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**Abstract**
The traditional view holds that English main verbs do not move to any of the inflectional heads AgrS, Tns or AgrO. Recently, it has been claimed that while English main verbs cannot move to the highest inflectional head (i.e. AgrS), they may move to an intermediate inflectional head such as AgrO or Tns (cf. section 2). In earlier work, I have argued that all verb movement to inflectional heads is triggered by the overt morphology of the latter (cf. Rohrbacher (1993)). This approach is not compatible with movement of English main verbs to AgrO or Tns since the language does not have overt object agreement and its overt tense morphology is not significantly 'richer' than that of the Mainland Scandinavian V in situ languages. The current paper presents new evidence from Quantifier Floating against (short) main verb movement in English. If English main verbs could move out of VP and leftwards to an intermediate inflectional head, they should be able to precede a floating subject quantifier in the specifier of VP. The resulting word order is however ungrammatical, a fact which strongly suggests that English main verbs stay in situ (cf. section 3). This conclusion is confirmed by the inability of adverbs that do not adjoin to the right of VP to surface after main verbs. The paper closes with a reëxamination of the arguments adduced in support of short verb main verb movement in English and finds that most if not all of them are less than convincing (cf. sections 4 and 5).[1]

**Comments**
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# The Institute For Research In Cognitive Science

## English Main Verbs Move Never

by

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# *ENGLISH MAIN VERBS MOVE NEVER

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## 1. Overview

The traditional view holds that English main verbs do not move to any of the inflectional heads AgrS, Tns or AgrO. Recently, it has been claimed that while English main verbs cannot move to the highest inflectional head (i.e. AgrS), they may move to an intermediate inflectional head such as AgrO or Tns (cf. section 2). In earlier work, I have argued that all verb movement to inflectional heads is triggered by the overt morphology of the latter (cf. Rohrbacher (1993)). This approach is not compatible with movement of English main verbs to AgrO or Tns since the language does not have overt object agreement and its overt tense morphology is not significantly 'richer' than that of the Mainland Scandinavian V in situ languages. The current paper presents new evidence from Quantifier Floating against (short) main verb movement in English. If English main verbs could move out of VP and leftwards to an intermediate inflectional head, they should be able to precede a floating subject quantifier in the specifier of VP. The resulting word order is however ungrammatical, a fact which strongly suggests that English main verbs stay in situ (cf. section 3). This conclusion is confirmed by the inability of adverbs that do not adjoin to the right of VP to surface after main verbs. The paper closes with a reëxamination of the arguments adduced in support of short verb main verb movement in English and finds that most if not all of them are less than convincing (cf. sections 4 and 5).[1]

## 2 English Main Verb Positions

### 2.1 V in Situ

The familiar transformational rule of Affix Hopping states that in English, inflectional affixes lower onto the verb in situ. An early formulation of this rule is reproduced in (1).[2] It is taken from Bach (1974), a work that was first published in 1964.

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1 This paper benefitted greatly from comments by Michael Hegarty, Kyle Johnson, Anthony Kroch and Beatrice Santorini. I would also like to thank the audience at the 18th Annual Penn Linguistics Colloquium in general and Stefan Frisch and Sabine Iatridou in particular. The usual disclaimers apply. Work on this paper was supported by NSF grant #SBR-8920230.

What follows represents work in progress, and comments are highly welcome.

2 Interestingly, the 'original' version given in "Syntactic Structures" (firtst published in 1957) is compatible with either lowering of the affix or raising of the verb.

(i) Auxiliary Transformation - obligatory

Structural Analysis: X - Af - v - Y

(where Af is any C or is *en* or *ing*; v is any M or V, or *have* or *be*)

Structural Change: $X_1 - X_2 - X_3 - X_4 \Rightarrow X_1 - X_3 - X_2\# - X_4$

(Chomsky 1965: 113)

(1) *Affix-shift*

| | | | | | |
|---|---|---|---|---|---|
| SA: | *X*, | [+*Affix*], | [+*Verb*], | Y | |
| | 1 | 2 | 3 | 4 | ⇒ |
| | 1 | Ø | 3*2+⊕ | 4 | (Bach 1974: 94) |

Two of the three claims of Affix Hopping, i.e. that inflection is generated above the verb and that the English verb does not raise to inflection, have remained largely unchallenged, although their theoretical implementation has undergone considerable change. Thus Pollock (1989) and Chomsky (1989) take the fact that negation and adverbs follow the main verb in French (cf. (2)) but precede it in English (cf. (3)) to indicate that while French main verbs must move to the highest inflectional head, English main verbs must stay in situ inside VP. This is shown in the tree in (4) which follows Chomky (1989) with respect to the relative placement of the functional heads.

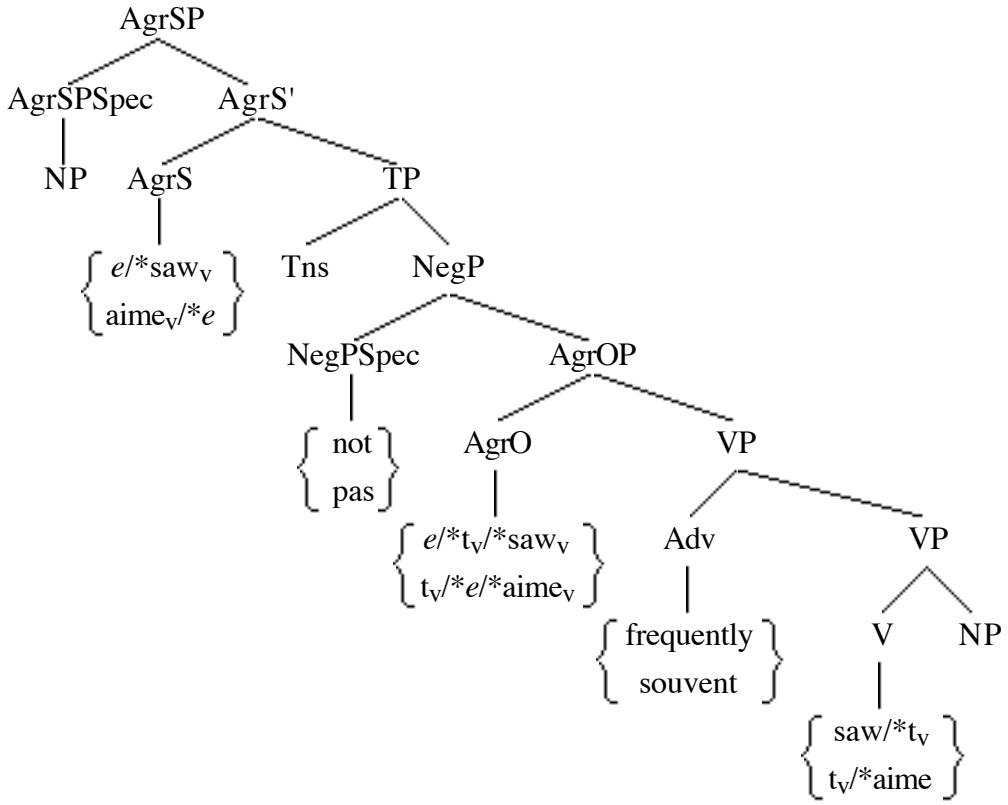
(2)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| a. | Marie | n'aime | pas | Jean. | a'. | *Marie | ne | pas | aime | Jean. |
| | M. | NEG-likes | not | J. | | M. | NEG | not | likes | J. |
| | "Mary doesn't like John." | | | | | | | | | |
| b. | Marie | embrasse | souvent | Jean. | b.' | Marie | souvent | embrasse | Jean. | |
| | M. | embraces | often | J. | | M. | often | embraces | J. | |
| | "Mary often embraces John." | | | | | | | | | (French) |

(3)

| | | | |
|---|---|---|---|
| a. | Sue did not see the movie. | a.' | *Sue saw not the movie. |
| b. | Sue frequently saw the movie. | b.' | *Sue saw frequently the movie. |

(4)




The third claim of Affix Hopping, i.e. that inflection lowers onto the English verb, has been abandoned. Thus Chomsky (1992) proposes that verbs are inflected already in

the lexicon and that the abstract tense and agreement features must be checked via verb movement to the inflectional heads. In languages like French where these features are strong, checking takes place at S-structure and verb movement is overt (hence the pattern in (2)). In languages like English where these features are weak, checking takes place at LF and verb movement is covert (hence the pattern in (3)). Cross linguistically, the strength or weakness of the abstract inflectional features appears to correlate with the amount of corresponding concrete morphology. I have argued in Rohrbacher (1993) that AgrS is strong in exactly those languages whose overt subject-verb agreement morphology minimally distinctively marks the person and number features. There I also give an explanatory rationale for this descriptive generalization to which the reader is hereby referred.

## 2.2 V to AgrO

Pesetsky (1989) points out that while English main verbs that take NP-complements obligatorily follow both negation and adverbs as shown in (3), English main verbs that take PP-complements must follow negation but may either precede or follow adverbs as shown in (5).

(5) a. Sue did not look at him. a.' *Sue looked not at him.
b. Sue carefully looked at him. b.' Sue looked carefully at him.

Pesetsky argues that the V^Adv order in (5b') is not due to right-adjunction of the adverb plus PP-extraposition, but that it arises instead via left-adjunction of the adverb plus verb movement to an intermediate functional head (cf. section 4). Branigan and Collins (1993) identify this head as AgrO and assign (5b') the S-structure in (6).[3]

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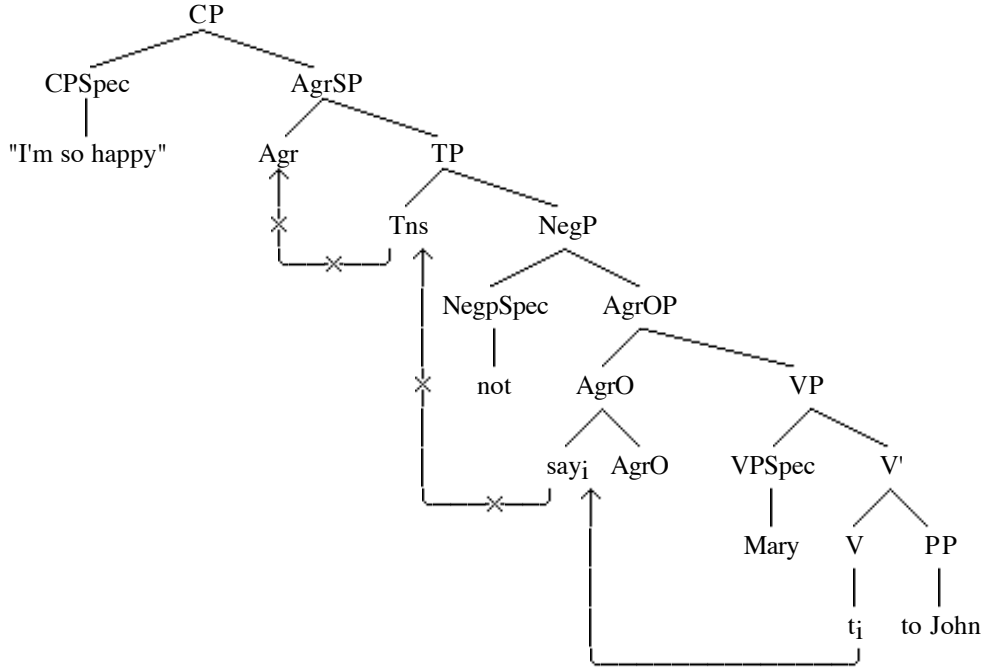
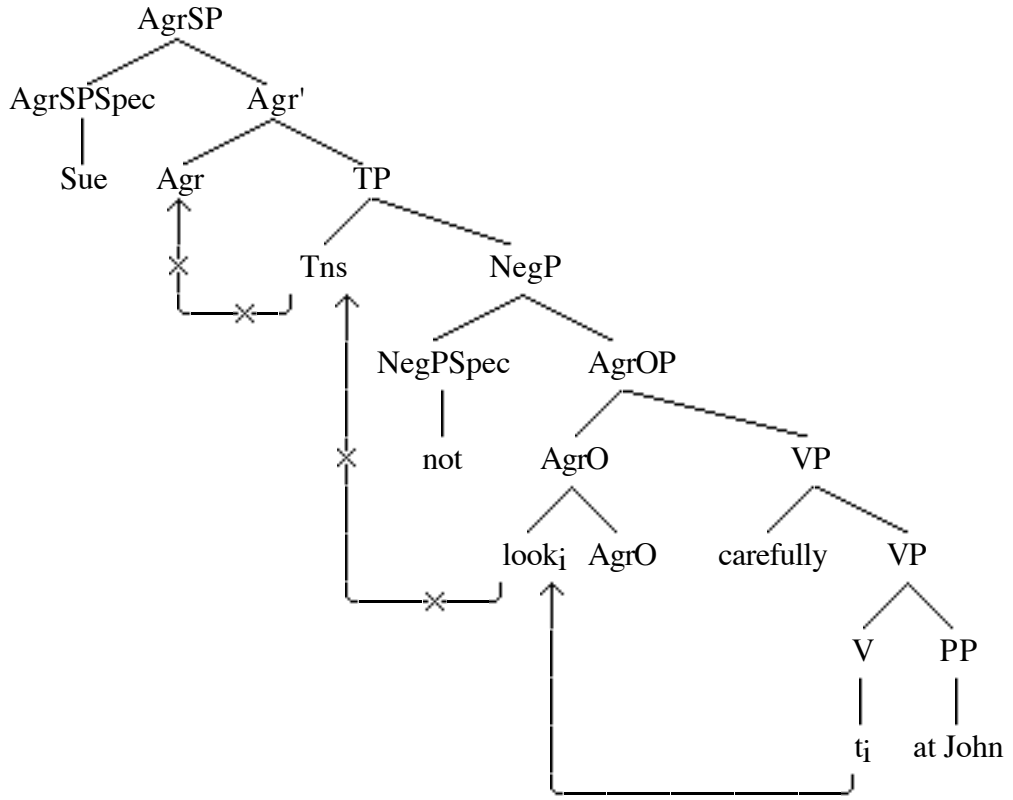
[3] Branigan and Collins also argue that the Quotative Inversion example in (ib) should be analyzed as in (ii) and thus constitutes another instance of optional main verb movement to AgrO in English.

(i) a. "I'm so happy", Mary said to John. b. "I'm so happy", said Mary to John.

(ii)



(6)




Branigan and Collins assume that English AgrO may have either a weak or a strong N-feature. In the first case, checking of this feature via V to AgrO raising is delayed until LF as in (5b). In the second case, checking/verb raising must happen in overt syntax as in (5b'). If the N-feature of AgrO is strong and the verb selects an NP-complement, this NP must move to the specifier of AgrOP where it blocks movement of the subject from VPSpec to AgrSPSpec - hence the ungrammaticality of (3b').

I mentioned earlier that cross linguistically, the strength or weakness of the abstract inflectional features seems to correlate with the amount of corresponding concrete morphology. Under Branigan and Collins's analysis of (5b'), English AgrO no longer fits this pattern: Its N-feature can be either weak or strong although there is never any concrete object agreement morphology in English. The result is a circular theory where AgrO's strong N-feature explains main verb movement and main verb movement is the only

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According to Branigan and Collins, (iiia) shows that in the Quotative Inversion, the verb cannot move past AgrO. But this leaves unexplained why do-support is not welformed either in this construction (cf. (iiia')), unless do is base-generated in AgrO. Another problem concerns adverb-placement. If Quotative Inversion involves V to AgrO, the order V^Adv should be grammatical, which it is not (cf. (iiib)). If on the other hand Quotative Inversion involves V in situ, we expect to find the order Adv^V. While Adv^V is more acceptable than V^Adv, it is far from perfect. The jugements in (iii) are those reported in Branigan and Collins.

(iii) a. *"I'm so happy", denied not Mary. a.' ??"I'm so happy", didn't deny Mary.
b. *"I'm so happy", said often Mary. b.' ?"I'm so happy", often said Mary.

Finally, it is unclear what allows the subject to stay in VPSpec in Branigan and Collins's analysis of the Quotative Inversion (cf. (ii)).

Quotative Inversion is restricted to the written language. It is therefore possible (especially in light of the problems listed above) that it reflects an earlier stage of English and cannot be analyzed in purely synchronic terms. I will leave this question for future research.

evidence for the AgrO's strong N-feature. Clearly a more explanatory account would be desirable.

## 2.3 V to Tns

Johnson (1991,1992) notes that English Particle Constructions and Icelandic Object Shift display similar word order patterns. In English, a full NP object may follow or precede a verbal particle while a pronominal object obligatorily precedes it (cf. (7)). In Icelandic sentences containing a single verb, a full NP object may follow or precede a negation marker or adverb while a pronominal object obligatorily precedes these elements (cf. (8)).

(7) a. Betsy blew up the bridge. a.' Betsy blew the bridge up.
b. *Betsy blew up it. b.' Betsy blew it up.

(8) a. Jón keypti ekki bókina. a.' Jón keypti bókina ekki.
J. bought not book-the. J. bought book-the not
"John didn't buy the book."
b. ?* Jón keypti ekki hann. b.' Jón keypti hann ekki.
J. bought not it J. bought it not
"John didn't buy it." (Icelandic)

Johnson suggests that the Particle Construction examples in (7a',7b') and the Object Shift examples in (8a',8b') have not only similar word orders, but also similar structures. Object Shift is arguably best analyzed as involving overt movement of the object into AgrOPSpec (cf. Jonas and Bobaljik (1993)). If this movement is also at work in Particle Constructions, the main verb preceding the object in (7a',7b') must have moved at least to Tns. The contrast in (9) is intended to show that it has in fact stopped in Tns (now assumed to be located below NegP) and not moved on past negation to AgrS. According to this analysis, (7b') has the S-structure in (10) on the next page.

(9) a. Betsy did not blow the bridge up. b. *Betsy blew not the bridge up

Johnson's analysis of Particle Constructions runs into a problem that is similar to the one discussed above in connection with Branigan and Collin's analysis of post-verbal adverbs. This problem involves the trigger for main verb movement to Tns in English. While there is concrete tense morphology in English, comparable morphology also exists in the Mainland Scandinavian languages which do not allow V to Tns. To see the latter point, consider the examples in (11). Swedish excludes Object Shift from embedded clauses that are not the complements of bridge verbs and as a consequence, pronominal objects obligatorily follow negation. This fact receives a straightforward explanation if we assume that Swedish verbs do not independently move as far as Tns. In this case, AgrOPSpec is the nearest landing site for the subject in VPSpec and a shifted object in AgrOPSpec will block the required movement of the subject to AgrSPSpec (cf. Jonas and Bobaljik (1993) and Rohrbacher (1993)). If on the other hand we were to assume that Swedish verbs move to Tns, it is unclear what blocks Object Shift in (11). Provided the conclusion that Swedish verbs do not move to Tns is correct, then any such movement in English has to be stipulated and cannot be related to other (e.g. morphological) properties of the language.[4]

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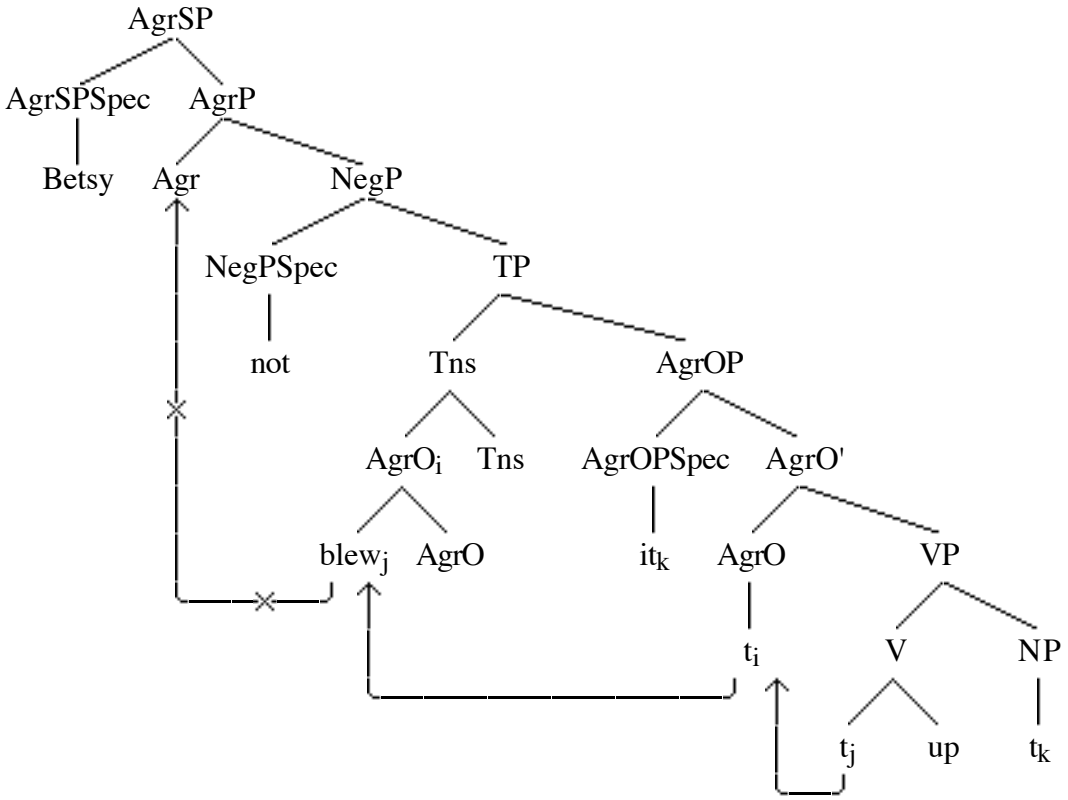
[4] In Mainland Scandinavian root clauses and complements of bridge verbs, the verb moves to Comp as part of the V2 phenomenon and Object Shift occurs as expected. In Icelandic (but not not Mainland Scandinavian) embedded clauses that are not complements of bridge verbs, the verb moves to AgrS and

(10)




(11) a. Jag beklager att studenterna inte läste den.
I regret that students-the not read it

b. * Jag beklager att studenterna den inte läste.
I regret that students-the it not read

"I regret that the students didn't read it." (Swedish)

There is another instance where the parallelism between Particle Constructions and Object Shift collapses. Scandinavian Object Shift never occurs in complex tenses (cf. (12a)), presumably for the same reason for which it is barred from Mainland Scandinavian embedded clauses that are not the complements of bridge verbs (cf. the discussion around (11)): The participle has not moved to Tns and a shifted object in AgrOPSpec would block movement of the subject from VPSpec to AgrSPSpec. English pronouns on the other hand obligatorily precede verbal particles in complex tenses (cf. (12b)). Under Johnson's analysis, we have to assume that English participles (unlike their Scandinavian counterparts) move to Tns. As far as I can see, this difference between English and Scandinavian cannot be independently motivated and must instead again be stipulated.

(12) a. Jón hefur ekki keypt hann.
J. has not bought it
"John hasn't bought it." (Icelandic)

a.' *Jón hefur hann ekki keypt.
J. has it not bought

b. *Betsy has blown up it.

b.' Betsy has blown it up.

---

Object Shift is again obligatory (cf. Rohrbacher (1993) for discussion). Note that English has neither V to C nor V to AgrS.

Taken together, these problems suggest that the English Particle Construction should not be analyzed along the same lines as Scandinavian Object Shift and in particular that the former does not involve verb movement to Tns. In section 5, I will sketch the Particle Construction analysis of Kayne (1984) which is based on Heavy NP Shift instead of verb movement and which I think has better chances to be on the right track.

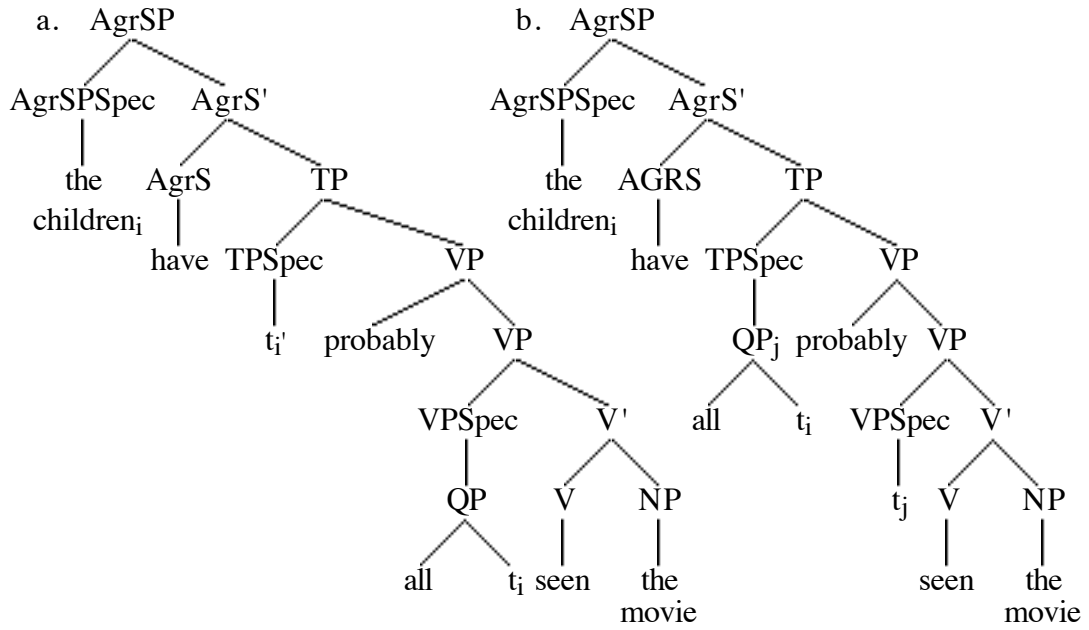
## 3. Quantifier Floating

Direct empirical evidence against main verb movement in English comes from Quantifier Floating. A quantified subject can of course appear as a whole in the S-structural subject position (cf. (13a)). Alternatively, a quantified subject can be split up so that only its NP appears in the S-structural subject position and its quantifier 'floats' to the right (cf. (13b,c)).

(13) a. All the children have probably seen the movie.
b. The children have probably all seen the movie.
c. The children have all probably seen the movie.

Following Sportiche (1988), Floating Quantifiers of the type illustrated above are standardly analyzed as follows. In (13b), the quantifier phrase has remained in VPSpec, the D-structural subject position, and only the NP originally contained within it has moved to AgrSPSpec, the S-structural subject position (cf. (14a)). In (13c), the whole quantifier phrase has moved halfway up the tree to TPSpec and only its NP has then moved on to AgrSPSpec (cf. (14b)).

(14) a. b.

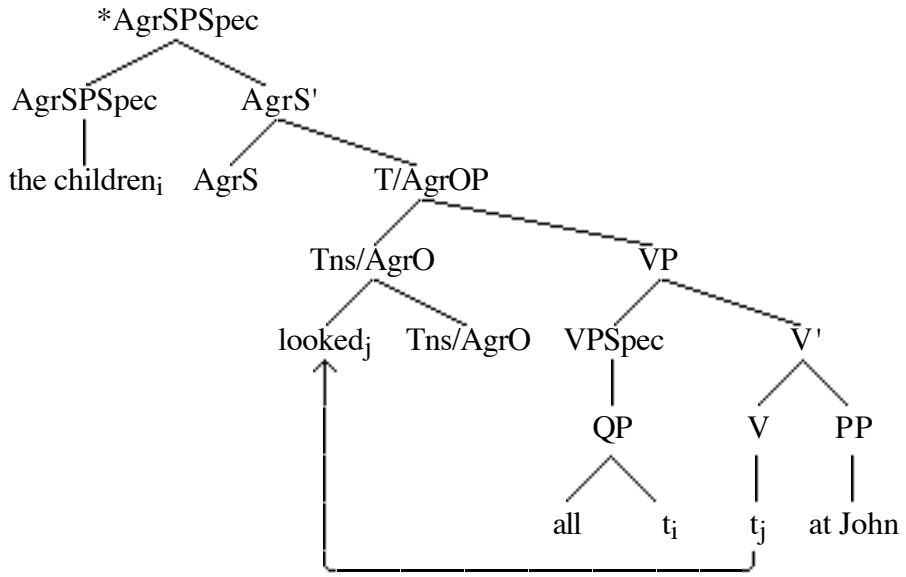



With (13) and (14) in mind, let us now return to Pestsky's, Branigan and Collins's and Johnson's verb movement based account for adverb placement and Particle Constructions. (13b) with the S-structure in (14a) shows that a floating subject quantifier can appear in VPSpec. If (6) is the correct analysis for (5b') or (10) is the correct analysis for (7b'), if in other words Pesetsky, Branigan and Collins and Johnson are right that the English main verb may move out of the VP to AgrO, Tns or some other inflectional head,

then the main verb should be able to precede a floating subject quantifier. Sentences like (15) with the S-structure in (16) are however ungrammatical.

(15) *The children looked all at John.

(16)




The ungrammaticality of the order V^FQ strongly suggests that English main verbs cannot move to an inflectional head and must instead stay in situ inside VP. In this case, we need to come up with analyses for English adverb placement (especially the order V^Adv^PP) and Particle Constructions (especially the order V^Obj^prt) that do not rely on main verb movement. Sections 4 and 5 briefly discuss some options along these lines.

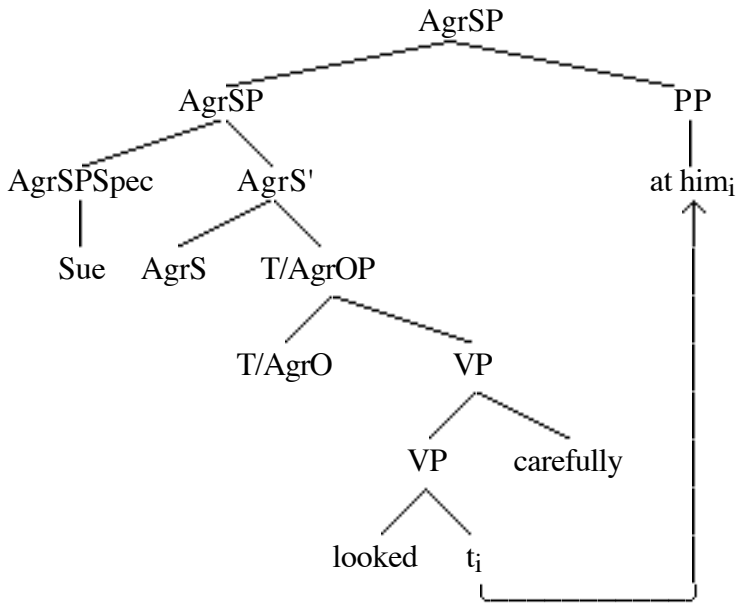
## 4 Adverb Placement

If (5b') repeated below as (17a) involves V in situ instead of V to AgrO/Tns, the adverb following the verb must have been generated on the right edge of the VP, an option that is clearly available in light of the surface order in (17b). In addition, the clause final PP must have been extraposed. The S-structure of (17a) is given in (18).[5]

(17) a. Sue looked carefully at him.
b. Sue looked at him carefully.

[5] The exact adjunction site of the extraposed PP is irrelevant with respect to the topic of this paper. The concrete choice of AgrSP in (21) should not be mistaken as a theoretical claim, especially in light of the fact that below I will adjoin extraposed PPs to T/AgrOP where this is more convenient.

(18)




Independent evidence for this analysis comes from adverbs like those in (19) which as usual may appear on the left edge of the VP (compare (20a) with (5b)) but have the special property of being barred from the right edge of the VP (compare (20b) with (17b) and see the discussion in Jackendoff (1972) and Emonds (1976)). The verb movement analysis in (6) predicts that the order V^Adv^PP is grammatical with adverbs of this type, since it can be straightforwardly derived from (20a) via V to AgrO/Tns. The V in situ analysis in (18) on the other hand predicts that this order is ungrammatical with these adverbs, since the latter do not allow adjunction to the right of VP. The ungrammaticality of (20c) shows that the V in situ analysis but not the V to AgrO/Tns analysis makes the right prediction and thus corroborates our conclusion reached in connection with Quantifier Floating (cf. the ungrammaticality of (15)) that English main verbs do not move.

(19) barely, hardly, merely, nearly, really, scarcely, simply, utterly, virtually

(20) a. John scarcely glanced at the students.
b. *John glanced at the students scarcely.
c. *John glanced scarcely at the students.

Pesetsky (1989: fn. 20) acknowledges that the ungrammaticality of (20c) is problematic for his account but notes that this word order improves when the verb is focused (cf. (21a)). However, the order in (20b ) also improves under verb focus (cf. (21b)). It thus seems that verb focus simply makes the right VP-edge marginally available even for the class of adverbs illustrated in (17), in which case the relative acceptability of (21a) does not bear on the question under consideration and the ungrammaticality of (20c) continues to strongly favor the V in situ approach over the V to AgrO/Tns approach.

(21) It was easy to get their attention...
a. ?John SHOUTED simply to them, and they came.
b. ?John SHOUTED to them simply, and they came.

The V in situ analysis in (18) predicts that extraction from the PP is degraded, since adjuncts are islands for movement. The V to AgrO/Tns analysis in (6) on the other hand predicts that extraction from the PP is perfect, since complements freely allow movement.

Consider now the paradigm in (22) and in particular the status of (22c), which exhibits extraction from an adjunct according to the V in situ analysis and extraction from a complement according to the V to AgrO/Tns analysis, versus the status of (22a,b) which exhibits extraction from a complement according to both analyses. Pesetsky finds (22c) as good as (22a,b), but all my informants find (22c) much worse than (22a,b). If the latter judgments are reliable (and I think they are), this contrast again favors the V in situ approach over the V to AgrO/Tns approach.

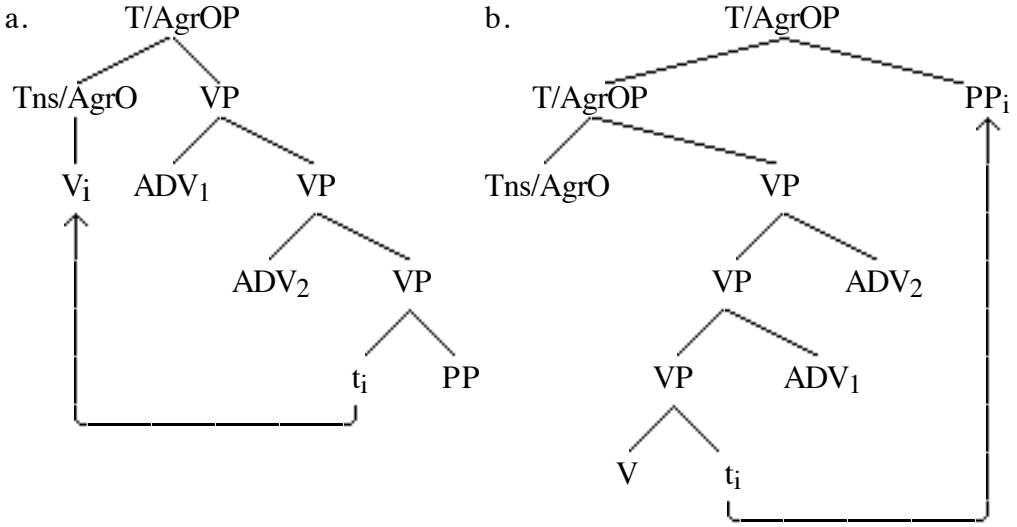
(22) a. This is what Bill has recently looked at.
b. This is what Bill has looked at recently.
c. ?This is what Bill has looked recently at.

Still, (22c) is slightly better than uncontroversial cases of adjunct extraction such as (23). Independent factors may play a role here, but I have no solution to this problem at this point and will have to leave it for further research.

(23) *"Portnoy's Complaint", which I gave to Bill a copy of, is a great book.

The two theories also make different predictions with respect to the c-command relations between multiple post-verbal adverbs. In the sequence V^Adv$_1$^Adv$_2$^PP, either adverb can c-command the other according to the V to AgrO/Tns analysis (where both (24a) and (24b) are available). According to the V in situ analysis (where only (24b) is available), the second adverb unambiguously c-commands the first.

(24) a. b.




When stacked to the left of VP, adverbs of completion must occur inside subject-oriented adverbs (cf. (25)). Provided that this is not merely a restriction on linear precedence, this means that adverbs of completion cannot c-command subject-oriented adverbs.

(25) a. Sue recently completely agreed with my comments.
b. *Sue completely recently agreed with my comments.

Let us now consider what should happen when an adverb of completion and a subject-oriented adverb are sandwiched between a main verb and a PP. According to the V to AgrO/Tns analysis, both the order Adv(subj)^Adv(comp) with the structure in (24a) and the order Adv(comp)^Adv(subj) with the structure in (24b) should be acceptable, since in

both cases the adverb of completion does not c-command the subject-oriented adverb. According to the V in situ analysis, only the order Adv(comp)^Adv(subj) should be acceptable, since the only available structure is (24b) where the second adverb asymmetrically c-commands the first. Pesetsky finds the order Adv(subj)^Adv(comp) at least marginally acceptable and the order Adv(com)^Adv(subj) ungrammatical and takes these judgments to support the V to AgrO/Tns analysis. The reasoning behind this conclusion is unclear, since we just saw that the V to AgrO/Tns analysis actually rules in both orders. But more importantly, I doubt the general validity of Pesetsky's judgments. All my informants find (26b) with the adverb of completion preceding the subject-oriented adverb better than (26a) with the reverse order. If anything, this supports the V in situ analysis.

(26) a. ??/*Sue agreed recently completely with my comments.
b. √/?Sue agreed completely recently with my comments.

Consider finally a related matter, i.e. the relative scope of multiple adverbs. If scope is based on c-commands, then both the V to AgrO/Tns and the V in situ analysis predict that <u>intentionally</u> has scope over <u>twice</u> in (27a) which can only have the structure in (24a) minus verb movement and that <u>twice</u> has scope over <u>intentionally</u> in (27b) which can only have the structure in (24b) minus PP-extraposition. In other words, (27a) should refer to one intentional event of knocking twice whereas (27b) should refer to two events of intentional knocking. But when the adverbs are sandwiched between the verb and the PP as in (27c), the two theories make different predictions. According to the V to AgrO/Tns analysis, both wide and narrow scope of either adverb should be possible, depending on whether (24a) or (24b) is chosen. According to the V in situ analysis, only wide scope of <u>twice</u> over <u>intentionally</u> should be possible, since only (24b) is available. Pesetsky reports that the facts are as predicted by the V to AgrO/Tns analysis.

(27) a. John intentionally twice knocked on the door.
b. John knocked on the door intentionally twice.
c. John knocked intentionally twice on the door.

I however think that it makes little sense to discuss the interpretations of (27a-c) without paying attention to prosody.[6] There are two more or less natural intonational patterns for the adverbs in (27): Asymmetric with considerably more emphasis on the second adverb (<u>intentionally twíce</u>) and symmetric with almost equal emphasis on both adverbs (<u>inténtionally twíce</u>). (27a,b) are most natural with the asymmetric intonation while (27c) is most natural with the symmetric intonation. What is crucial is that (27a,b) become ambiguous when the symmetric intonation is chosen and that (27c) becomes unambiguous (with wide scope of <u>twice</u> over <u>intentionally</u>) when the asymmetric intonation is chosen. If we disregard the question which intonation is most natural for which sentence (a question that I assume is irrelevant with respect to the problem at hand), then it turns out that (27c) is entirely parallel to (27b): Both of these sentences are ambiguous with the symmetric intonation and, more importantly, they both require wide scope of the second adverb over the first with the asymmetric intonation. (27a) is the odd man out, being ambiguous with the symmetric intonation but requiring wide scope of the first adverb over the second with the asymmetric intonation. If semantic scope depends on syntactic structure as assumed by Pesetsky, then this pattern suggests that (27c) is structurally similar to (27b) but structurally dissimilar from (27a). In this case, the adverbs in (27c) must be stacked to the right of VP (as in (27b)) and not to the left of VP (as in (27a)). This is as predicted under the V in situ analysis, according to which the post-verbal position of

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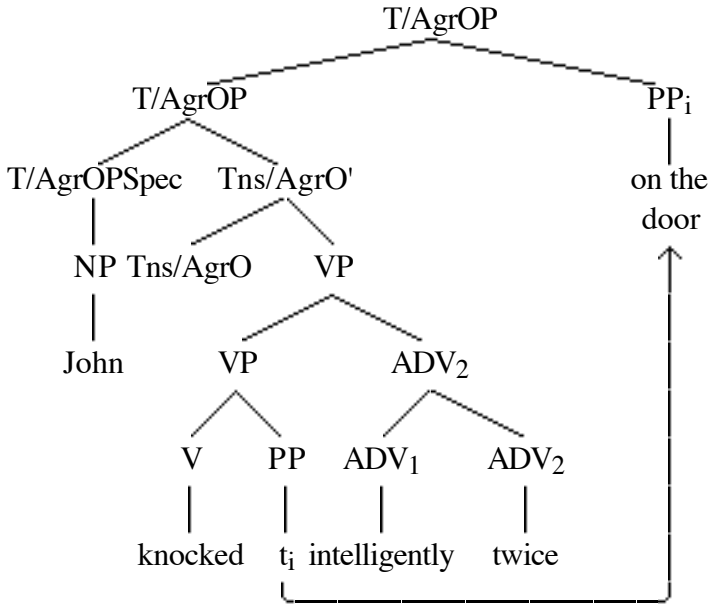
6 The following remarks grew out of discussions with Michael Hegarty and Tony Kroch.

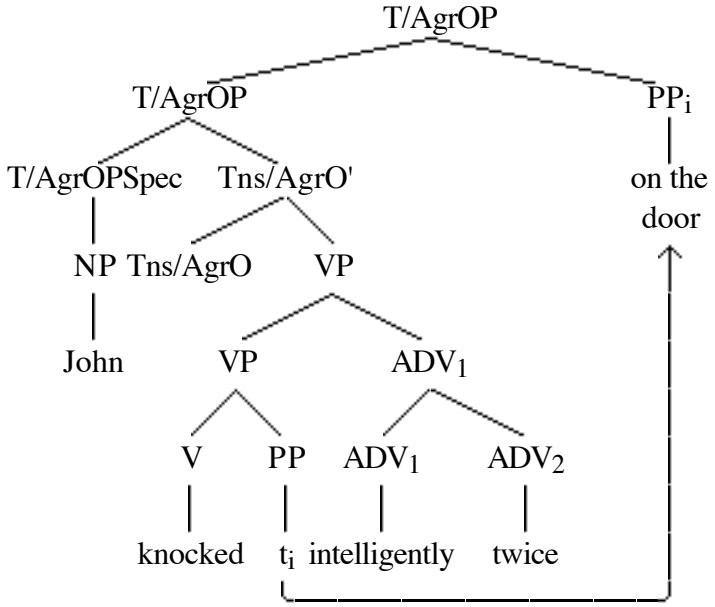
adverbs indicates that they are adjoined to the right of VP, but it is incompatible with the V to AgrO/Tns analysis, according to which post-verbal adverbs can be the result of their adjunction to the left of VP plus verb movement to an inflectional head. The contrast in (27) thus turns out to be evidence for the V in situ analysis and against the V to AgrO/Tns analysis.

It is natural to assume that the asymmetric intonation is chosen when the adverbs are adjoined directly to the stem of the tree, i.e. when they are stacked to the right or the left of VP. But what is the syntactic structure that gives rise to the symmetric intonation? I propose that in this case, the first adverb is adjoined to the second as in (28) or the other way around as in (29). Let us further adopt Kayne's definition of c-command in (30). According to this definition, <u>intentionally</u> c-commands and has therefore scope over <u>twice</u> in (28) but not vice versa. In (29), the opposite holds: <u>twice</u> c-commands and has therefore scope over <u>intentionally</u> but not vice versa.

(28)




(29)



(30) X c-commands Y iff X and Y are categories and X excludes Y and every category that dominates X dominates Y. (Kayne 1993:9)

The scope-paradigm of multiple adverbs located between a main verb and a PP does however provide one piece of seemingly genuine evidence for the V to AgrO/Tns and against the V in situ approach. When the NP in (27c)'s clause-final PP is extracted as in (31), the reading with scope of twice over intentionally vanishes, even when the symmetric intonation is chosen. This is as predicted by the V to AgrO/Tns account, according to which this reading depends on the availability of (24b): Since extraction out of adjunction violates the island condition, (31) can only have structure (24a) with wide scope of intentionally over twice. In the V in situ account, the lack of ambiguity in (31) is surprising, since extraction out of the PP should not affect the availability of adjoining twice to intentionally as in (29). But remember that extraction out of PP in the scenario V^Adv^PP is not perfect to begin with (cf. (22c)), and it is unclear what a scope-judgment in connection with an imperfect sentence tells us about its syntactic structure.

(31) ?The door which John knocked intentionally twice on is to your right.

We have seen in this section that while the syntax of adverbs does not yield conclusive arguments for the V to AgrO/Tns analysis, the fact that obligatorily left-adjoined adverbs don't appear between V and PP strongly supports the V in situ analysis.

## 5 Particle Constructions

The Particle Construction examples in (7) share important syntactic and semantic properties with the adjective-headed Small Clause examples in (32). Bolinger (1971:68) notes that "at least some conjunctions between particles and adjectives are perfectly normal" (cf. (33)), a fact that suggests that particles and adjectival heads of Small Clauses have the same syntactic status.

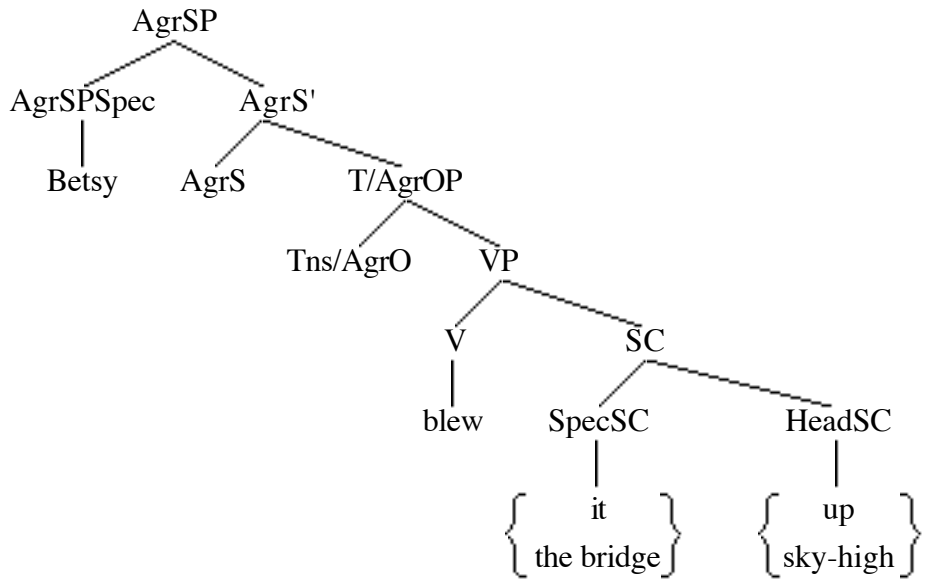
(32) a. Betsy blew the bridge sky-high. a.' *Betsy blew sky-high the bridge.
b. Betsy blew it sky-high. b.' *Betsy blew sky-high it.

(33) He held the gun out and ready.

It is hence tempting to analyze (7) and (32) along the same lines, i.e. to extend the Small Clause analysis to Particle Constructions. Such a proposal was first formalized in Kayne (1984), who assigns the structure in (34) on the next page to the examples in (7) and (32). This analysis does not have to make use of verb movement. Rather, what had been previously regarded as the object of the verb is now understood to be the subject of the Small Clause headed by the particle or the adjective, respectively. Accordingly, the examples in (7a,7b,32a) and (32b) do not involve Object Shift but show the subject of the Small Clause in its underlying position and the example in (7a') is no direct reflex of D-structure, but has the Small Clause subject extraposed to the right. Such rightward movement of noun phrases is otherwise restricted to 'heavy' elements (Heavy NP-Shift). But Kayne points out that syntactic heaviness cannot be defined in absolute terms. Instead, it must be defined relative to the rest of the clause. When the Small Clause is headed by a particle, even a 'middleweight' full NP but not a 'light' pronoun counts as 'heavy' relative to this 'light' particle, and Heavy NP-Shift is hence possible in (7a') but not in (7b'). When the Small Clause is headed by an adjective, neither an 'middleweight' full NP nor a 'light' pronoun counts as 'heavy' relative to this 'middleweight' adjective, and Heavy NP-

Shift is hence impossible in both (32a') and (32b'). I do not have the space to discuss the details of this account,[7] but it seems to constitute a viable alternative to the V to AgrO/Tns analysis in (10) and has the advantage of being compatible with the V in situ analysis advocated in this paper.

(34)




In conclusion, I have argued in this paper that the ungrammaticality of a floating subject quantifier between a main verb and a PP lends strong support to the traditional assumption that main verbs do not move in English, a conclusion that is in accordance with recent cross-linguistic findings regarding the morphological properties of verb movement languages. Counter arguments against a V in situ analysis from the domains of adverb placement and word order in Particle Constructions were shown to be either inconclusive or to actually support the V in situ analysis.

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7 One of the numerous problems that needs to be addressed is the often non-compositional, idiomatic meaning of verb-particle complexes such as "blow up" (i.e. "destroy via explosion" or "lose one's temper"). Possibly, a level where the verb and the particle are reanalyzed as one verb is needed even in a theory where they originally head different projections.

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