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Verb Movement and the Distribution of Copular be

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1. Introduction

While there is general agreement that English main verbs do not raise overtly to T, it has often been suggested since Larson (1988) that they do undergo short movement, the target being either an extended lexical projection of the VP itself or some VP-like functional projection directly above it (e.g. Sportiche 1990, Bowers 1993).¹ Current theories of head movement distinguish two basic types: (1) lexical incorporation, or movement in lexical syntax (e.g. Hale and Keyser 1993), and (2) syntactic head to head raising, both of which are assumed to be subject to locality conditions such as the head movement constraint. Although lexical incorporation is generally assumed for English, overt syntactic movement, specifically of main verbs, is for the most part unattested. Movement of this type, however, is argued for in a number of theories related to the internal structure of verb phrases (e.g. Sportiche 1990, Koopman 1994), although the proposed trigger in such cases is argued to be lexically conditioned, with V raising overtly to license, or assign a theta role to, its external argument. Under more current formulations of the theory, specifically within the minimalist framework of Chomsky (1993, 1994, 1995), this assumption has led to the suggestion that theta features are strong formal features in English (e.g. Lasnik 1995, Boskovic and Takahashi 1995), although see Collins (1995) for an argument against this view.

In this paper, I will argue that syntactic head to head raising does exist in English. The major thesis will be that nonpassive main verbs raise to the head position of a functional category immediately dominating VP. Passive verbs, on the other hand, do not raise. Instead, copular be is inserted into the higher functional position. For ease of exposition, I will call this functional category Predicate Phrase or PrP, following Bowers (1993), although I do not necessarily assume that its primary function is to license

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predication. As used here, PrP is taken to be a landing site for verb movement, similar to the category μ in the theory of Pesetsky (1989).²

The main facts which I hope to provide an account of are illustrated in (1), with copular be appearing in italics.

- (1) (a) * The police were being arresting John.
 - (b) John was being arrested by the police.
 - (c) The police arrested John.

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(d) * John arrested by the police.

Taken together, the examples in (1a) and (1c) show that nonpassive verbs can never appear with copular be. (1b) and (1d), on the other hand, show that passive verbs must appear with copular be, at least in matrix clauses. Thus, nonpassive verbs and copular be are in complementary distribution. I will suggest that these facts follow from the claim that nonpassive verbs and copular be occupy the same position in the syntax, the head position of the predicate phrase. I will argue for structure (2a) in the case of nonpassive constructions, with the verb raising overtly to Pr, and for structure (2b) in the case of passive constructions, with the verb remaining in situ and copular be being inserted into Pr.

(a) $[P_{rP} ... V_{j...} [V_{P} ... t_{j...}]]$ (b) $[P_{rP} ... be... [V_{P} ... V...]]$ (2)

Note that ergative verbs in English must fall under structure (2a). Accordingly, they will be assumed to undergo overt raising. The primary reason for this assumption is that these verbs do not require the presence of the copula. Furthermore, given that ergative verbs are not assumed to be associated with external arguments, I do not assume that the need to license such arguments is the driving force behind overt verb movement in English.

2. **Empirical Arguments**

The first piece of evidence I would like to introduce for the structures in (2) involves the placement of a certain class of adverbs, which I will call the *perfectly*-class. Additional exemplars of this class include poorly, beautifully, horribly, and terribly. As illustrated by (3), in nonpassive constructions these adverbs only appear post-verbally.

- (a) * John poorly built the house. (3)
 - (b) John built the house poorly.
 - (c) * Mary beautifully played the flute.
 - (d) Mary played the flute beautifully.
 - (e) * John terribly handled the situation.
 - (f) John handled the situation terribly.

In passive constructions such as (4), however, perfectly-adverbs may either precede or follow the verb.

- (4) (a) The house was poorly built by John.
 - (b) The house was built poorly by John.
 - (c) The flute was beautifully played by Mary.(d) The flute was played beautifully by Mary.

²In this paper, I will not consider verb movement of the type commonly assumed to take place within the VP (e.g. V2 raising and adjoining to a 'light' V1 in a Larsonian VP shell), which may or may not be a function of lexical syntax.

Note that while all speakers may not find examples like (4a), (4c), and (4e) perfect, where the adverb is preceding a passive verb, they do find them much more acceptable than examples like (3a), (3c), and (3e), where the adverb is preceding a nonpassive verb.

Interestingly, while *perfectly*-adverbs may precede passive verbs, they cannot precede copular *be*, as demonstrated by the examples in (5).

(5) (a) * The house was poorly being built by John.

(b) The house was being poorly built by John.

(c) * The flute was beautifully being played by Mary.

(d) The flute was being beautifully played by Mary.

(e) * The situation was terribly being handled by John.

(f) The situation was being terribly handled by John.

Assuming that adverbs occupy fixed positions in the syntax, the examples in (3) through (5) suggest that nonpassive verbs and copular be occupy the same structural position.³ Following Bowers (1993), I take perfectly-adverbs to be strictly V' licensed, adjoining to either side of V. Integrating this assumption with the structures in (2) will yield (6). For purposes of this paper, I will assume that external arguments are generated in the specifier position of the predicate phrase.

(6) (a) [TP Maryk [PrP tk played; [VP the flute; (beautifully) t; t; (beautifully)]]]
 (b) [TP The flutek was; [PrP tk t; [VP tk (beautifully) played tk (beautifully) by Mary]]]

The next set of facts I would like to discuss involves the distribution of adverbs in pseudo-passive constructions. In Johnson (1991), it is argued that examples like those in (7) result from overt verb movement (see also Pesetsky 1989).

(7) (a) [TP Johnk [PrP tk voted; [VP eagerly t; [PP for Mary]]]]
 (b) [TP Billk [PrP tk spoke; [VP loudly t; [PP to Mary]]]]

On this account, raising is assumed to be obligatory. Since PPs do not require case, they must remain in situ. As a result, VP internal manner adverbs may intervene between a verb and its PP complement. Direct objects, on the other hand, must be assigned case. Johnson argues that objective case is assigned in the spec of VP. Given this, it follows that

- (i) (a) The ball had been thrown to John perfectly.
 - (b) The ball had been perfectly thrown to John.
 - (c) John had been thrown the ball perfectly.
 - (d) ? John had been perfectly thrown the ball.

One counter-argument, however, is the fact that the distributional generalization is maintained even in examples such as (5) where the participle follows a form of be in the progressive. It is well known that progressive be cannot license stative complements. The fact that progressive be cannot be followed by uncontroversial adjectival passives, as the following examples illustrate, suggests that the passive participle in (5) is verbal.

(ii) (a) John was being frightened by Mary.

(b) * John was being unfrightened by the storm.

³It has been suggested to me that in those cases where a *perfectly*-adverb appears before a passive participle, the participle in question is adjectival. This suggestion is all the more plausible in light of the fact that, like adjectives, the participle is unable to license a DP complement when it is preceded by an adverb of this class.

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verb and its PP complement. Direct objects, on the other hand, must be assigned case. Johnson argues that objective case is assigned in the spec of VP. Given this, it follows that object raising must be obligatory as well. Consequently, no adverbs may intervene between a verb and its direct object. This is illustrated in (8).

(8) (a) $[TP Mary_k [PrP t_k played; [VP the flute; loudly t_i t_i]]]$ (b) * [TP Maryk [Prp tk played; [vp loudly t; the flute]]]

On the assumption that verb movement always applies, Johnson is able to derive the effects of adjacency from the case filter. A major claim of this paper, however, is that passive verbs do not raise. An important prediction made by this claim is that passive verbs and PP complements should exhibit similar adjacency effects. This prediction appears to be confirmed in cases of pseudo-passivization. Consider the passive variants of (7a) and (7b).4

(9) (a) Mary was eagerly voted for by John.

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- (b) * Mary was voted eagerly for by John.
- (c) Mary was loudly spoken to by Bill.
- (d) * Mary was spoken loudly to by Bill.

The examples in (9) show that adverbs may not appear between the verb and preposition in pseudo-passive constructions, an expected result if passive constructions do not involve overt verb movement.

The final piece of evidence I will consider in this section involves complement selection. A number of English verbs take verbal small clause complements. Consider first the case of perception verbs like see and hear. As illustrated by the examples in (10) and (11), these verbs can take nonpassive complements as well as passive complements headed either by a passive verb or the copula.

- (a) I saw [the police arrest John] (10)
 - (b) I saw [John be arrested by the police]
 - (c) I saw [John arrested by the police]
- (11)(a) I heard [Mary play the flute]
 - (b) I heard [the flute be played by Mary]
 - (c) I heard [the flute played by Mary]

If, as I am arguing, nonpassive verbs and copular be occupy Pr in the syntax while passive verbs occupy V, one might expect to find verbs which take only one of the two as their complement. Fortunately, such cases do exist. Consider first the verbs let and make.

⁴It has been suggested that adjacency effects such as those in (9) constitute strong evidence for a reanalysis approach to pseudo-passivization (e.g. Van Riemsdijk 1988). The movement account given here, however, provides a plausible alternative to this hypothesis. Note that if examples such as those in (9b) and (9d) result from reanalysis, it is unclear why similar effects are not found in other cases where the operation is assumed to apply, such as (i).

John spoke loudly to Mary about herself. (i)

Given the c-command requirement on binding, it has generally been argued that examples like the one in (i) involve reanalysis. In this case, however, adverbs may freely intervene between the verb and PP. On the other hand, since the verb in (i) is not passive, the possibility of an intervening adverb is predicted on the movement account.

These verbs can take complements headed by nonpassive verbs, as in (12a) and (13a), but may only take passive complements if they are headed by the copula, as indicated by the contrast between (12b, 13b) and (12c, 13c).

- (12) (a) I let [the police arrest John]
 (b) I let [John be arrested by the police]
 (c) * I let [John arrested by the police]
- (13) (a) I made [the police arrest John]
 (b) I made [John be arrested by the police]
 (c) * I made [John arrested by the police]

Verbs like want and need display the opposite properties. These verbs can not take complements headed by nonpassive verbs, as illustrated by (14a) and (15a), and may only take passive complements if they are not headed by the copula, as shown by the contrast between (14b, 15b) and (14c, 15c).

- (14) (a) * I want [the police arrest John]
 (b) * I want [John be arrested by the police]
 (c) I want [John arrested by the police]
- (15) (a) * I need [the police arrest John]
 (b) * I need [John be arrested by the police]
 (c) I need [John arrested by the police]

Assuming that nonpassive verbs and passive verbs occupy different positions in the syntax (i.e. Pr and V respectively), the selection facts follow. Verbs like *let* and *make* obligatorily select for the maximal projection containing either a nonpassive verb or copular *be* (i.e. PrP), while verbs like *want* and *need* obligatorily select for the maximal projection containing a passive verb (i.e. VP). Given (10) and (11), perception verbs like *see* and *hear* appear to select for either category.

Turning now to ergative verbs, recall that I have assumed that they raise overtly to Pr. Given this, it follows that ergative verbs and active verbs should pattern in exactly the same way. As the examples in (16) and (17) illustrate, this prediction is borne out. (16) shows that *perfectly*-adverbs must follow ergative verbs.

- (16) (a) * The glass perfectly shattered.
 - (b) The glass shattered perfectly.

(17) shows that ergative verbs have a distribution identical to that of active verbs regarding their admissibility or inadmissibility as complements of verbs like *let* and *want*.

(17) (a) I let [the vase break]
(b) I made [the vase break]
(c) * I want [the vase break]
(d) * I need [the vase break]

3. A Minimalist Solution

The explanation I would like to offer for the facts discussed to this point relies heavily on recent developments within the minimalist framework of Chomsky (1993, 1994, 1995). Following Chomsky (1995), I assume that all movement is morphologically

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driven. Syntactic derivations are uniform computations from a start state N to LF. At any given point along the computation from N to LF, the operation Spell-Out strips away those features relevant only to PF. Crucially, all strong features must be checked prior to the point at which this operation applies. If a strong feature remains unchecked after Spell-Out, the derivation crashes at PF. Convergent derivations must further be optimal with respect to the principles of economy (SHORTEST MOVE, PROCRASTINATE, GREED). Consistent with Chomsky (1995) and Johnson (1991) but contra Chomsky (1993), I will also assume that accusative case is checked inside the VP, and that AGR heads and their corresponding projections may be dispensed with.

Given these assumptions, the patterns in (3) through (17) will be argued to follow from the claims in (18). [+P] is a feature which I take to be associated with both main verbs and Pr. As used here, [+P] should be understood as a strong formal head feature which must be checked before Spell-Out.

- (18) (a) English Pr is strong, [+P].
 - (b) English main verbs are strong, [+P].
 - (c) Verbal passive formation involves (at least) three operations:
 - (i) Suppression of the external argument.
 - (ii) Absorption of the accusative case feature.
 - (iii) Absorption of [+P].
 - (d) Be is an appropriate feature checker for [+P].

I will assume that whenever PrP is present in English, the head Pr is strong for the feature [+P]. I will also assume that all main verbs are canonically specified for a strong [+P]. This feature, I argue in (18c), is absorbed in the course of verbal passive formation, along with the accusative case feature.⁵ When [+P] absorption takes place, copular be is inserted to check the strong [+P] feature of Pr.

As I will show, whereas a derivation which inserts be is always possible, it is only convergent when the main verb has lost its [+P] feature through passive formation. When [+P] absorption occurs, a derivation which inserts be will always be the optimal derivation as determined by GREED. To illustrate, consider the derivations in (19) and (20), putting aside for the moment the position of the DPs.

(19) (a) [PrP Mary e [VP the flute beautifully played]] [+P] [+P]
(b) [PrP Mary played; [VP the flute beautifully t;]]
(c) *[PrP Mary be [VP the flute beautifully played]] [+P]

⁵Given that verbal passive formation is usually assumed to be a lexical operation which absorbs features, and given that the data which I am attempting to account for is crucially linked to the passive/ nonpassive distinction, there is a certain degree of plausibility to (18c). Note that accusative case absorption and [+P] absorption both appear to have overt syntactic correlates. Thus, if passive formation absorbs the accusative case feature, the deep object will show up as a surface subject. On the other hand, if passive formation fails to absorb the accusative case feature, it will show up as a direct object. Similarly, it might be argued that if passive formation absorbs [+P], a given language will have periphrastic passives. Conversely, if passive formation does not absorb [+P], the language will have synthetic passives.

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(20) (a) [PrP the flute e [VP beautifully played by Mary]] [+P]

- (b) * [$_{PrP}$ the flute played, [$_{VP}$ beautifully t by Mary]]
- (c) [PrP the flute be [VP beautifully played by Mary]]

In (19a) both the main verb and Pr are [+P]. There are two possible derivations, (19b) and (19c). Derivation (19c) fails to converge at PF even though the [+P] feature of Pr has been checked by *be* insertion. This is because the [+P] feature of the main verb remains unchecked. Derivation (19b) converges since movement of the main verb to Pr allows the features of each to be mutually checked.

In (20a) only Pr is [+P], the [+P] feature of the main verb having been absorbed. Again there are two possible derivations, (20b) and (20c). This time both derivations converge at PF. Given GREED, however, (20c) is the optimal derivation. Movement of the passive verb violates GREED in (20b) since it is moving solely to satisfy the checking requirements of Pr. (20c), on the other hand, where the verb remains within the VP, satisfies GREED, and the [+P] feature of Pr is checked by *be* insertion.

In addition to the above cases, this analysis provides a natural way of explaining the c-selection facts discussed earlier. Consider once again the verbs of *let* in (12) and *want* in (14), repeated in (21) and (22) with the relevant structure added.

- (21) (a) I let [PrP the police arrest_i [VP John t_i]]
 - (b) I let [PrP John be [vp arrested by the police]]
 - (c) * I let [PrP John arrested; [VP t; by the police]]
- (22) (a) * I want [vp the police arrest John]
 - (b) * I want [VP John be arrested by the police]
 - (c) I want [vp John arrested by the police]

As mentioned in the previous section, I assume that *let* obligatorily takes a PrP complement. (21a) converges as expected, since the verb raises to Pr and the strong [+P] features of each are mutually checked. In both (21b) and (21c), [+P] has been absorbed from the passive verb. Pr, however, is still strong and must be checked. Given GREED, the optimal derivation is (21 b), with *be* inserted and the verb remaining in situ.

Want in (22) obligatorily takes a bare VP complement.⁶ (22a) crashes at PF since the nonpassive verb is [+P] and cannot be checked in the absence of Pr. (22b) is ruled out independently since there is no position in which *be* can be inserted. (22c) converges since the passive verb has no strong features left which require checking.

4. Copular Sentences

The distribution of be in copular sentences, such as those in (23), receives a straightforward explanation under the present account. Assuming that each of the examples

⁶The notion that small clauses may be bare lexical projections (e.g. Stowell 1983) has been challenged by numerous authors. The general consensus is that small clauses must contain functional categories like Agreement. Ruyter (1988) and Contreras (1995) are representative of this widely-held view, providing arguments based on facts similar to what I am considering here. However, despite the appeal of this approach, there are a number of problems. For instance, the functional category hypothesis provides no clear explanation for the fact that verbs appear to select for the category of the predicate inside the small clause, a fact which the theory of Stowell (1983) is able to capture. For purposes of this paper then, I will assume that small clauses may in some instances be bare lexical projections.

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in (23) contains a predicate phrase, specified for [+P], and further, that nonverbal predicates lack the [+P] feature, the obligatoriness of copular *be* in these constructions follows. That is, *be* insertion is required in order to prevent the derivations from crashing at PF.

(23) (a) [TP John is; [PP t; [DP a doctor]]] (b) [TP John is; [Pr t; [AP silly]]]

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(c) [TP John is; [PrP t; [PP in the garden]]]

Although noninfinitival copular constructions are less prevalent as complements in English, they do show up in predictable environments, specifically, as complements of verbs like *let* and *make*, which were argued to c-select PrPs.⁷ As exemplified by (24) and (25), these verbs vary as to the range of nonverbal complements they permit.

- (24) (a) I made [_{DP} John a doctor]
 (b) I made [_{AP} John silly]
 (c) * I made [_{PP} John in the garden]
- (25) (a) * I let [_{DP} John a doctor] (b) * I let [_{AP} John silly] (c) I let [_{PP} John in the garden]

While *make* allows DPs and APs but disallows PPs, *let* allows PPs but disallows DPs and APs. Recall that neither verb allows bare VPs as complements. If copular *be* heads the complement, however, a full range of lexical categories is permitted by both verbs.

- (26) (a) I made [PrP John be [DP a doctor]
 (b) I made [PrP John be [AP silly]
 (c) I made [PrP John be [PP in the garden]
- (27) (a) I let [PrP John be [DP a doctor]
 (b) I let [PrP John be [AP silly]
 (c) I let [PrP John be [PP in the garden]

On the assumption that be heads PrP, (26) and (27) follow straightforwardly. Given the selection requirements of a verb such as let, APs and DPs must obligatorily project to PrP

- (i) (a) * Zij zagen [de kinderen in de tuin zijn]
 - they saw the children in the garden be
 - 'They saw the children in the garden.' (b) Hij zag [de zieke gewassen worden door de verpleegster] he saw the sick washed be by the nurse 'He saw the sick being washed by the nurse.'

It appears that in Dutch, the copula *zijn* and the passive auxiliary *worden* must be regarded as elements which check different features.

⁷The analysis I am developing here implies that there is no real distinction between passive *be* and what many have called 'main verb *be*' (e.g. Williams 1984). That is, both are assumed to be spellouts of [+P] features in Pr. It is well known, however, that there are some languages which do distinguish between passive auxiliaries and copular verbs. Dutch is such a language. In Dutch, *worden* is the passive auxiliary while *zijn* is the equivalent of English 'main verb' *be*. These elements are distributionally distinct in addition to being phonetically distinct. For instance, *zijn* cannot head the complement of a perception verb in Dutch (except on the irrealis interpretation), whereas *worden* can. This is illustrated by the following examples from Ruyter (1988).

in order to be licensed as complements. Since the head Pr is [+P], it follows that copular be is obligatory in such cases.

5. Object Shift

The analysis I have proposed here has implications for theories of object shift as well.⁸ In recent years, there has been some debate as to whether the case feature of direct objects is checked overtly or covertly in English. Those who have argued for covert object shift, most notably Chomsky (1993), Jonas and Bobaljik (1993), and Bobaljik and Jonas (1996), have attempted to explain the phenomenon in terms of Holmberg's generalization. Roughly stated, Holmberg's generalization states that overt object shift is contingent upon overt V raising.⁹ However, if the analysis proposed here is correct, this no longer holds. In fact, given the technical definition of Holmberg's generalization, one would now expect object shift to be overt in English. A number of independent facts, which I will not discuss here, also appear to point to the same conclusion (e.g. Johnson 1991, Koizumi 1993).

On assumption that objects are generated as complements, the major problem with covert shift in light of the proposed analysis is illustrated by the examples in (28), with the adverb left adjoined to V' in (28a) and right adjoined in (28b).

(28) (a) * [TP Mary_k [PrP t_k played_i [VP beautifully t_i the flute]]]
 (b) [TP Mary_k [PrP t_k played_i [VP t_i the flute beautifully]]]

If it is the case that object shift is covert in English, (28a) should be a possible derivation, with an adverb intervening between the verb and the direct object. On the other hand, if object shift is overt, a derivation such as (28a) will never arise and adjacency between verbs and direct objects will follow. This is exemplified in (29), with the direct object raising to the spec of VP to check its case feature (e.g. Johnson 1991).

(29) (a) [TP Maryk [PrP tk played; [VP the flute; beautifully t; t;]]]
 (b) [TP Maryk [PrP tk played; [VP the flute; t; t; beautifully]]]

If overt object shift is driven solely by the need to check strong case features, it follows that direct objects should remain in situ if these features are weak or absent. The examples in (30), however, appear to present a problem for this view.

- (30) (a) A flute was being played at our wedding.
 - (b) There was a flute being played at our wedding.
 - (c) * There was being a flute played at our wedding.
 - (d) * There was being played a flute at our wedding.

To the extent that the judgments in (30) are correct, these examples show not only that the object must undergo raising, but that it must raise to some position higher than the spec of VP, even in a so-called impersonal passive construction such as the one in (30b). Given the clause structure I have been assuming, the most likely candidate is the specifier

⁸As used here, 'object shift' should be understood to refer to A movement of full DPs, excluding A' movement and A movement of (weak) unstressed pronouns. This is essentially the conception of OS adopted in Bobaljik and Jonas (1996), who argue that A movement of weak pronouns results from a different process. In recent work by Holmberg (1996), it is suggested that Scandinavian pronoun shift is a PF rule. The major evidence for this claim is the fact that the application of this operation appears to be blocked by any phonetically visible category, excluding adjuncts, which might otherwise intervene between a shifted pronoun and its trace.

⁹Although see Holmberg (1996) for an argument against this contingency. See also footnote (8).

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position of PrP. This implies that the spec of PrP is potentially available as a checking position. Consequently, the structure corresponding to (30b) is (31).

(31) [TP There was [PrP a flutek being [VP played tk [PP at our wedding]]]]

In (31) the verb has lost the ability to check accusative case as a result of passive formation, which explains why the DP does not raise to the spec of VP. What needs to be addressed, however, is the question of what feature is responsible for triggering object shift to the spec of PrP in (31). Lasnik (1992), developing on work by Belletti (1988), argues that copular be is able to check partitive case on indefinite DPs. Once checked, and assuming that agreement features are weak, PROCRASTINATE prevents the DP from raising further to the spec of AgrP until after Spell-Out. Since nominative case is strong in English, an expletive is required in order to check the strong case feature of T in AgrP. As a result, subsequent LF movement of the indefinite to the spec of AgrP is driven solely by the need to check agreement features against the D-features of Agr. Since I have taken copular be to be a 'semantically empty' spellout of [+P] features, the assumption that it checks partitive case of indefinite DPs. This is suggested by the fact that partitive case may be checked even when Pr is occupied by a raised verb, as in (32).¹⁰

(32) (a) [TP A mank was [PrP tk playing; [VP the flute; t; t; [PP at our wedding]]]]
 (b) [TP There was [PrP a man playing; [VP the flute; t; t; [PP at our wedding]]]]

If partitive case is checked in the spec of PrP, it follows that indefinite DPs appearing in this position should always precede the verbal head. While this prediction holds for the examples considered to this point, it does not appear to be true for ergative verbs, as the contrast between (33) and (34) illustrates.

(33) (a) A man was killed last night.

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- (b) There was a man killed last night.
- (c) * There was killed a man last night.
- (34) (a) A man arrived from Boston.(b) There arrived a man from Boston.

(i) (a) A man played the flute at our wedding.
 (b) * There a man played the flute at our wedding.

(ii) (a) I thought that a man was playing the flute last night and there was.
(b) I thought that there was a man playing the flute last night and someone was.

¹⁰The analysis given for examples like (32b) precludes the existence of transitive-expletiveconstructions (TECs) in English, contra Bobaljik and Jonas (1996). One problem with maintaining that these are TECs is the fact that sentences such as the one in (ib) are impossible in English

Note, however, that while alternative analyses are open to (32b), only a TEC account is able to explain the set of facts in (ii).

The examples in (ii) suggest that (32a) and (32b) have virtually the same structure, differing only in that the subject in (32a) has raised to the spec of TP. On the other hand, if (32b) has a structure distinct from (32a), it is not clear why the VP ellipsis facts should pattern the way they do in (ii).

The examples above show that while an indefinite DP can never directly follow a passive verb (33c), it may follow an ergative verb (34b).¹¹ I will suggest that this contrast may be accounted for by assuming, following the lead of Belletti (1988), that partitive case may be checked by ergative verbs in the spec of VP.¹² Note that this assumption is only possible if ergative verbs occupy Pr in the syntax while passive verbs occupy V. In (33c), partitive case is checked in the spec of PrP, with copular *be* then raising to T. In (34b), partitive case is checked in the spec of VP, with the verb then raising to Pr. These derivations are given in (35).

(35) (a) [TP there wasi [PrP a man_k t_i [VP killed t_k last night]]]

(b) [TP there [PrP arrived; [VP a mank t; tk from Boston]]]

6. Be Raising

One problem which on the surface does not appear to follow from the analysis proposed here is illustrated by the examples in (36).

- (36) (a) * There will a flute be played at our wedding tomorrow night.
 - (b) There will be a flute played at our wedding tomorrow night.
 - (c) * There had a flute been played at our wedding last night.
 - (d) There had been a flute played at our wedding last night.

In these examples, it appears that the copula must precede the raised object even when it does not move to T. The major difference between these examples and the ones in (30) is that the latter contain two *bes* while the former contain only one. The conclusion appears to be that the copula must raise to the position which would otherwise be filled by the first *be* in examples like (30). Note that this is not a new proposal. In Akmajian and Wasow (1975), it is suggested that an assumption along these lines is necessary in order to account for VP ellipsis facts like those in (37) and (38) (see also Akmajian, Steele, and Wasow 1979).

(37) (a) Bill was being arrested and Fred was too.

- (b) * Bill was being arrested and Fred was being too.
- (c) Mary was being nice and Martha was too.
- (d) * Mary was being nice and Martha was being too.
- (38) (a) Bill will be arrested and Fred will too.(b) Bill will be arrested and Fred will be too.

¹¹English differs in this regard from French, which allows indefinite DPs to directly follow the verb in impersonal passive constructions. This is illustrated by the following examples from Belletti (1988).

- (i) (a) Il a été tué unhomme.
 - there has been killed a man (b) * Il a été tué l'homme.
 - there has been killed the man

Given the acceptability of (ia), I will assume that the partitive case feature is weak on indefinites in French (but strong in English). As a result, PROCRASTINATE ensures that the object will not raise before Spell-Out. ¹²Belletti (1988) argues that the ability to assign an 'inherent' partitive case is a property of

¹²Belletti (1988) argues that the ability to assign an 'inherent' partitive case is a property of unaccusative verbs. When partitive case is assigned, the object DP may remain in situ without violating the case filter. The fact that the object has raised from its canonical position in (31), however, suggests that partitive case assignment must be regarded as structural case assignment rather than inherent case assigned to an internal DP argument.

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(c) Mary had been nice and Martha had too.

(d) Mary had been nice and Martha had been too.

Akmajian and Wasow (1975) observe that copular be (i.e. passive be and main verb be) behaves as though it is part of the VP in cases where aspectual be is present. When aspectual be is not present, copular be is more auxiliary-like. This is illustrated in (37) and (38). When aspectual be is present, as in (37), copular be cannot license VP ellipsis. Instead, it must be elided along with the rest of the VP. These restrictions do not hold when aspectual be is not present, as is the case in (38). In these examples, copular be is able to license VP ellipsis. To account for these facts, Akmajian and Wasow propose an obligatory rule of Be shift whereby copular be is moved out of the VP if and only if aspectual be is not present. This implies that the lone be in the (38) examples occupies the same structural position as the first be in the (37) examples.

Given the present framework, on the assumption that be has raised in (36b) and (36d), it follows that it must be able to check other features besides [+P]. For the sake of argument, assume that be in these examples has raised to AspP (aspect phrase) to check the strong [+A] feature associated with this projection.¹³ As was the case with PrP, I will assume that whenever AspP is present in English, it is strong for [+A]. Be can then be defined as follows:

(39) Be is optionally either [+P] or [+A], or both [+P] and [+A].

As (39) implies, there are three possibilities for be in English. Consider a derivation which has reached the point where the insertion of be is required in order to check the [+P] feature of Pr. Given (41) there are two possible options: insert a form of be which is both [+P] and [+A], or a form which is [+P] only. Since [+P] of Pr is checked in each case, and since neither option is any more costly than the other, it can be assumed that economy does not decide between them, although it should be noted that the choice made at this point has consequences for the well-formedness of any subsequent operations. (40) illustrates all the possible derivations if the first option is taken.

(40) (a) [TP There will [AspP e [PrP a flutek e [VP played tk at our wedding]]]] [+A] [+P]
(b) * [TP There will [AspP e [PrP a flutek be [VP played tk at our wedding]]]] [+A] [+A] [+A]
(c) [TP There will [AspP be [PrP a flutek ti [VP played tk at our wedding]]]] (d) * [TP There will [AspP be [PrP a flutek be [VP played tk at our wedding]]]] [+A] [+A]

Given (40a), assume that a form of be with both [+P] and [+A] features is inserted into Pr, with the [+P] feature being immediately checked. In addition, assume that the form of be which is selected is morphologically realized as be (i.e. as the stem form). The unchecked [+A] feature forces the projection of Pr to be merged with Asp, which is also [+A]. When be raises to Asp, as it must, its morphology forces the projection of Asp to be merged with

¹³In what follows, I assume that the element *be* has nothing to do with the interpretation of a sentence. Instead, interpretation is a function of the set of features which make up a given head when it enters the computation. This implies, for example, that if Asp is selected and merged together with PrP, it is the [+A] feature which determines its aspectual interpretation. The presence of the element *be* is merely a consequence of the fact that [+A] is strong. As a result, a principled distinction between aspectual and copular *be* need not be drawn. Their differences follow from differences in thenature of [+A] and [+P].

 $T.^{14}$ The result is the well formed (40c). Neither of the other two possibilities results in convergence. (40b) crashes at PF since the failure of be to raise results in two strong features surviving past Spell-Out. (40d) also crashes since the [+A] feature of be in Pr goes unchecked.

Now consider what would happen if at the same point in the derivation the second option is taken instead of the first. In this case, a form of be which is [+P] only is selected and inserted into Pr. Assume that the form of be in this instance is morphologically realized as being. Note that this will also have the effect of forcing the projection of PrP to be merged with Asp.

- (a) [TP There will [AspP e [PP a flutek e [VP played tk at our wedding]]]] [+A] [+P]
 (b) * [TP There will [AspP e [PP a flutek being [VP played tk at our wedding]]]] (41)

 - (c) * [TP There will [A_{spP} being; [PrP a flute t; [VP played t, at our wedding]]]]
 - (d) [TP There will [A_{SDP} be [P_{PP} a flute being [V_P played t_k at our wedding]]]]

Given (41a), there are again three possible derivations, (41b), (41c) and (41d). Again, as was the case in (40), in each instance [+P] of Pr is checked by the operation. (41b) crashes since [+A] of Asp is unchecked in the absence of be raising. Both (41c) and (41d) converge, however. Since be has no [+A] feature, (41d) is the optimal derivation given that movement violates GREED in (41c).

The conclusion appears to be that if be is inserted into Pr with both [+P] and [+A] features, it must raise to Asp. Consequently, Asp must project since this is the only means by which the [+A] feature of be can be checked. On the other hand, if be is inserted into Pr with only a [+P] feature, a second be with the feature [+A] must be inserted into Asp if Asp is projected. One immediate advantage of this proposal is that only a single be is needed. Thus, whether a derivation will permit one form of be or two is a function of the morphology and set of features with which the first be enters the computation.

One final, albeit welcomed, consequence of the present account is that it allows for a uniform explanation of the predicate fronting facts discussed in Akmajian and Wasow (1975). Akmajian and Wasow observe that a passive VP may only be fronted if the sentence does not contain more than one be. If two bes are present, the copula must be fronted along with the passive verb. This is illustrated in (42).

(42) (a) I thought John was arrested and arrested, he was.

- (b) I thought John was being arrested and being arrested, he was.
- (c) * I thought John was being arrested and arrested, he was being.

¹⁴The implication here is that the morphological form of a given head determines which category or set of categories it's projection can be merged with. Given the minimalist assumption that derivations are constructed in a bottom up fashion, a treatment of selection along these lines appears necessary. On the traditional view of selection, whereby a head determines the morphology of its complement, derivations would necessarily be counter-cyclic. That is, an operation which selects a given head and projects it would have to be delayed until the selecting head was projected. This implies that, for example, the projection of a VP headed by a tensed verb would have to be merged within and directly under the projection of T, a move which would violate the strict cycle. While I will not attempt a formalization of the alternative in this paper, I do assume that it falls out generally from constraints on economy of derivation.

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Given these examples, it follows that predicate fronting must affect the category PrP and not VP, assuming, of course, that the lone be in (42a) has raised. Now consider the fact that nonpassive VPs may also be fronted.

I thought that the police would arrest John and arrest John, they did. (43)

If passive and nonpassive verbs both remain inside the VP, there is no clear way to explain the fact that the VP in (43) may front while the VP in (42c) may not. On the other hand, if nonpassive verbs raise to PrP and the rule of predicate fronting affects the category PrP, the contrast between (42c) and (43) follows.

7. Conclusions

The major aim of this paper has been to show (1) that there is an empirical basis for assuming that verbs undergo short syntactic movement in English, and (2) that the distribution of copular (and perhaps aspectual)be can be accounted for in terms of this type of operation. The major proposal was that nonpassive verbs, including ergatives, raise overtly to Pr, the head position of a functional category immediately dominating VP. It was assumed that main verbs, in addition to the functional head Pr, are canonically specified with the strong formal head feature [+P]. Given this, obligatory movement of the verb to Pr was taken to follow as a consequence of the requirement that the verb check its strong [+P] feature against the strong [+P] feature of Pr before Spell-Out. Failure of the verb to raise results in nonconvergence. Passive verbs, it was argued, do not raise. On the assumption that passive verbs lose the [+P] feature in the course of passive formation, it was argued that raising to Pr in such cases results in a violation of the economy condition of GREED. Consequently, copular be must be inserted to check the strong [+P] feature of Pr. A number of empirical facts, related to the position of adverbs, the position of indefinite DPs in impersonal passive constructions, complement selection, and predicate fronting, were found to receive a natural explanation on this account.

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