaneous cry.
 b. * John let a spontaneous cry out.
- (30) a. In the Spring, the hedgerows put forth new buds.
 b. * In the Spring, the hedgerows put new buds forth.
- (31) a. The smuggler put up a flight but was finally overcome and carried off to jail.
 b. * The smuggler put a flight up but was finally overcome and carried off to jail.
- (32) a. Forensic science takes in criminology.
 b. * Forensic science takes criminology in.

(ODCIE)

In (b) sentences from (28) to (32), the particles cannot be permitted to appear after the NPs. Furthermore, the particles cannot appear before the NPs in the (b) sentences from (33) to (37) below :

- (33) a. A thick forest girdled the castle about.
 b. * A thick forest girdled about the castle.
- (34) a. A growing confidence in the new leaders helped to carry the soldiers through.
 b. * A growing confidence in the new leaders helped to carry through the soldiers.

- (35) a. Not a single boy in the class could get the problem out.
 b. * Not a single boy in the class could get out the problem.
- (36) a. If you want good crops of flowers and vegetables, you must keep the weeds down.
 b. * If you want good crops of flowers and vegetables, you must keep down the weeds.
- (37) a. If you try to pass the problems by, they'll remain to dog you.
 b. * If you try to pass by the problems, they'll remain to dog you.

(ODCIE)

3. An Alternative

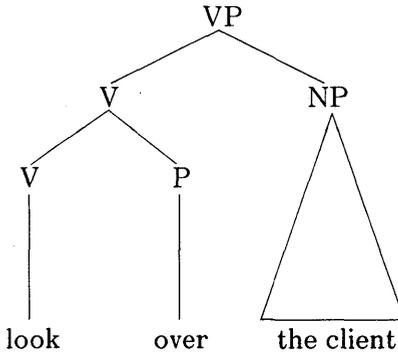
In the previous sections, we have seen that the syntactic distinction between the verb-preposition and verb-particle combinations has been described in terms of the internal structures of VPs and the applicability of the Particle Movement. In this section we will see that these two syntactic criteria have grave and intricate problems within themselves. Then, an alternative analysis of the verb-particle constructions will be shown.

First, let's have a close look at Radford's (1988) approach again. As we have already seen, a phrasal verb allows its accompanying particles to be positioned either *before* or *after* noun phrase objects, as in (38) (= (1)) below :

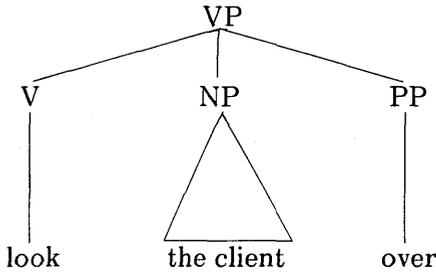
- (38) a. Harry will look over the client.
 b. Harry will look the client over.

The particle [over] in (38a) is considered to have moved to the position after the noun phrase [the client] by way of the Particle Movement. Radford claims that (38a) has the structure (39a) and (38b) has the structure (39b) :

(39) a.



b.



Note that the particle [over] is dominated by the node P, that is, [over] has the simple word-level category in (39a), whereas in (39b) it is moved across the NP [the client] to the right and attached to the node VP and [over] is dominated by the node PP, the status of a phrase-level category. However, this operation (Particle Movement) obviously violates a general condition on Adjunction derived from Emonds' (1976) *Structure-Preserving Hypothesis* :

(40) *Structure-Preserving Transformation* :

A transformation (or a transformational operation, in the case of a transformation performing several operations) that introduces or substitutes a constituent C into a position in a phrase marker held by a node C is called "structure-preserv-

ing.”

(Emonds (1976 : 3))

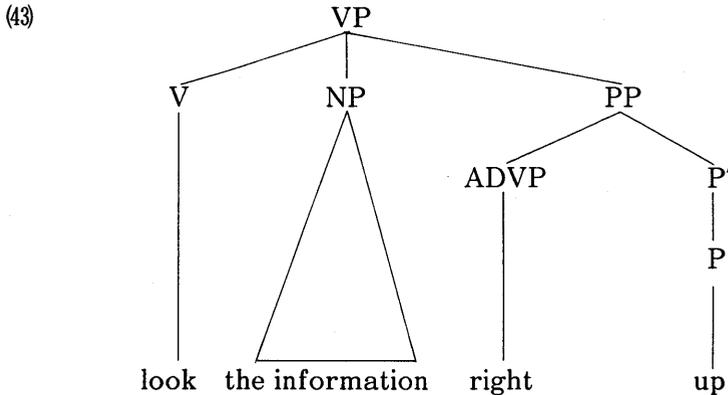
- (41) An adjunction is structure-preserving just in case the material adjoined to a given category X^n results in the creation of a derived constituent with the same categorial status as the original X^n to which the material was adjoined.

(Radford (1988 : 544))

The syntactic status of [over] in (39b) would be PP, that is P'' , and this may be supported by the following empirical evidence :

- (42) a. John'll look the information right up.
 b. John switched the light right off.
 c. His bad manners put her right off.

The VP in (42a), for example, will have the structure (43) below :



The intensifier [right] can be taken as a P-bar attribute, as in (43).

The VP-structure (39a), however, cannot correctly predict that the intensifier [right] can occur immediately adjacent to the

verb, as in (44) below :

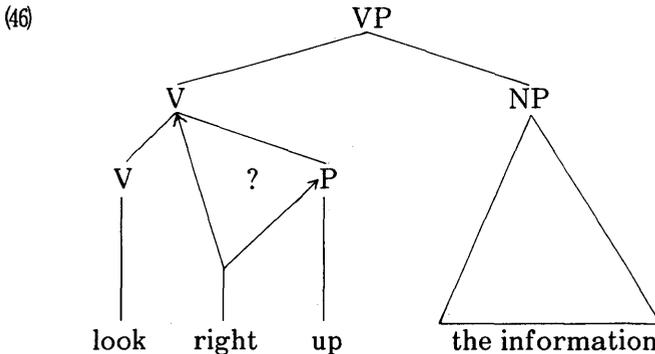
- (44) a. ? John looked right up the information.
 b. John looked right up the information that I had asked for.

(Kayne (1984))

Furthermore, if we assume the VP-structure as in (39a), then how can we explain the grammaticality of the sentences in (45) below ? :

- (45) a. The plane took right off.
 b. The troop fell right in.
 c. The children has grown straight up.

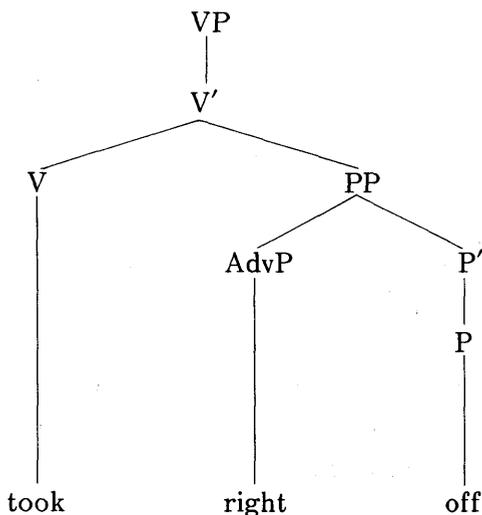
Given the previous argument that the adverbial [up] in (44a) has the syntactic status of the word-level category P, the VP-structure would be as follows :



Obviously, the structure (46) fails to explain the grammaticality of the sentences in (44) and (45) above, since the adverbial [right] cannot be attached to the node V in (46). This observation leads us to

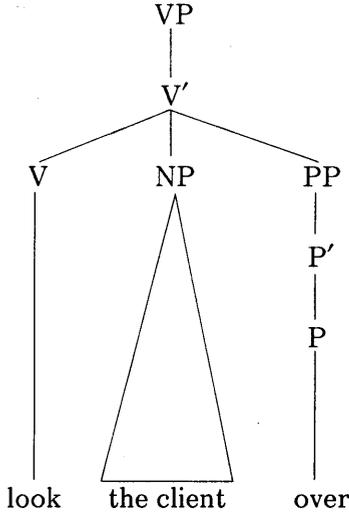
suppose that the D-structure (39a) should be modified so as to correctly predict the grammaticality of the sentences above. I will propose that an alternative VP-structure of (45a) should be (47) below :

(47)



Furthermore, we should obviously expect that the structure (47) can be expanded to that of [verb-particle-NP] sequence. Our claim is that the sentence (38b) has the VP structure (48) below⁸ :

(48)



The structure (48) contains a V-bar constituent of the schematic form [_{V'} V NP PP]. In the light of Radford's (1988 : 234) claim that the phrase *do so* seems to function as a pro-V-bar, consider the followings :

- (49) a. Harry will [look the client over], and Paul will *do so* as well.
 b. * Harry will [look the client] over, and Paul will *do so* over as well.
- (50) a. John will [speed the process up], and Paul will *do so* as well.
 b. * John will [speed the process] up, and Paul will *do so* up as well.

In (49a) and (50a), *do so* can replace the whole string [look the client over], [speed the process up], respectively and this suggests that the strings are V-bar constituents. By contrast, in (49b) and (50b), *do so* cannot replace these strings [look the client] and

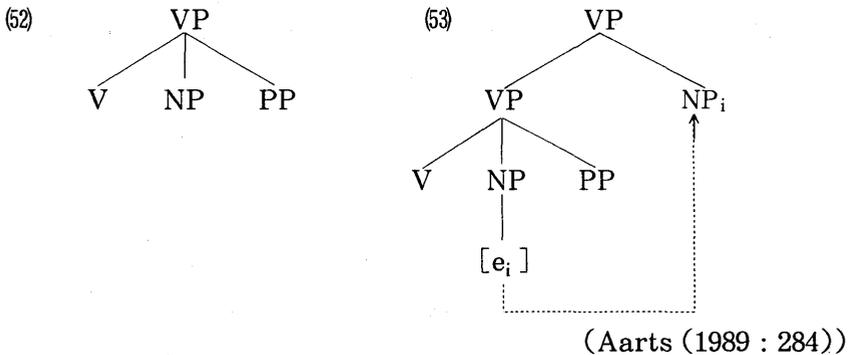
[sped the process], suggesting that these strings cannot be V-bar constituents.

Let us now turn to an account of the syntactic relation between (38a) and (38b), repeated here as (51a) and (51b) :

- (51) a. Harry will look over the client.
 b. Harry will look the client over.

We have already seen that Radford's (1988) analysis (by way of Particle Movement) should be rejected, since it violates the general condition on adjunction, deriving from *Structure-Preserving Principle*. Then, what kind of operation could we invoke to explain the syntactic relation between the two sentences ?

Aarts (1989) proposes the rightward movement of the NP which derives (53) from (52) below :



In this analysis the NP is adjoined to VP and this treatment is in accordance with Chomsky's (1986 : 6) claim that Adjunction is possible only to maximal projections in non-argument position. First of all, this operation seems to have the advantage that it does not violate the general condition on adjunction (40), partly be-

cause the syntactic status of the particle, that is P", does not change after the operation. Furthermore, it seems to have the added advantage that it can also account for similar types of sentences in which a rightward NP movement would be involved :

- (54) a. John looked up the information I had asked for.
 b. I switched off the radio John gave me.

(Kayne (1984 : 127))

- (55) a. John looked it up.
 b. * John looked up it.

- (56) a. John switched it off.
 b. * John switched off it.

It seems that some notion of heaviness is indeed involved in accounting for the verb-particle constructions above. In (54), the NPs [the information I had asked for], [the radio John gave me] are 'heavy,' so these are obligatorily moved rightward into the sentence-final positions. In (55) and (56), on the other hand, the NPs, [it] in both cases, cannot be moved to the right since they are considered to be very 'light.'

Thus far, we have argued that (A) the syntactic status of the particles in verb-particle constructions should be P" (a phrase-level category), not P (a word-level category), and (B) the VP-structures in verb-particle constructions should be the form of (49), and finally, (C) the alternative verb-particle configurations, that is, the [Verb-Particle-NP] sequence, could be derived from the structure (48) by way of a rightward movement of the NP. These assumptions allow us to give a consistent analysis to the grammaticality of the sentences in (44), (45) and (54), which could not be explained in the previous frameworks.

There would be, however, some other problems awaiting us.

One of the major problems relevant to the present discussion is how we could give an adequate explanation to the syntactic distribution of the "Particles," as we see in the following examples:

- (57) a. I'll just get my things on and we'll go for a short walk.
 b. I'll just get on my things and we'll go for a short walk.
- (58) a. The instructor got his students on so well that they had covered the course three weeks before the allotted time.
 b. * The instructor got on his students so well that they had covered the course three weeks before the allotted time.
- (59) a. She had put the sewing needles down on the chair by the window.
 b. She had put down the sewing needles on the chair by the window.
- (60) a. He put the glider down in a corn-field.
 b. * He put down the glider in a corn-field.
- (61) a. They introduced measures aimed at putting down organized gambling.
 b. * They introduced measures aimed at putting organized gambling down.

(ODCIE)

In (60a), for instance, the phrasal verb 'put down' has the meaning 'place something on the table, shelf, etc.' and in this case, the particle [down] can occur *before and after* the NP [the sewing needles]. In (60) and (61), however, the phrasal verbs 'put down' have the meaning 'land, settle,' 'suppress, abolish,' respectively. In (61), the particle [down] occurs only *after* the NP [the glider], whereas in (61) the particle [down] occurs only *before* the NP [organized gambling]. Then, how could the syntax of 'Phrasal Verbs' established so far explain the irregularity of the

particle behaviors ? Or is it something other than the syntactic nature ?

Chen (1986) argues that there is a subtle difference between (a) and (b) sentences below :

- (62) a. John picked up a book and threw it out the window.
 b. John picked a book up and threw it out the window.
- (63) a. There is a dark-covered book under the dining-table.
 John picked the book up and went upstairs.
 b. There is a dark-covered book under the dining-table.
 John picked up the book and went upstairs.

(Chen (1986 : 81))

Chen claims that (62a) and (63a) sound more natural than (62b) and (63b), respectively. The difference noted here could not be accounted for within the framework we have developed so far. Further research will be required to give a principled account of the seemingly syntactic anomalies of these verb-particle constructions.

5. Concluding Remarks

In sections 1 and 2, we have reviewed three major syntactic tests which have been invoked to differentiate the verb-preposition constructions from the verb-particle constructions. In section 3, we have argued that there are quite a few examples which could not be explained in terms of these syntactic criteria. In section 4, we have also argued that the syntactic status of the particles in phrasal verbs should be P", a phrase-level category, and the internal D-structure of the VPs should be [_{v'} [_v [V NP PP]]]. Given these assumptions, we could stipulate the rightward NP movement to derive the alternative structure [_{v'} [_v [V [e_i] PP]]

[NP_i]]. This analysis could provide a principled account of verb-particle constructions in English. I hope that further research will reveal the explanatory adequacy of this analysis and its interaction with other aspects of the theory of English grammar.

Notes

* I wish to express my gratitude to Toshiaki Nishihara for his invaluable comments and suggestions. Thanks are also due to William MaComie and Mark Tiedemann, who have willingly and patiently served as informants. Needless to say, all the errors and inadequacies in the present paper are my own.

1. This acronym represents *Oxford Dictionary of Current Idiomatic English* (1975) by Cowie, A. P. and Mackin, R. Hence, ODCIE stands for this source.

2. The term 'particle' is generally defined as "indeclinable or uninflected parts of speech." Cowie, A. P. and R. Mackin (1975 : xxix) describes as follows :

"The terms particle and preposition are used throughout the dictionary to reflect the ways in which words such as *away, off, on, with* etc. are used in sentences (i. e. their syntactic functions). In other words, 'particle' and 'preposition' refer to use and not to form."

3. These diagrams are from Radford (1988 : 90), in which X-bar or X' notation is omitted since it is irrelevant to the present discussion.

4. There seems to be some other syntactic criteria to distinguish verb-particle combinations from verb-preposition ones. Firstly, the 'Gapping' test :

- (i) (a) He sped up the street, and she sped up the alleyway.
- (b) He sped up the street, and she, up the alleyway.
- (ii) (a) He sped up the process, and she sped up the distribution.
- (b) * He sped up the process, and she, up the distribution.

(Fraser (1974 : 2))

The verb *get* can be gapped along with the modal *would* in (ib) above, but the sequence [would put] cannot be gapped in (iib).

Secondly, the 'Coordination' test :

- (iii) (a) They talked about the situation and about the issues of the day.
 (b) *The fisherman reeled in the lines and in the fish nets.

(Okuno (1989 : 68))

In (iii a), the sequence [about the situation] is a PP constituent and it can be coordinated with another PP of the same type, [about the issues of the day]. By contrast, as we can see from (iii b), the sequence [in the lines] cannot be coordinated with another similar sequence [in the fishnets]. These syntactic tests have been proposed to support the syntactic difference between verb-particle and verb-preposition combinations. But I will not go further into these issues here. See Fraser (1974), Okuno (1989) and Radford (1988) for further discussion.

5. My informants suggests that under a certain context, the sequence [particle-NP] could be preposed :

SPEAKER A : Did you push the lever down ?

SPEAKER B : ? No, *up the lever* I pushed.

(SPEAKER B : No, *up*.)

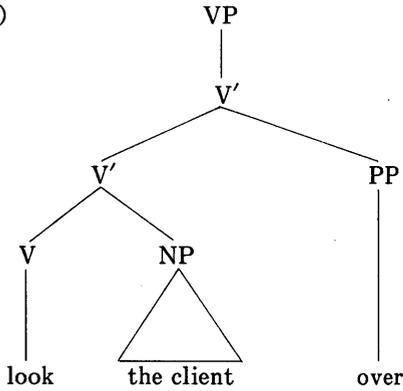
6. Radford (1988 : 241) suggests that within the X-bar theory of categories, VP adverbs can be described more accurately as V-bar Adverbs — i. e. as adverbs which function as verbal attributes or adjuncts.

7. Chomsky (1957 : 75) suggests the following *Particle Movement Rule* :

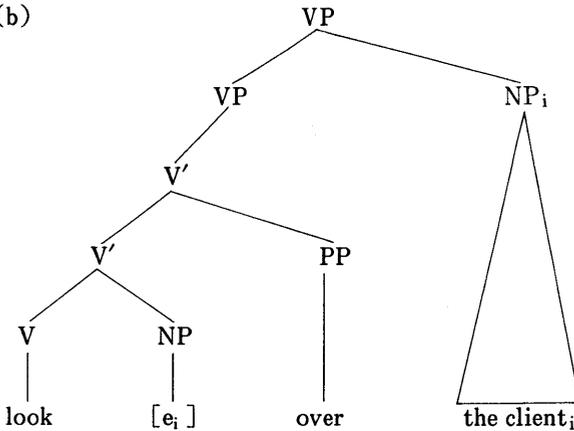
(i) X, V, Prt, NP → X, V, NP, Prt

8. If we permit the recursion of V', we may have the following internal structures of the VPs :

(i) (a)



(b)



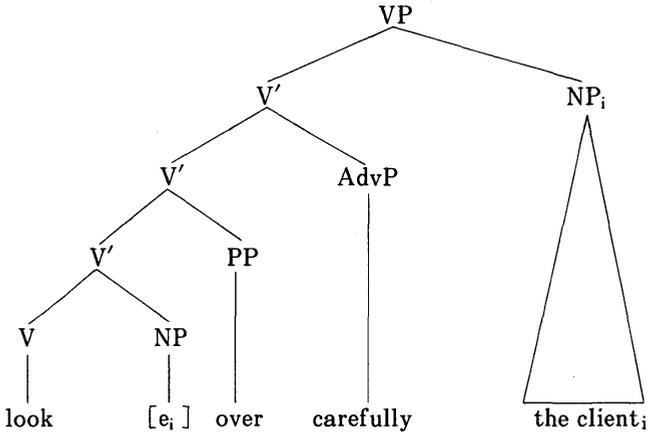
However, the structure (ib) could not block the occurrence of VP-adverbs within the VPs, as in (ii) below :

(ii) (a) *Harry will look over carefully the client.

(b) *Drunks would put off completely the customers.

For example, the VP in (ii a) could have the structure (iii) :

(iii)



Therefore, I do not stipulate such VP structures as (ia) or (ib) in the present discussion.

9. Kayne (1984) claims that the moved NPs be adjoined to V' not to V", which is not in accordance with Chomsky's (1986 : 6) treatment. Here, I accept Chomsky's treatment without any discussion.

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