

There are several positions available: English intermediate subject positions

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The distribution of floating quantifiers and associates of existential constructions provide the most compelling evidence in English for the vP-internal subject hypothesis. It is observed, however, that FQs and associates demonstrate similar patterns of behaviour which suggest they actually surface outside vP, contrary to standard analyses. Given the apparent ability for both floating quantifiers and associates to delineate low/intermediate subject positions, and given their similarities in distribution, this paper aims to provide a unified account of these two related phenomena. The analysis appeals to phase theory and Late Adjunction, claiming v_{prog}° is the clause internal phase head instead of v° .

1. Introduction

Existential constructions in English have often been used to provide evidence for Koopman & Sportiche's (1991) claim that subjects are merged within the vP domain:

- (1) There was a boy eating an apple.

In (1), the subject *a boy* is not sat in the canonical subject position Spec-TP, which appears to be occupied by the expletive *there*. Rather, *a boy* is found adjacent to the lexical verb *eating*.

Under the standard mono-clausal analysis of this construction (Chomsky 1981; Burzio 1986; Akmajian & Wasow 1975), the semantically vacuous expletive *there* is merged directly into the canonical subject position, Spec-TP. This satisfies the Extended Projection Principle (EPP) on T° which requires Spec-TP, to be overtly filled.¹ The satisfaction of the EPP by expletive *there* subsequently prevents the subject from raising out of its initial merge position, namely Spec-vP, as it no longer has any motivation to move. Therefore, the subject (which is hereby referred to as *the associate* in existential constructions) surfaces in Spec-vP, adjacent to the lexical verb which occupies v° . This is why in the sentence in (1), the associate *a boy* is found immediately preceding the lexical verb *eating*; hence the claim that existential constructions provide compelling evidence in English for the vP-internal subject hypothesis.

¹ This can be formalized as follows: T° has a [uD] feature which requires checking in a spec-head relationship with a DP.

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Similarly, floating quantifiers (FQs) provide further evidence for the claim that subjects are merged within the vP domain. Sportiche (1988) noted that the following two sentences are semantically identical:

- (2) a. All the children had watched the movie.
 b. The children had all watched the movie.

The only structural difference between the two sentences is the distribution of the FQ *all*. In (2)a it precedes the subject *the children*, and in (2)b it precedes the lexical verb *watched*. Sportiche hypothesised that for the two sentences to be semantically identical, they must have at some stage in the derivation been syntactically identical. Furthermore, FQs were shown to agree cross linguistically for person, number and gender with the argument to which they are related. Sportiche therefore claimed that rather than being a simple adverb, FQs enter the derivation adjoined to the subject in Spec-vP, and may either be pied-piped by the subject up to the canonical subject position, as in (2)a, or optionally stranded in the subject's base position, as in (2)b. In other words, the subject raises at the exclusion of the quantifier, leaving the quantifier behind in Spec-vP, adjacent to the lexical verb. Therefore, FQs are deemed to immediately c-command the traces of subjects, hence the claim that FQs provide compelling evidence in English for the vP-internal subject hypothesis.²

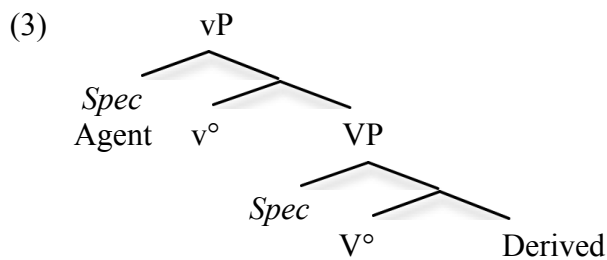
Upon closer inspection however, neither FQs nor existential constructions conform perfectly with their current analyses. The aim of this paper is to first observe that both FQs and associates share similar distributional patterns which suggest that neither are in fact able to surface within the vP domain. The goal is then to provide a unified analysis which accounts for these anomalous patterns of behaviour by claiming that all subjects raise to an intermediate position outside of the vP layer. This intermediate position exists in the form of a clause internal phase edge. I therefore reject the notion that v° acts as the clause internal phase head, and instead posit that a higher functional head fulfils this role.

This paper is organised as follows: Section 2 discusses the predictions made by the analyses of FQs and existential constructions that were outlined in the introduction; section 3 highlights the fact that these predictions are not borne out by supplying detailed data on FQs and existential constructions. The motivation for a unified analysis is then given. Section 4 outlines a few prerequisites for the analysis, which is then presented in section 5. Section 6 explores an alternative account of existential constructions that has been proposed in the literature, whilst section 7 discusses the further issues that arise from my own analysis. Finally, section 8 concludes.

2. Predictions

Two basic types of subjects exist: the agentive subject, which has volitional control over the action of the lexical verb, and the derived subject, which potentially can bear a number of different thematic relations to the verb, though none of these are of volitional control. Crucially, agentive subjects are typically merged in Spec-vP (Koopman & Sportiche 1991), whilst derived subjects are merged as complement to V° , i.e. object position:

² It should also be noted that FQs may be optionally pied-piped by the subject through various intermediate specifiers, and subsequently stranded in any one of these intermediate positions. I return to this issue later.



Both agentive and derived subjects standardly surface in the canonical subject position by raising out of their base positions to Spec-TP to satisfy the EPP on T°. Agentive subjects are typically found with unergative and transitive verbs:

- (4) a. The boy laughed.
 b. The boy ate an apple.

Whilst derived subjects are typically found with unaccusative verbs or with passivised transitive verbs:

- (5) a. The letters arrived.
 b. The apple was eaten (by the boy).

Given these assumptions, a number of predictions fall out of the analyses presented above for both FQs and existential constructions. I first point out two predictions for associates, one for each type of subject, and then two parallel predictions for FQs.

First, agentive associates of existential constructions, supposedly surfacing in Spec-vP, should precede the lexical verb (which does not raise beyond v° in English), but follow all auxiliary verbs and pre-verbal adverbs, both of which are assumed to be merged above vP (Cinque 1999).

The second prediction is with regards to derived associates. According to the analysis outlined in section 1, derived associates, with no motivation to raise, should surface in their initial merge position, that is, complement to V°. Therefore we predict derived associates to follow all passive and unaccusative verbs, all auxiliaries and pre-verbal adverbs.

The third prediction is with regards to FQs related to agentive subjects. According to the analysis presented in the introduction, FQs should potentially be stranded in Spec-vP. Similar to agentive associates, these FQs are expected to precede lexical verbs whilst following all auxiliaries and pre-verbal adverbs.

The fourth and final predication involves FQs related to derived subjects. These FQs should potentially be stranded in object position, i.e. complement to V°. Similar to derived associates, these FQs are predicted to follow passive and unaccusative verbs, auxiliaries and pre-verbal adverbs.

The following section shows however, that these predictions are not borne out.

3. Data

I first discuss data related to the distribution of agentive associates, and then of derived associates. Following this I observe parallel data for the distribution of FQs, first related to agentive subjects, and then to derived subjects.

I begin by considering the distribution of agentive associates of existential constructions. Recall that these are expected to precede all lexical verbs, but follow all auxiliaries and preverbal adverbs (prediction 1). The first observation to be made contrary to this prediction is that the agentive associate must obligatorily precede the copular auxiliary *being*:

- (6) a. There were **several men** being rather loud.
 b. * There were being **several men** rather loud.

Whilst all other auxiliaries are standardly assumed to be merged above vP, copular *be* is in fact assumed to be generated on v° itself, making it seem more akin to a lexical verb. However, unlike lexical verbs, copular *be* is able to precede negation, undergo subject-auxiliary-inversion and escape VP ellipsis, suggesting that, like all other auxiliaries, it is prone to overt raising in order to receive tense inflections.

- (7) a. He isn't a doctor.
 b. * He runs not often.

- (8) a. Is he a doctor?
 b. * Runs he often?

- (9) a. He said he's a doctor, and indeed he is [~~a doctor~~].
 b. * He said he runs marathons, and indeed he runs [~~marathons~~].

I follow Cinque (1999) and Thoms (2010), among others, in claiming that auxiliary verbs in English raise overtly in order to receive aspectual inflections as well tense inflections. Therefore copular *be*, always bearing inflections of some kind, must always raise out of v° to a position beyond Spec-vP. In this case, copular *be* is expected to precede the agentive associate, which, under standard assumptions, resides in Spec-vP. As (6) demonstrates however, this prediction is not borne out.

Furthermore, as (10) illustrates, agentive associates precede low pre-verbal adverbs such as the measure adverb *completely* (Haegeman 2004) and the manner adverb *loudly*:

- (10) a. There were **several academics** completely destroying my argument.
 b. * There were completely **several academics** destroying my argument.
 c. There was **a boy** loudly eating an apple.
 d. * There was loudly **a boy** eating an apple.

If we assume, as per Cinque (1999) and Ernst (2001) that such adverbs are merged above vP, then this observation is also contrary to prediction.

I next consider the distribution of derived associates. Recall that these are predicted to follow unaccusative and passive verbs, auxiliaries and pre-verbal adverbs (prediction 2). As (11) demonstrates however, the derived associate must precede both unaccusative and passive verbs, contrary to prediction:

- (11) a. There were **three letters** arriving.
 b. * There were arriving **three letters**.
 c. There were **several buildings** demolished by the local council.
 d. * There were demolished **several buildings** by the local council.

Furthermore, the derived associate must precede the passive auxiliary *being*:

- (12) a. There were **several buildings** being demolished by the local council.
b. * There were being **several buildings** demolished by the local council.

Finally, derived associates must precede low pre-verbal adverbs such as the measure adverb *completely* and the manner adverb *loudly*:

- (13) a. There were **several buildings** completely demolished by the local council.
b. * There were completely **several buildings** demolished by the local council.
c. There were **several buildings** loudly demolished by the local council.
d. * There were loudly **several buildings** demolished by the local council.

Given that both agentive and derived associates must in reality precede not only the lexical verb, but also low adverbs and auxiliary *being*, it seems that neither Spec-vP nor complement of V° are available as surface positions for associates. Associates must therefore be appearing in the specifier of some higher projection, one that is outside of the initial vP domain.

I next consider the distribution of FQs, beginning with FQs related to agentive subjects. These are expected to be potentially stranded in Spec-vP, preceding lexical verbs but following all auxiliaries and pre-verbal adverbs (prediction 3). As (14) and (15) illustrate however, this prediction is not borne out. First of all, FQs related to agentive subjects must precede the copular auxiliary *being*:

- (14) a. They were **all** being rather loud.
b. * They were being **all** rather loud.

Second, these FQs must precede pre-verbal manner adverbs such as *loudly* (Sportiche 1988) and measure adverbs such as *completely* (Cinque 1999):

- (15) a. They were **all** completely destroying my argument.
b. * They were completely **all** destroying my argument.
c. They were **all** loudly destroying my argument.
d. * They were loudly **all** destroying my argument.

Notice that the distribution of FQs related to agentive subjects parallels that of agentive associates.

Finally, I consider the distribution of FQs related to derived subjects. These are expected to be potentially stranded in object position, crucially following unaccusative and passive verbs, all auxiliaries and pre-verbal adverbs (prediction 4). As the following examples illustrate however, this prediction is not borne out. First of all, FQs related to derived subjects precede unaccusative and passive verbs:

- (16) a. They were **all** arriving.
b. * They were arriving **all**.
c. The buildings were **all** demolished.
d. * The buildings were demolished **all**.

Second, such FQs precede the passive auxiliary *being*:

- (17) a. They were **all being** punished.
 b. * They were being **all** punished.

Moreover, these FQs precede pre-verbal manner and measure adverbs:

- (18) a. The buildings were **all loudly** destroyed.
 b. * The buildings were loudly **all** destroyed.
 c. The buildings were **all completely** destroyed.
 d. * The buildings were completely **all** destroyed.

Notice that the distribution of FQs related to derived subjects parallels that of derived associates.

Therefore it can be concluded that FQs and associates in general parallel one another in their distribution. This seems to suggest that Spec-vP and complement of V° are unavailable as surface positions for both FQs and associates, and that FQs and associates must therefore surface somewhere outside of the vP domain. If one continues to assume that both FQs and associates do indeed delineate non-canonical subject positions, and given the similarities in distribution that have just been observed, it seems reasonable that a unified account should be attempted of these two clearly related phenomena. FQs and associates therefore must be spelt-out in the same intermediate projection, which sits above vP but below TP. Assuming that the vP-internal subject hypothesis still holds, it may also be concluded that they appear in this position due to some form of subject raising. The question then is what is this intermediate position, and why must subjects raise there?

Though many analyses have been given in an attempt to explain the distribution of either FQs (Sportiche 1988; Shlonsky 1991; Boskovic 2004; Cirillo 2009) or associates (Caponigro & Schütze 2003; Rezac 2006; Burzio 1986), none of them are able to account for the distribution of both phenomena in Standard English at the same time (though see Henry & Cottell 2007 for a unified account of these constructions in Belfast English). The aim of this paper is thus to provide such an account.

Before commencing with an analysis, further data needs to be considered, in particular with regards to the peculiar behaviour of auxiliary *be* in its various different guises. This includes all forms of *be*: progressive, passive and copular. Recall first of all, as was illustrated in (6), (12), (14) and (17), FQs and associates must precede *being*. However, as the following examples show, associates and FQs must follow all other forms of *be*.³ This includes tensed *be* (cf. (19)), infinitival *be* (cf. (20)), and *be* when preceded by perfective *have* (cf. (21)):

- (19) a. There were **several people** standing in the garden.
 b. They were **all** standing in the garden.
 c. There were **several buildings** demolished by the local council.
 d. They were **all** demolished by the local council.
 e. There was **a man** in the garden.
 f. They were **all** in the garden.

³ Some native speakers of English find instances in which the FQ follows *be* or *been* (as in (20) and (21)) to be unacceptable, or somewhat degraded. The current analysis will ignore this variation, focussing instead on the majority of speakers who do find such constructions grammatical. I leave the observed dialectal variation for future research.

- (20) a. There could be **several people** standing in the garden.
 b. They could be **all** standing in the garden.
 c. There could be **several buildings** demolished by the local council.
 d. They could be **all** demolished by the local council.
 e. There could be **a man** in the garden.
 f. They could be **all** in the garden.
- (21) a. There have been **several people** standing in the garden.
 b. They have been **all** standing in the garden.
 c. There have been **several buildings** demolished by the local council.
 d. We could have been **all** killed... or worse.⁴
 e. There had been **a man** in the garden.
 f. They had been **all** in the garden.

This raises the question of why FQs and associates must precede *being*, but not necessarily any other form of *be*, a puzzle which will assist the analysis later on.

Finally, before moving on to the prerequisites and the analysis, there is one further piece of data to be addressed, namely that FQs and associates do not pattern exactly the same. There does indeed appear to be a certain intermediate position where FQs and associates obligatorily raise to, but unlike FQs, associates are frozen in this position. As (22) and (23) illustrate, FQs obligatorily precede *being* but may freely precede all other higher auxiliaries as well, whereas associates obligatorily precede *being*, but follow all other higher auxiliaries. This fact will also be incorporated into the analysis.

- (22) a. We **all** could have been being punished for our crimes.
 b. We could **all** have been being punished for our crimes.
 c. We could have **all** been being punished for our crimes.
 d. We could have been **all** being punished for our crimes.
 e. * We could have been being **all** punished for our crimes.
- (23) a. * There **a man** could have been being punished for his crimes.
 b. * There could **a man** have been being punished for his crimes.
 c. * There could have **a man** been being punished for his crimes.
 d. There could have been **a man** being punished for his crimes.
 e. * There could have been being **a man** punished for his crimes.

To summarise, I will try to provide a unified analysis which can account for the fact that associates and FQs obligatorily precede lexical verbs, auxiliary *being* and low adverbs, with FQs furthermore being able to occur freely amongst all higher auxiliaries:

- (24) Subj <all> Modal <all> *have* <all> *be/been* <all> *being* <*all> V <*all>
 (25) Expl <*as> Modal <*as> *have* <*as> *be/been* <as> *being* <*as> V <*as>

⁴ Hermione Granger in 'Harry Potter and the Philosopher's Stone' by J.K. Rowling, 1997.

4. Prerequisites

There are two prerequisites to the analysis. One is with regards to auxiliary raising, and the other with regards to subject raising. I deal with each in turn.

4.1 Auxiliary Raising

Adapting ideas from Cinque (1999) and Thoms (2010), I assume a basic hierarchical structure within the TP layer. Specifically, four separate functional projections exist in which auxiliary and modal verbs are merged.⁵ I assume that perfective *have*, progressive *be* and passive *be* all head a vP shell (which I have labelled vP_{perf} , vP_{prog} and vP_{voice} for the sake of clarity), and that modals are merged in a separate ModP.⁶

The sentence in (26) illustrates that auxiliaries and modal verbs rigidly occur in the order modal>perfective *have*>progressive *be*>passive *be*:

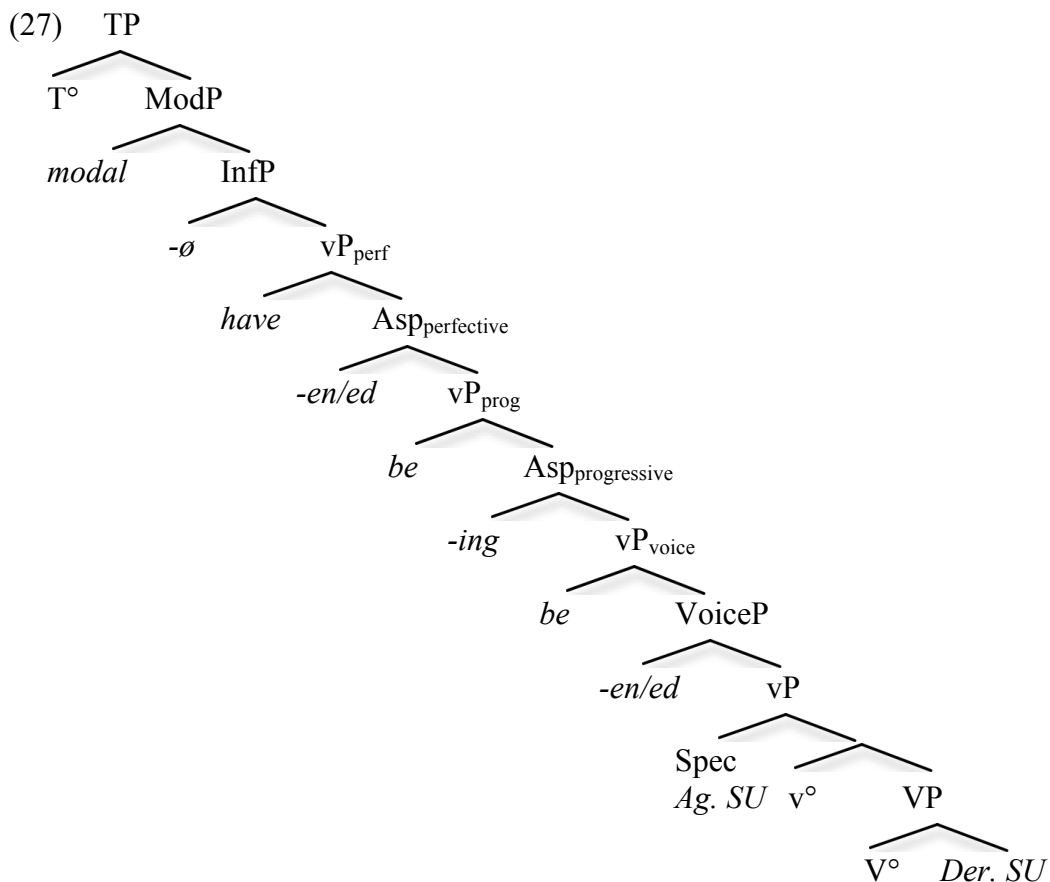
(26) He could have been being punished.⁷

Given this, I assume these four functional projections to be arranged in the following hierarchical order: ModP> vP_{perf} > vP_{prog} > vP_{voice} . Moreover, I assume that each of these phrases immediately selects a further functional projection, in the head of which the relevant inflection associated with that auxiliary is merged. Specifically, ModP selects an InfP in the head of which a $-\emptyset$ inflection is generated. Similarly, vP_{perf} selects $\text{Asp}_{\text{perfective}}$, in the head of which the relevant $-\text{en}/\text{ed}$ inflection is merged; vP_{prog} selects $\text{Asp}_{\text{progressive}}$, in the head of which the relevant $-\text{ing}$ inflection is merged; and vP_{voice} selects VoiceP, in the head of which the passive $-\text{en}/\text{ed}$ inflection is generated. Finally, I assume along the lines of strict cartography (Rizzi 1997, Cinque 1999) that these functional phrases are always present in the derivation, whether overtly realised or not. This produces the following hierarchy:

⁵ There may very well be more than four functional projections for modals and auxiliaries, but for the purposes of this paper I will keep things simple.

⁶ As before, I also standardly assume copula *be* is merged in v°

⁷ Some native speakers of English find sentences containing four auxiliary verbs of the type *could have been being V* difficult to parse, though such sentences are standardly still considered grammatical.



As mentioned before, I assume that auxiliaries and modal verbs may raise overtly in English to T° for tense inflections, and, following Akmajian & Wasow (1975); Boskovic (2004); Thoms (2010); Cinque (1999), that auxiliaries in English also raise overtly in the structure in order to receive aspectual/infinitival inflections. More specifically, if an auxiliary α is preceded by a higher auxiliary/modal verb β , then α will overtly raise to the aspectual/infinitival projection associated with β .

For instance, if *have* or a form of *be* is preceded by a modal, then *have* or *be* will raise to Infl° in order to pick up the $-\emptyset$ inflection and surface as *be* or *have*:

- (28)
- a. I could **have** died.
 - b. We could **be** eating by now.
 - c. We could **be** discovered.
 - d. He could **be** a doctor.

If a form of *be* is preceded by *have*, then *be* raises to Asp_{perfective}° in order to receive the relevant $-\text{en/ed}$ inflection and surface as *been*:

- (29)
- a. We have **been** walking for some time now.
 - b. We have **been** defeated.
 - c. We have **been** such idiots.

Finally, if passive or copular *be* is preceded by progressive *be*, it raises to $\text{Asp}_{\text{progressive}}^{\circ}$ in order to receive the progressive *-ing* inflection and surface as *being*:

- (30) a. We were **being** fed.
 b. We were **being** rather loud.

I assume that lexical verb raising in English is always non-overt, whether for tense, infinitival, aspectual or passive morphology. Therefore the lexical verb will always surface in v° , and no higher.

The crucial point of this subsection is that auxiliary *be* only raises as high as $\text{Asp}_{\text{progressive}}^{\circ}$ in order to surface as *being*, but raises beyond this position in order to be spelt out as *be*, *been* or tensed *be*.⁸

Recall that associates and FQs obligatorily precede *being* but not *be*, *been* or tensed *be*. This implies that associates and FQs must be spelt out in a position that sits somewhere between $\text{Asp}_{\text{progressive}}^{\circ}$ and $\text{Asp}_{\text{perfective}}^{\circ}$. For now I suggest that this position is $\text{Spec-vP}_{\text{prog}}$. My motivations for this will become clear later on. The next task is to explain why associates and FQs must surface in this position, which calls for a brief discussion on the nature of subject raising.

4.2 Subject raising

Here I appeal to the notion of phase theory (Chomsky 2000, 2001) as a means of motivating subject raising to intermediate positions. Under phase theory, spell-out is taken to be cyclic. That is, syntactic structures are not shipped off to PF all at once; instead they are shipped off in chunks as a means of reducing the computational load on the syntactic component. This implies that a subpart of the overall structure is formed, and sent to spell-out before the rest of the structure is completed. Phases are delineated by phase heads, which are traditionally taken to be v° and C° . The specifier of a phase head comprises the phase edge, and the complements of v° and C° are considered to be the phasal domains, i.e. the spell-out domain of the phase. Once the phase head is constructed, the phasal domain is sent to PF. Though considered to be a part of the lower phase, spell-out of the phase head and its edge is always delayed and is instead sent to PF as part of the phasal domain of the higher phase head.

The cyclic nature of spell out implies that material contained within the lower phase is unavailable for computations/operations in the higher phase. That is, if an item has already been shipped off to PF, it is unavailable to further syntactic processes in the higher phase. This is known as the Phase Impenetrability Condition (PIC, Chomsky 2000), which is stated formally as thus:

- (31) Given structure $[_{ZP} Z [_{XP} [_{HP} \alpha [H YP]]]]$, with H and Z the heads of phases – in phase α with head H, the domain of H is not accessible to operations outside α ; only H and its edge are accessible to such operations.

Since the spell-out of the phase head and edge is delayed, elements sat in these positions remain available for further syntactic operations, whilst elements sat in the phasal domain, i.e. the complement of the phase head, are not. Therefore, if an item merged in the domain of the

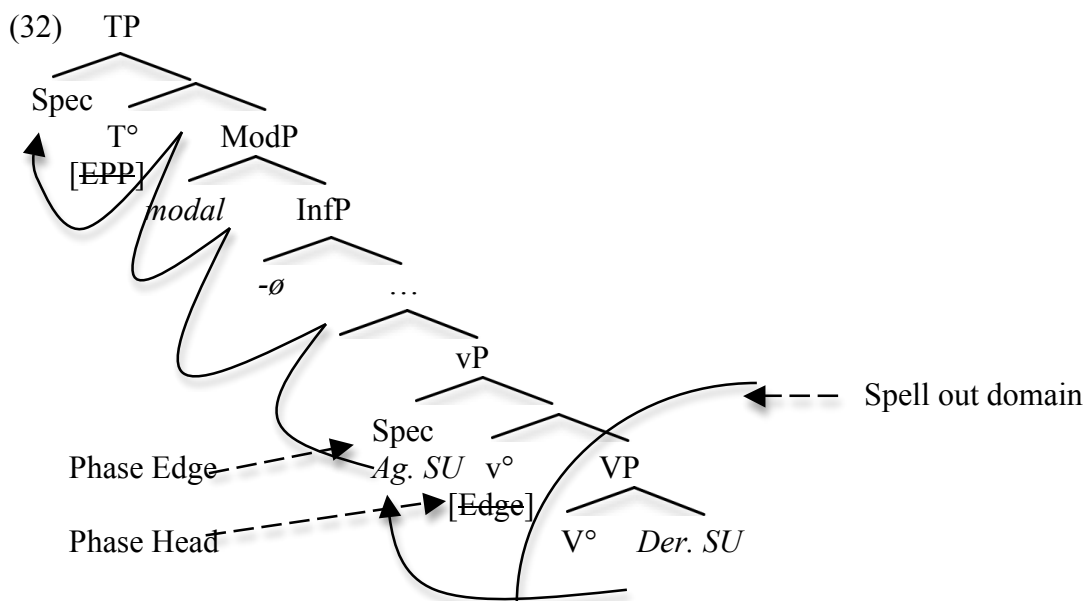
⁸ I use auxiliary *be* as a cover term for any form of *be* as it makes little difference in terms of the positioning of *be*.

lower phase head is required for operations in the higher phase, it must first move to the phase edge in order to escape spell-out and be visible to the higher phase. One way of motivating this raising is by positing an EPP feature on the phase head, also known as an ‘Edge’ feature. This would drive movement of the required element to the phase edge. I assume use of this ‘Edge’ feature for present purposes.⁹

I claim, as is standardly believed, that subject raising is always driven by the EPP feature, whether this be on T° or on the phase head. I furthermore assume that subject raising is successive cyclic, that is, the subject must pass through every available intermediate specifier on its way to checking the EPP feature (due to limitations on space, I am unable to go into how successive cyclic movement is possible under an Attract F theory of movement. However, see Ochi (1999) for such proposals). For now this successive cyclic raising will be of little use, but it will come in handy when discussing the freer distribution of FQs in comparison to associates.

I also assume that in order for a subject to check the EPP on T°, it must first raise to satisfy the Edge feature on the clause internal phase head. That is, T° is not merged until the higher phase, whereas subjects are merged in the clause internal phase. This means that, in accordance with the PIC, subjects would not be available to the higher phase to check the EPP on T° unless they first raised out of the lower phase. In order to do this, the subject would first have to raise to the clause internal phase edge to check the Edge feature on the phase head. This would allow the subject to escape spell-out by having been evacuated from the domain of the lower phase head. Only then, under the rules of the PIC, would the subject be visible to T° and therefore available to satisfy the EPP on T°.

Under standard assumptions, the agentive subject is merged on Spec-vP, the clause internal phase edge. Being merged on the phase edge, the agentive subject automatically escapes spell-out of the lower phase, so no raising is required other than to Spec-TP. Derived subjects however, merged as complement to V°, would be required to raise to the Spec-vP phase edge in order to escape spell-out and therefore appear visible to T°. This is all exemplified in the tree below:



⁹ Use of the Edge feature obviously raises huge problems in terms of look ahead. There are ways of getting around this matter, but due to limitations on space, and for the sake of simplicity, I will forego this issue for the purposes of this paper.

All the basic mechanics are now in place with which a unified analysis of existential constructions and FQs can be pursued.

5. Analysis

I begin by claiming that, contrary to popular belief, v° is not a clause internal phase head, rather, v_{prog}° is. This is not an entirely unmotivated claim. It has been proposed before that the heads of vP shells (in which auxiliary verbs are merged) may act as intermediate phase heads (Deal 2009; Legate 2003; Rocquet 2010), and Aboh (2005) has even singled out progressive aspect in particular as acting as the clause internal phase head as opposed to v° .

There is also empirical weight in English to the claim that v_{prog}° may act as a phase head. Recall that auxiliary *being* will only raise as far as $\text{Asp}_{\text{progressive}}^\circ$, crucially, below the v_{prog}° phase head, whereas *be*, *been* and tensed *be* raise beyond the phasal boundary. This means we would predict certain behavioural differences between *being* and other forms of *be*. These predictions, in certain environments, are borne out.

First of all, under VP ellipsis, *being* is obligatorily elided, whereas other forms of *be* are not:¹⁰

- (33) a. I thought we were being watched, and it turns out we were [~~being watched~~].
 b. * I thought we were being watched, and it turns out we were **being** [~~watched~~].
 c. I thought we couldn't be defeated, but it turns out we could **be** [~~defeated~~].
 d. I thought they had been defeated, and it turns out they had **been** [~~defeated~~].
 e. I thought the apple was eaten by the dog, and in fact it **was** [~~eaten by the dog~~].
- (34) a. He said they were being idiots, and in fact they were [~~being idiots~~].
 b. * He said they were being idiots, and in fact they were **being** [~~idiots~~].
 c. He said they could be aliens, and indeed they could **be** [~~aliens~~].
 d. He said they had been absolute idiots, and indeed they had **been** [~~absolute idiots~~].
 e. He said he was a doctor, and indeed he **was** [~~a doctor~~].

I follow Gengel (2007); Gallego (2009); Yoshida & Gallego (2008) in claiming that the ellipsis site of VP ellipsis is the complement of the clause-internal phase head. Therefore, in order for *being* to be elided, it must sit in the domain of the phase head. This obviously cannot be v° , which is generated below *being*, but is instead more likely to be v_{prog}° . Furthermore, since *been* need not be elided, we can rule out v_{perf}° or any head above that from being the relevant phase head also.

Zagona (1982) and Johnson (2001) also note that the same site which may be elided, may also be fronted. That is, under VP fronting, *being* is obligatorily fronted, whereas other forms of *be* are not:

- (35) a. He said they were being watched, and **being** watched they were.

¹⁰ A problem with this evidence is that *be* and *been* are optionally elided, a fact for which I have no explanation.

(i) I thought we couldn't be defeated, but it turned out we could [~~be defeated~~].
 (ii) I thought they hadn't been defeated, but it turned out they had [~~been defeated~~].
 (iii) He said they could be aliens, and indeed they could [~~be aliens~~].
 (iv) He said they had been absolute idiots, and indeed they had [~~been absolute idiots~~].

- b. * He said they were being watched, and watched they were **being**.
 c. He said they could be defeated, and defeated they could **be**.
 d. He said they had been defeated, and defeated they had **been**.
 e. He said they were defeated, and defeated they **were**.
- (36) a. He said they were being noisy, and **being** noisy they were.
 b. * He said they were being noisy, and noisy they were **being**.
 c. He said they could be noisy, and noisy they could **be**.
 d. He said they had been noisy, and noisy they had **been**.
 e. He said they were noisy, and noisy they **were**.

It may also be noted that *being* is the only auxiliary which remains in a reduced relative clause:

- (37) a. The boy (~~who was~~) **being** punished yesterday was my brother.
 b. * The boy (~~who had~~) **been** punished yesterday was my brother.
 c. * The boy (~~who could~~) **be** punished yesterday was my brother.

Akmajian & Wasow (1975) also note that *being* cannot be used in tag questions, whereas other forms of *be* can:

- (38) a. * They are being punished, aren't they **being**?
 b. They could be punished, couldn't they **be**?
 c. They have been punished, haven't they **been**?
 d. They were punished, **weren't** they?
- (39) a. * They are being very noisy, aren't they **being**?
 b. They could be very noisy, couldn't they **be**?
 c. They have been very noisy, haven't they **been**?
 d. They were very noisy, **weren't** they?

Therefore *being* does indeed appear to behave differently from other instances of auxiliary *be*. Although a full account of VP ellipsis, fronting, tag questions and reduced relative clauses is beyond the scope of this paper, it seems reasonable to suggest that this distinction may be attributed to the claim that *being* does not raise beyond the clause internal v_{prog}° phase head, whereas all other instance of *be* do.

Having posited v_{prog}° as the clause internal phase head rather than v° , and having provided justification for this claim, I now proceed with a specific analysis of associates and FQs. I begin with the distribution of associates of existential constructions.

5.1 Existentials

As stated previously, *being* surfaces in $\text{Asp}_{\text{progressive}}^{\circ}$ and lexical verbs in v° . Furthermore, pre-verbal manner adverbs such as *loudly* and measure adverbs such as *completely* are merged below Voice° (Cinque 1999; Ernst 2001)¹¹.

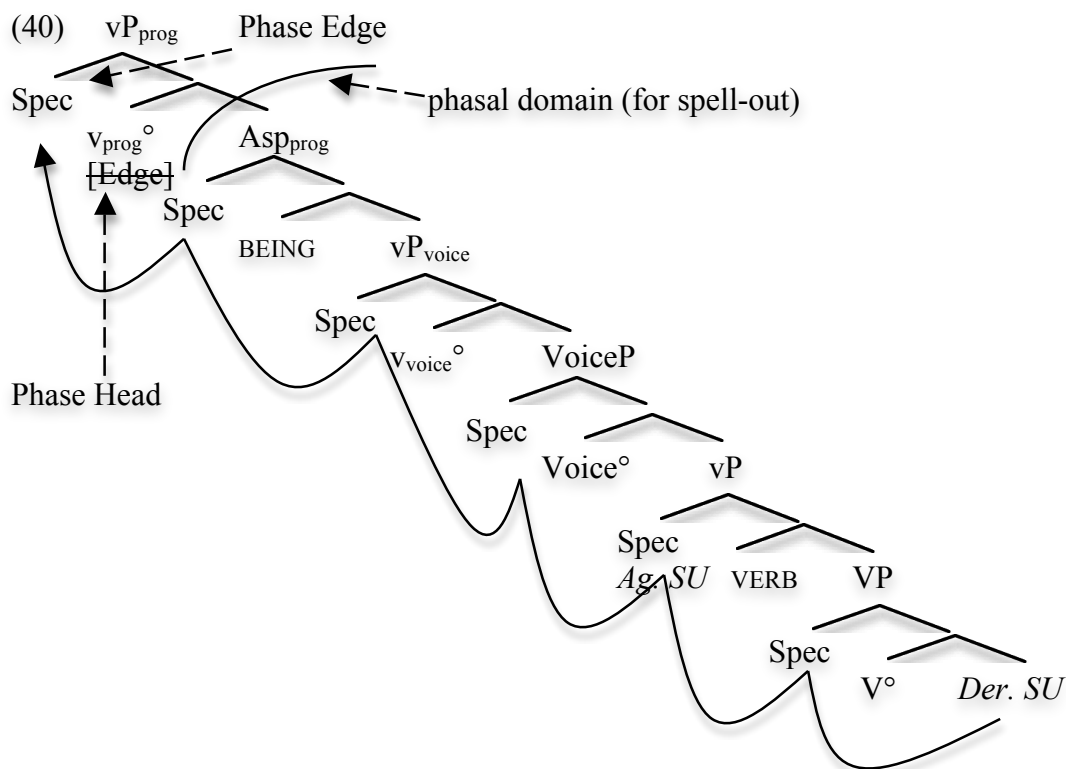
¹¹ According to Cinque (1999) manner and measure adverbs are merged as specifiers of separate functional projections.

Recall that subject raising is motivated by the need to check EPP features, whether this be on T° or on the phase head. Recall furthermore that v_{prog}° acts as the clause internal phase head as opposed to v° . This means that all subjects, whether agentive or derived, must raise to $\text{Spec-}vP_{\text{prog}}$ in order to satisfy the Edge feature on v_{prog}° and escape spell-out of the phasal domain. Crucially, this causes derived subjects to raise beyond the lexical verb (in v°), and for subjects in general to raise beyond low pre-verbal adverbs (merged below Voice°) and auxiliary *being* (in $\text{Asp}_{\text{prog}}^\circ$). Note, however, that the clause internal phase edge on which the subject now sits is situated below all other auxiliaries, which have either risen beyond this position, in instances of auxiliary *be*, or were merged above it in the first place, in instances of auxiliary *have* and modal verbs.

I would particularly like to draw attention to the fact that agentive subjects must raise under this analysis, as they are no longer merged on the phase edge. That is, agentive subjects are still merged in $\text{Spec-}vP$, but as v° is no longer the clause internal phase head, $\text{Spec-}vP$ no longer acts as the phase edge. Therefore, agentive subjects, just like derived subjects, must raise to $\text{Spec-}vP_{\text{prog}}$ in order to check the Edge feature on v_{prog}° .

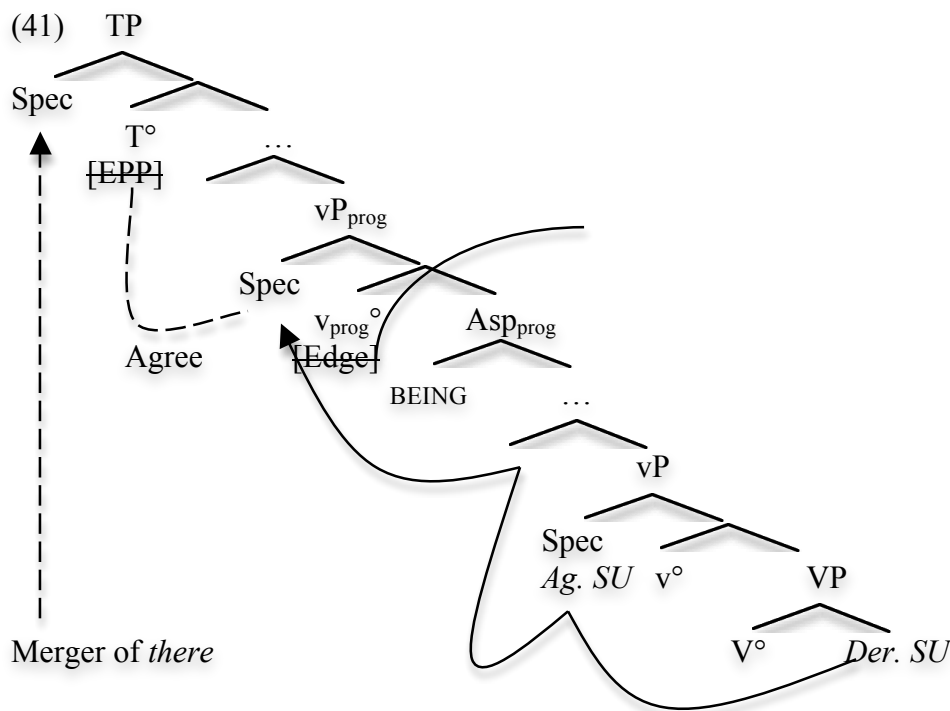
The subject, now on the phase edge, escapes spell-out of the clause internal phasal domain, and is therefore available to computations in the higher phase, i.e. to check the EPP on T° .

The tree diagram below represents subject movement within the clause internal phase.



Following subject raising to the edge of the clause internal phase, the higher phase is constructed. In standard constructions, the subject raises to Spec-TP once T° is merged, in order to check T 's EPP feature, thereby surfacing in the canonical subject position. I follow Emonds (1970); Milsark (1974); Stowell (1978) and Burzio (1986) however, in assuming that in existential constructions, once T° is merged, expletive *there* is instantly inserted into Spec-TP . This satisfies the EPP on T° . The subject (now the associate), without any further motivation to raise, is subsequently frozen in its last position, namely $\text{Spec-}vP_{\text{prog}}$, the clause

internal phase edge. From this position the associate precedes *being*, low pre-verbal adverbs and the lexical verb, but follows all other auxiliaries. Furthermore, the associate, sitting on the phase edge, is still visible to T° in accordance with the PIC. Therefore, the associate is still able to receive Case from T° and enter into an agreement relationship with the finite verb via Agree.¹² This is why the associate must always precede lexical verbs, low adverbs and *being*, because it must raise to the phase edge so as to avoid spell-out and therefore be visible to T° in the higher phase. If the associate remained within the domain of the phase head, potentially following *being*, low adverbs and the lexical verb, it would be sent to spell-out at the end of the phasal derivation. According to the PIC, this would render the associate invisible to T° in the higher phase, resulting in the associate failing to receive Case, and in T's uninterpretable phi-features failing to be checked, causing the derivation to crash. The tree diagram below represents the basic derivation for existential constructions. This analysis successfully captures the distribution of associates of existential constructions. The next task is to capture the distribution of FQs under a similar mechanism.



5.2 Floating Quantifiers

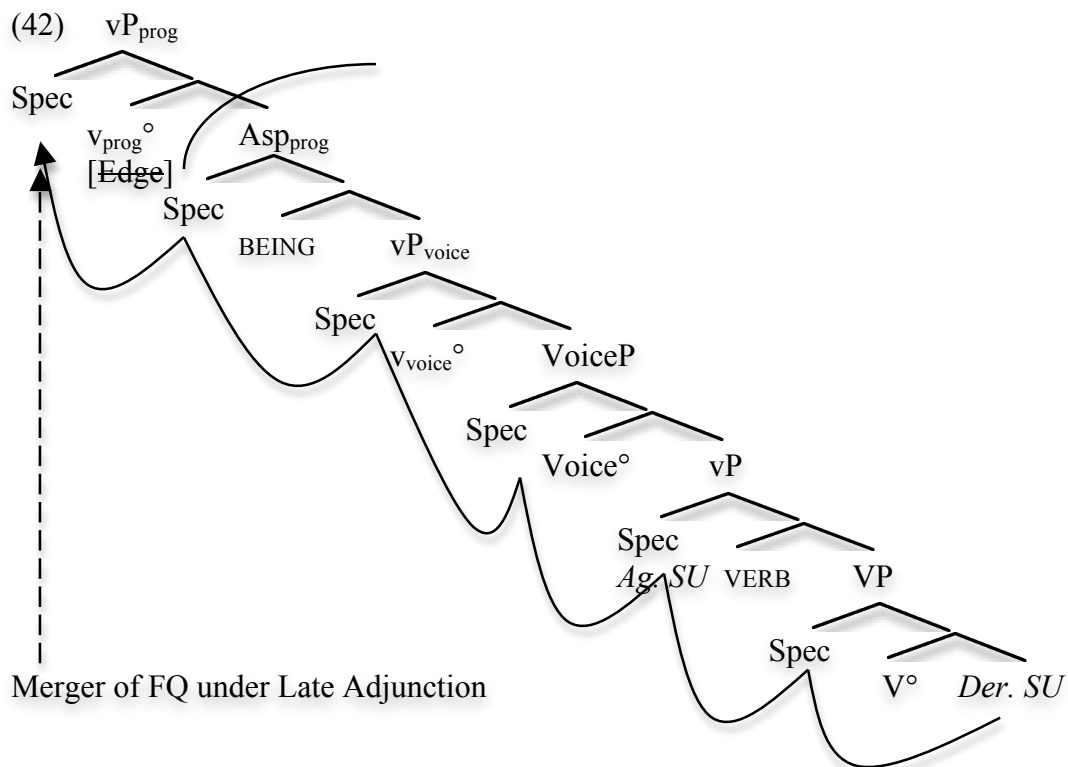
In order to capture the parallel distribution of FQs I appeal to the principle of Late Adjunction (Stepanov 2001; Newell 2005). The principle of Late Adjunction states that adjuncts are merged into the syntactic structure post cyclically. That is, according to Stepanov (2001), they are introduced late into the structure after all other elements have been merged. Newell (2005) claims specifically that adjuncts are only merged at the end of a phasal derivation, crucially, after all other operations have taken place. If we assume, as argued by Sportiche (1988), that

¹² Formally: through a probe-goal relationship, the associate is able to receive Case and value the uninterpretable phi-features on T°.

FQs are adjoined, the principle of Late Adjunction bears some pleasing consequences for the distribution of FQs under the current analysis.

As before I assume that both agentive and derived subjects must raise to Spec- vP_{prog} , the clause internal phase edge, in order to check the Edge feature on v_{prog}° , thereby escaping spell-out of the phasal domain. This causes them to raise over lexical verbs (which surface in v°), low adverbs (which are merged below Voice $^{\circ}$) and auxiliary *being* (which surfaces in $Asp_{progressive}^{\circ}$).

According to the principle of Late Adjunction, FQs cannot be adjoined to the subject until the end of the phasal derivation, that is, when the clause internal phase is complete. Crucially, the FQ can only be merged with the subject once all other operations within the phase are finished, including movement of the subject to the phase edge. This means that the FQ cannot be merged with the subject in its base position, i.e. in Spec- vP or complement to V° , until the end of the phasal derivation, by which point the subject has already raised to the phase edge. Therefore, under Late Adjunction, the lowest point at which the FQ may actually be adjoined to the subject is on the phase edge, crucially above *being*, low adverbs and lexical verbs, but below all other auxiliary verbs. Now that the FQ has been adjoined to the subject in Spec- vP_{prog} , it may subsequently be stranded in that position. This trivially explains why FQs can never be stranded lower than this, i.e. below *being*, low adverbs or lexical verbs: because FQs are never merged in these lower positions. To adjoin a FQ to a subject in a position lower than the phase edge would violate the principle of Late Adjunction, thus causing the derivation to crash. The diagram below maps out the aforementioned analysis.



With regards to construction of the higher phase, once T° is merged, the subject raises to Spec-TP to check the EPP feature. The FQ may either be optionally stranded in Spec- vP_{prog} , or it may be pied-piped by the subject into a higher specifier. As stated earlier, I assume the raising of the subject to be successive cyclic (Ochi 1999), in which the subject passes through every available intermediate specifier on its way to checking the EPP on T° . The FQ may be

optionally stranded in any one of these intermediate specifiers, or it may be pied-piped by the subject all the way up to Spec-TP; hence the reason why FQs may freely occur amongst the higher auxiliaries. This thereby successfully captures the distribution of FQs in a way that parallels that of associates of existential constructions.

5.3 Summary

To summarise the analysis presented, I have claimed that v_{prog}° acts as a clause internal phase head as opposed to v° . This causes subjects to raise to Spec- vP_{prog} to check the Edge feature on v_{prog}° , thereby escaping spell-out of the lower phasal domain. This renders them available to T° in the higher phase in accordance with the PIC so that T 's uninterpretable phi-features may be valued, and the EPP feature checked. The movement of the subject to the phase edge causes the subject to raise out of the vP domain, above lexical verbs, low adverbs and auxiliary *being*, but below all other auxiliaries, which either themselves raise beyond this position, or are already merged above it.

Once on the Spec- vP_{prog} phase edge, the subject may then proceed to Spec-TP in the higher phase in order to check the EPP feature. However, in existential constructions, expletive *there* is merged directly onto Spec-TP as soon as T° enters the derivation, satisfying the EPP. The subject/associate, now with no motivation to raise, is frozen on the clause internal phase edge, from where it is still able to value the phi-features on T° via Agree.

With regards to FQs, the quantifier, under the principle of Late Adjunction, may not adjoin to the subject until the end of the phasal derivation, crucially after all other operations have taken place, including raising to the phase edge. This means the FQ may only be adjoined to the subject in Spec- vP_{prog} , where it sits above lexical verbs, low adverbs and auxiliary *being*. From this position, the FQ may then be subsequently stranded. It may also be optionally pied-piped by the subject to an intermediate specifier, and then stranded in that position.

From this it may be concluded that indeed an intermediate subject position does exist outside of the vP domain, in the form of a clause internal phase edge, and that the similarities in distribution that were observed between associates and FQs hinge upon the obligatory movement of all subjects to this position.

6. Reduced Relative Analysis

This section explores an alternative account of existential constructions which has been proposed in the literature, namely the reduced relative analysis. Under this approach (Williams 1984; McNally 1992; Moro 1997; Law 1999), the lexical verb of the existential derivation is claimed to in fact be a part of a reduced relative clause embedded within the associate DP:

- (43) a. [_{TP}There were [_{DP} several men [_{CP} (who were) running a marathon]]]
 b. [_{TP}There were [_{DP} several men [_{CP} (who were) being watched]]]
 c. [_{TP}There were [_{DP} several men [_{CP} (who were) arriving]]]
 d. [_{TP}There were [_{DP} several men [_{CP} (who were) being rather loud]]]

Under this analysis, expletive *there* is merged in Spec-TP, copular *be* (as opposed to progressive or passive *be*) occupies T° , and the associate selects a reduced relative clause, of which the lexical verb (and *being*) is a part. If this is true, then existential constructions do not

in fact reveal anything about non-canonical subject positions. Thereby the perceived connection with FQs would be deemed to be spurious, and the entire analysis given above would have little to offer in terms of theoretical significance. Here, I explore arguments both for and against the reduced relative analysis, concluding that the reduced relative analysis is either untenable, or, at the very least, that existential derivations are ambiguous constructions for which both mono-clausal and reduced relative structures apply. I begin with arguments for the reduced relative analysis, which mainly centre around the behavioural similarities that both existential constructions and reduced relative clauses share.

First of all, reduced relatives can occur in progressive or passive states, but not in perfective, infinitival or tensed states (the bracketed, crossed out material indicates the reduced elements):

- (44) a. The man (~~who was~~) showing off at the beach was annoying.
 b. The building (~~which was~~) destroyed yesterday was suddenly rebuilt.
 c. * The man (~~who had~~) showed off at the beach was annoying.
 d. * The man (~~who could~~) show off at the beach was annoying.
 e. * The man (~~who~~) showed off at the beach was annoying.

This same pattern holds for existentials:

- (45) a. There was a man showing off at the beach.
 b. There were several buildings destroyed.
 c. * There has a man showed off at the beach.
 d. * There may a man show off at the beach.
 e. * There a man showed off at the beach.

This observed similarity is perhaps the most compelling evidence for the reduced relative analysis. It is also a fact about existential derivations for which the mono-clausal analysis currently has no explanation. See Deal (2009) however, for steps towards an account under the mono-clausal approach. I am also currently pursuing an analysis which may be able to fully account for this property of existential constructions, though due to space limitations, and the fact that it is still very much a work in progress, I do not go into this analysis here.

Second, the reduced relative analysis can easily account for the ordering data that was observed to be problematic for the traditional mono-clausal analysis. Observe that reduced relatives in English must always follow the DPs they modify; they can never precede them:

- (46) a. I severely disliked **the man** showing off at the beach.
 b. * I severely disliked showing off at the beach **the man**.
 c. **The boy** being punished was my brother.
 d. * Being punished **the boy** was my brother.
 e. **The people** being rowdy are all relatives of mine.
 f. * Being rowdy **the people** are all relatives of mine.
 g. I'm not familiar with **the people** arriving.
 h. * I'm not familiar with arriving **the people**.

The fact that the associates of existential constructions always precede *being* and the lexical verb, as was observed earlier in this paper, naturally falls out of the reduced relative analysis.

Under this approach, the material following the associate is all part of the reduced relative clause which modifies, and therefore naturally follows, the associate.

According to proponents of the reduced relative analysis, the only instance of a genuine mono-clausal existential which actually delineates non-canonical subject positions, would be that of non-progressive unaccusatives where the associate follows the lexical verb rather than precedes it:

- (47) a. There have arrived **three letters**.
b. There arrived **three letters**.
c. There may arrive **three letters**.

To add further weight to this claim is the fact that there are no reduced relative equivalents to the sentences in (47) (as previously observed, reduced relatives can only occur under progressive or passive morphology):

- (48) a. *The letters (~~which have~~) arrived are on the table.
b. *The letters (~~which~~) arrived are on the table.
c. *The letters (~~which may~~) arrived will be on the table.

The reduced relative analysis therefore captures the ordering data in an efficient and elegant manner: if a reduced relative clause is present, it is embedded inside the subject DP, following the associate; and if there is no reduced relative clause present, as in the case of non-progressive unaccusatives, the associate is seen to occupy its base position, following the unaccusative verb. This is more elegant than appealing to notions of verb raising (see section 7) and subject raising to a Spec- vP_{prog} phase edge.

However, I now present six arguments *against* the reduced relative analysis. These mainly centre around the behavioural differences exhibited by existential constructions and reduced relative clauses.

First, passive verbs in existentials can occur independently of any further material within the VP (cf. (49)a). This is not the case for reduced relatives, where more material is required (cf. (49)b,c):

- (49) a. There were several buildings destroyed.
b. * The buildings destroyed were quickly rebuilt.
c. The buildings destroyed yesterday were quickly rebuilt.

Second, Deal (2009) observes that reduced relatives must precede full relatives, whereas in existential constructions, no such restriction occurs. The examples in (50) (from Deal 2009) demonstrate this pattern with regards to unergative verbs, whilst (51) shows that the same pattern holds for passive verbs.

- (50) a. The teacher scolded [the student laughing in the hall who was wearing a cap].
b. * The teacher scolded [the student who was wearing a cap laughing in the hall]
c. There is a man laughing in the hall who's wearing a red cap.
d. There is a man who's wearing a red cap laughing in the hall.

- (51) a. We began rebuilding the house destroyed yesterday which was built by our forefathers.

- b. * We began rebuilding the house which was built by our forefathers destroyed yesterday.
- c. There was a house destroyed yesterday which was built by our forefathers.
- d. There was a house which was built by our forefathers destroyed yesterday.

Third, Milsark (1974); Lasnik (1995); Caponigro & Schütze (2003); Chomsky (2001) all observe that whilst extraction is possible out of an existential construction, it is not possible out of a full or reduced relative clause. The sentences in (52) show that this is true for transitives, (53) for passives, and (54) for unaccusatives (the sentences in brackets show the original sentence before extraction):

- (52) a. From what were there many people running?
- b. What were there many people running from?
 (There were many people running from the monster)
- c. * From what were there many people who were running?
- d. * What were there many people who were running from?
 (There were many people who were running from the monster)
- e. * From what did I rescue the people running?
- f. * What did I rescue the people running from?
 (I rescued the people running from the monster)

- (53) a. By who were there many people being harassed?
- b. Who were there many people being harassed by?
 (There were many people being harassed by the police)
- c. * By who were there many people who were being harassed?
- d. * Who were there many people who were being harassed by?
 (There were many people who were being harassed by the police)
- e. * By who did I speak to the people being harassed?
- f. * Who did I speak to the people being harassed by?
 (I spoke to the people being harassed by the police)

- (54) a. To what was there a man falling?
- b. What was there a man falling to?
 (There was a man falling to his death)
- c. * To what was there a man who was falling?
- d. * What was there a man who was falling to?
 (There was a man who was falling to his death)
- e. * To what did I try to save the man falling?
- f. * What did I try to save the man falling to?
 (I tried to save the man falling to his death)

Fourth, Chomsky (2001) observes that existential constructions permit idiom chunks, whereas existential constructions containing a relative clause do not:

- (55) a. There were tabs being kept on Kate.
- b. * There were tabs which were being kept on Kate.

Fifth, Milsark (1974) and Rezac (2006) claim that copular existential constructions are illicit under an eventive interpretation (examples from Caponigro & Schütze 2003:11):

- (56) a. * There's just been a frog.
b. * There was a frog just now.

Since the reduced relative analysis predicts existential *be* to always be a copula, all existential constructions should be illicit under an eventive interpretation. That is, the lexical verb, supposedly embedded inside the reduced relative, should have no effect on the grammaticality of the main clause, as can be seen when an overt relative clause is introduced into the existential derivation:

- (57) *There've just been several fish which were caught.

This is not the case however when a passive verb is introduced on its own into the existential derivation. As can be seen in (58), the existential construction is indeed accepted under an eventive interpretation when a passive verb is present, showing that the passive verb truly is a part of the main clause and is not contained inside an embedded clause.

- (58) a. There've just been several fish caught.
b. There were several fish caught just now.

The sentences in (59) demonstrate that the same pattern holds for unergative existentials:

- (59) a. * There was a dog just now.
b. There was a dog dancing just now.
c. * There has just been a dog which was dancing on stage.
d. There has just been a dog dancing on stage.

Finally, the reduced relative analysis is argued for based on certain behavioural similarities between existentials and reduced relatives. However, it has been observed in this paper that associates of existentials also exhibit behavioural similarities with another syntactic phenomenon, one which in fact favours the mono-clausal approach: FQs. To adopt the reduced relative analysis would force the similarities between FQs and associates to be sidelined as mere coincidence, an undesirable result. Of course, this also entails that by adopting the mono-clausal analysis, one is forced to sideline the similarities between existential constructions and reduced relatives as mere coincidence. This remains a matter for further research.

Given that existential constructions and reduced relative clauses exhibit such differences in behaviour, it can be concluded that existential derivations are indeed mono-clausal constructions, or at the very least, are ambiguous derivations with both reduced relative and mono-clausal structures available to them; hence the need to explain the irregularities in distribution that the associate demonstrates.

7. Further Issues

A major issue that needs to be addressed is with regards to unaccusative existential constructions. As was observed in (11), derived associates must precede progressive unaccusative verbs. This was accounted for by claiming that derived associates obligatorily raise to the Spec- vP_{prog} phase edge, above the unaccusative verb, which resides in v° . If it is standardly assumed that lexical verbs never overtly raise in English, then it should be expected that associates always precede the lexical verb (assuming the cartographical viewpoint that the v_{prog}° phase head is always present). As (47) (repeated here as (60)) demonstrates however, this prediction is not borne out. Unlike transitive and unergative existentials, unaccusative existentials may occur without progressive or passive morphology, which subsequently causes the associate to follow the unaccusative verb, contrary to prediction:

- (60) a. There have arrived **three letters**.
 b. * There have **three letters** arrived.
 c. There may arrive **three letters**.
 d. * There may **three letters** arrive.
 e. There arrived **three letters**.
 f. * There **three letters** arrived.

This is indeed problematic for the proposed analysis, as the opposite ordering is expected to hold. Caponigro & Schütze (2003) claim however, that in such instances the unaccusative verb is able to undergo additional raising beyond the associate. They observe that lexical verbs inflected for perfective aspect appear to raise beyond adverbs such as *poorly*, whereas those inflected for passive morphology do not:

- (61) a. They have **built the house** poorly.
 b. * They have poorly **built the house**.
 c. The house was poorly **built**.
 d. * The house was **built** poorly.

This can be extended to lexical verbs inflected for tense and infinitival morphology, which appear to also undergo similar raising:

- (62) a. They may **build the house** poorly.
 b. *They may poorly **build the house**.
 c. They **built the house** poorly.
 d. *They poorly **built the house**.

This suggests therefore that in English, lexical verbs inflected for perfective, infinitival or tensed morphology do undergo some form of intermediate raising beyond the associate, which would account for the problematic ordering in (60). Note however, that lexical verbs inflected for progressive morphology also appear to undergo a similar form of raising:

- (63) a. They were **building the house** poorly.

- b. * They were poorly building the house.

This would predict that lexical verbs inflected for progressive morphology should also raise beyond the associate, contrary to fact. Thereby it significantly reduces the weight of the argument that the non-progressive unaccusative verbs in (60) have actually risen over the associate, or at least brings into question the reliability of the evidence used in (61) and (62) to support this claim. The observation therefore that non-progressive unaccusative verbs must precede the associate, remains a problem for my analysis.

To further complicate matters, FQs must always precede the unaccusative verb, irrespective of its inflectional morphology:

- (64) a. The guests were **all arriving**.
 b. * The guests were arriving all.
 c. The guests have **all arrived**.
 d. * The guests have arrived all.
 e. The guests might soon **all arrive**.
 f. * The guests might soon arrive all.
 g. The guests **all arrived**.
 h. * The guests arrived all.

Here the similarities in distribution between associates and FQs obviously break down, which brings into question the motivation for providing a unified analysis. However, given the similarities in distribution observed at the beginning of this paper, and given that both FQs and associates do supposedly delineate non-canonical subject positions, I believe that a unified account should still be pursued, with the aim of incorporating the distributional facts observed in (60) and (64) into the analysis. How exactly this can be achieved remains at present a matter for further research.

8. Conclusion

To conclude, it was observed that both FQs and associates of existential constructions exhibit similar distributional patterns of behaviour which suggest that neither can be spelt out within the vP-domain, contrary to standard analyses, and also in contradiction with the general notion of the vP-internal subject hypothesis. The aim of this paper was to provide a unified account of these phenomena which posits an intermediate position outside of vP but below TP to which all subjects must obligatorily raise. This position exists in the form of a clause internal phase edge. Specifically, I claimed that v_{prog}° acts as the phase head (with Spec-vP_{prog} as the respective phase edge) as opposed to v° . All subjects must obligatorily raise to this phase edge, outside of vP, in order to check the relevant Edge feature. All subjects thus escape spell out of the clause internal phasal domain. Under the PIC, subjects are therefore available to agree with the finite verb and to check the EPP on T[°].

In existential constructions, merger of expletive *there* in Spec-TP satisfies the EPP, preventing the subject/associate from raising beyond the clause internal phase edge. Under the principle of Late Adjunction, FQs can only be adjoined to the subject at the end of the phasal derivation, when the subject sits in the phase edge. The FQ may subsequently be stranded in this position, or may be optionally pied-piped by the subject to an intermediate specifier (assuming raising to be successive cyclic) and be stranded from there.

I furthermore showed that existential constructions are indeed mono-clausal derivations, or at the very least, are ambiguous constructions with both reduced relative and mono-clausal structures available to them. Therefore an analysis of why associates must be spelt out outside of the vP domain is warranted. Further issues of course need to be explained, such as why associates appear to be able to surface within the vP domain when accompanied by a non-progressive unaccusative verb, whereas FQs must always precede these verbs. I leave this issue for future research.

The majority of the analysis is dependent upon the notion of phases, and in particular upon the crucial assumption that v_{prog}° acts as the clause internal phase head as opposed to v° . Although this is non-standard, increasing amounts of evidence appear to be pointing in this direction (Aboh 2005; Deal 2009; Preminger & Coon 2011). If this analysis is on the right track, then the concept of phases might need to be reconsidered. Either the traditional notion that a predicate relationship constitutes a phase needs to be abandoned altogether in favour for a more liberal definition of what constitutes a phase, or one needs to be open to the idea that multiple predicational layers are possible within a clause, which extends the notion of the phase beyond the traditional vP.

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References

- Aboh, E. (2005). Object shift, verb movement and verb reduplication. Cinque, G. & R. Kayne (eds.), *The Oxford handbook of comparative syntax*. OUP, New York, pp. 138-177.
- Akmajian, A & T. Wasow (1975). The constituent structure of VP and AUX and the position of the verb *be*. *Linguistic Analysis* 1, pp. 205–245.
- Boskovic, Z. (2004). Be careful where you float your quantifiers. *Natural Language & Linguistic Theory* 22:4, pp. 681-742.
- Burzio, L. (1986). *Italian syntax: a government-binding approach*. Reidel, Dordrecht.
- Caponigro, I. & C. Schütze (2003). Parameterizing passive participle movement. *Linguistic Inquiry* 34:2, pp. 293-307.
- Chomsky, N. (1981). *Lectures on government and binding*. Reidel, Dordrecht.
- Chomsky, N. (2000). Minimalist inquiries: the framework. Martin, R., D. Michaels, & J. Uriagereka (eds.), *Step by step*. MIT Press, Cambridge, pp. 89-156.
- Chomsky, N. (2001). Derivation by phase. Kenstowicz (ed.), *Ken Hale: a life in language*. MIT Press, Cambridge MA, pp. 1-54.
- Cinque, G. (1999). *Adverbs and functional heads: a cross-linguistic perspective*. OUP, Oxford.
- Cirillo, R. (2009). The syntax of floating quantifiers: stranding revisited. Diss. Utrecht, Landelijke Organisatie Taalwetenschap.
- Deal, A. (2009). The origin and content of expletives: evidence from selection. *Syntax* 12:4, pp. 285-323.
- Emonds, J. (1970). Root and structure-preserving transformations. Diss, MIT.

- Ernst, T. (2001). *The syntax of adjuncts*. CUP, Cambridge.
- Gallego, A. (2009). Ellipsis by phase. Paper presented at *XIX Colloquium on Generative Grammar*, Euskal Herriko Unibertsitatea.
- Gengel, K. (2007). Phases and ellipsis. Efnér, E. & M. Walkow (eds.) *Proceedings of the 37th Meeting of the North East Linguistic Society*. GLSA Publications: Massachusetts, Amherst.
- Haegeman, L. (2004). Speculations on subject positions, predication and predicate inversion in English. Ms, University of Ghent.
- Henry, A. & S. Cottell (2007). A new approach to transitive expletives: evidence from Belfast English. *English Language and Linguistics*, 11:2, pp. 279-299.
- Johnson, K. (2001). What VP ellipsis can do and what it can't, but not why. Baltin, M. & C. Collins (eds.) *The handbook of contemporary syntactic theory*. Blackwell, pp. 439-479.
- Koopman, H. & D. Sportiche (1991). The position of subjects. *Lingua* 85:3, pp. 211-258.
- Lasnik, H. 1995. Case and expletives revisited: on greed and other human failings. *Linguistic Inquiry* 26, pp. 615-633.
- Law, P. (1999). On the passive existential constructions. *Studia Linguistica* 53, pp. 183–208.
- Legate, J. (2003). Some interface properties of the phase. *Linguistic Inquiry* 34:3, pp. 506-515.
- McNally, L. (1992). An interpretation for the English existential construction. Diss, University of California, Santa Cruz.
- Milsark, G. (1974). *Existential sentences in English*. Diss, MIT.
- Moro, A. (1997). *The raising of predicates: predicative noun phrases and the theory of clause structure*. CUP, Cambridge.
- Newell, H. (2005). Bracketing paradoxes and particle verbs: a late adjunction analysis. *Proceedings of Console XIII*. University of Leiden, pp. 249-272.
- Ochi, M. (1999). Some consequences of Attract F. *Lingua* 109, pp. 81-107.
- Preminger, O. & J. Coon. (2011). Towards a unification of person splits. Paper presented at the *47th annual meeting of the Chicago Linguistic Society*, Chicago, IL.
- Rezac, M. (2006). The interaction of Th/Ex and locative inversion. *Linguistic Inquiry* 37:4, pp. 685-697.
- Rizzi, L. 1997. The fine structure of the left periphery. L. Haegeman (ed.) *Elements of grammar: handbook in generative syntax*. Dordrecht, Kluwer, pp. 281–337.
- Rocquet, A. (2010). Past participle agreement in French: a matter of phases and case-accessibility. An. D. K. & S. Y. Kim (eds.) *2010 Movement in Minimalism: Proceedings of the 12th Seoul International Conference in Generative Grammar*. Hankuk Publishing, Seoul.
- Shlonsky, U. (1991). Quantifiers as functional heads: a study of quantifier float in Hebrew. *Lingua* 84. Pp. 159-180.
- Sportiche, D. (1988). A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19:3, pp. 425–449.
- Stepanov, A. (2001). Late adjunction and minimalist phrase structure. *Syntax* 4:2, pp. 94-125.
- Stowell, T. (1978). What was there before *there* was there? Farkas, D. et al. (eds.), *Papers from the 14th Regional Meeting, Chicago Linguistic Society*, Chicago, IL, pp. 458-471.
- Thoms, G. (2010). Verb-floating and VPE: towards a movement account of ellipsis licensing. Paper presented at *Brussels Conference in Generative Linguistics 4*, Brussels.
- Williams, E. (1984). There-insertion. *Linguistic Inquiry* 15, pp. 131–153.
- Yoshida, M & A. Gallego (2008). Phases and ellipsis. Paper presented at the *27th West Coast Conference on Formal Linguistics*, UCLA, CA.
- Zagona, K. (1982). Government and proper government of verbal projections. Diss, University of Washington.