Rise of the Associate: An Analysis of English Existential Constructions[1]

Will Harwood
Ghent University

1 Introduction

This paper explores intermediate subject positions through an analysis of English existential constructions. In particular, I argue that associates never appear in their base positions, rather they raise to the specifier below the clause internal phase head, which I assume to be $v_{prog}°$ as opposed to $v°$.

Existential constructions have received a great deal of attention throughout the generative literature as they demonstrate word order patterns that differ from the normal active sentences of the languages in question. For instance, in English, active unaccusative sentences demonstrate a typical SV order:

(1)   <u>Three letters</u> **arrived** in the mail today.

However, as an existential, this sentence would appear in the reverse order of VS:

(2)   There **arrived** <u>three letters</u> in the mail today.

Since the two sentences are tantamount to the same semantic meaning,[2] it is generally believed that the two sentences share the same underlying form. The question then, is how are the two sentences in (1) and (2) derived?

Generally, the subjects of unaccusative sentences are considered to be derived subjects. That is, rather than being merged in Spec-vP like an agentive subject, they are instead merged in object position, as complement to V°. It has been widely hypothesized that sentences such as (1) are then derived by the subject, *three letters*, raising from its base position to the canonical subject position of Spec-TP in order to satisfy the EPP on T°. For (2), however, Chomsky (1981), Burzio (1986) and Akmajian & Wasow (1975) (among others) have argued that the semantically vacuous expletive *there* is inserted directly into Spec-TP, satisfying the EPP on T°. The logical subject, *three letters* (*the associate* in existential constructions), no longer with any motivation to move, is thereby prevented from raising. Consequently, it is spelt out in its base position as complement to V°, crucially following the lexical verb which resides on v° in

---

[2] There is some debate however, over the semantic contribution of expletive *there*.

English. This gives the correct VS word order to the existential sentence in (2). In this way, existential constructions are believed to provide convincing evidence for the vP-internal subject hypothesis (vPISH, cf. Koopman & Sportiche 1991), which states that subjects are merged within the vP domain. Specifically, agentive subjects are merged in Spec-vP, and derived subjects as complement of V°.

The suggestion that existentials provide significant evidence for the vPISH becomes all the more convincing when we consider the derivation of unergative and transitive sentences in their active and existential forms:

(3)   a.   <u>A boy</u> **is laughing**.
      b.   <u>A boy</u> **is kicking** a ball.

(4)   a.   There **is** <u>a boy</u> **laughing**.
      b.   There **is** <u>a boy</u> **kicking** a ball.

Recall that the subject in these sentences is an agentive subject which is generated in Spec-vP. The manner in which the sentences in (3) and (4) are derived then falls easily out of the above proposals. In (3), the subject *a boy* raises out of Spec-vP to Spec-TP to satisfy the EPP, thereby raising over finite auxiliary *be* which surfaces on T° for tense and agreement. In (4) merger of expletive *there* in Spec-TP satisfies the EPP, preventing the subject/associate from raising out of Spec-vP. The associate therefore is spelt out on Spec-vP, preceding the lexical verbs *laughing/kicking* situated on v°, but following finite auxiliary *be* occupying T°.

However, closer inspection of the relevant word orders in English existentials reveals that the above analysis is not entirely tenable. That is, the associate does not in fact appear to be occupying its base position, contrary to belief. Let us consider for instance, a passive construction of the type in (5):

(5)   <u>Several buildings</u> were **destroyed**.

Subjects of passive sentences are assumed to be derived. We therefore predict, in the existential counterpart of (5), for the associate to occupy its base position as complement of V°, the post-verbal position, parallel to unaccusatives. This is not the case however. As (6) shows, the associate in fact sits in pre-verbal position:

(6)   There were <u>several buildings</u> **destroyed**.

The fact that the derived associate sits in pre-verbal position suggests it is not always spelt out in its base position. However, given that the associate must always follow the finite auxiliary (which sits in T°), we know that the associate has not risen to Spec-TP either. Therefore, the associate must be raising to an intermediate projection. The question is, what is this projection, and what motivates subject/associate raising to this position? Moreover, why is this raising inconsistent? That is, why do some derived associates surface post-verbally (cf.

(2)), in their apparent base position, whilst others surface pre-verbally, in an intermediate position (cf. (6))? Though analyses of these word order patterns have been attempted before (see Caponigro & Schütze 2003, Rezac 2006), none have been successful in accounting for all the ordering facts in one fell swoop. This is exactly the aim of the present paper. I argue that associates always raise, and that their apparent ability to sometimes be spelt out in their base position is derived via additional lexical verb raising beyond the associate. The results will also have further reaching consequences, shedding new light on intermediate subject positions, the nature of movement and the size of the phasal domain.

The paper is organized as follows: section 2 presents detailed data on English existential constructions. Section 3 provides prerequisites to the analysis. Section 4 gives an analysis of existential constructions, and section 5 concludes.

2 Data

I first consider in detail the distribution of derived associates of unaccusative existentials. Recall that associates of unaccusatives are merged as complements to V°, and because the EPP is satisfied by merger of expletive *there* in Spec-TP, the associate has no motivation to raise. Thus we expect it to surface post-verbally as the complement of V°. This is true if the unaccusative verb is finite, infinitival, or inflected for perfective aspect (collectively referred to as non-progressive):

(7)   a.   There <*<u>three letters</u>> **arrived** <<u>three letters</u>> in the mail today.
        b.   There **may** <*<u>three letters</u>> **arrive** <<u>three letters</u>> in the mail today.
        c.   There **have** <*<u>three letters</u>> **arrived** <<u>three letters</u>> in the mail today.

However, if the verb is inflected for progressive aspect, the associate must *precede* the verb, suggesting it has risen from its base position:

(8)   There were <<u>three letters</u>> **arriving** <*<u>three letters</u>> in the mail.

With regard to passive existentials, we have already seen that the derived associate must also occur in pre-verbal position:

(9)   There were <<u>several buildings</u>> **destroyed** <*<u>several buildings</u>>.

Progressive unaccusatives and passives pattern with unergative and transitive existentials, where the agentive associate unsurprisingly precedes the verb.[3, 4]

(10)   a.   There was <<u>a boy</u>> **laughing** <*<u>a boy</u>>.

---

[3] Recall that agentive associates are merged in the already preverbal position of Spec-vP:

[4] Curiously, non-progressive *unergative* or *transitive* existentials do not exist, an issue which is addressed in Harwood (*To appear*(b)) and Deal (2009).

b. There was <u>a boy</u> **eating** <*<u>a boy</u>> an apple <*<u>a boy</u>>.

However, when considering the distribution of associates amongst adverbs and more complex auxiliary constructions, we see that even agentive associates do not surface in their base position of Spec-vP. I assume that adverbs, auxiliaries and modals are merged outside of vP (Cinque 1999).[5] This implies that if agentive or derived associates remained inside vP, they should follow all auxiliaries and adverbs. As is illustrated below, this prediction is not borne out.

First, both agentive and derived associates obligatorily precede measure adverbs such as *completely* (Haegeman 2004) and manner adverbs such as *loudly*:

(11) a. There was <u>a man</u> **completely <*<u>a man</u>> disregarding the rules.
      b. There were <u>many houses</u> **completely** <*<u>many houses</u>> demolished.
      c. There was <u>a boy</u> **loudly** <*<u>a boy</u>> eating an apple.
      d. There were <u>many houses</u> **loudly** <*<u>many houses</u>> demolished.

Moreover, all associates must precede the passive and copular auxiliary *being*:

(12) a. There were <u>several people</u> **being** <*<u>several people</u>> arrested.
      b. There were <u>several people</u> **being** <*<u>several people</u>> rather loud.

This suggests that both agentive and derived associates are raising to an intermediate projection outside of vP. Crucially, they are raising to a projection above the surface positions of auxiliary *being*, low adverbs and the lexical verb. The most prominent question that arises at this point is what exactly is this position? By further exploiting the distribution of associates amongst complex auxiliaries, we are able to uncover the nature of this projection.

First, whilst associates must precede auxiliary *being*, they cannot precede other forms of *be*, i.e. *been*, tensed *be* or infinitival *be*. Moreover, neither agentive nor derived associates can precede auxiliary *have*, nor the modal verb:

(13) a. There <*<u>a man</u>> **was** <<u>a man</u>> standing in the garden.
      b. There <*<u>a man</u>> **was** <<u>a man</u>> hung for his crimes.
      c. There <*<u>a man</u>> **was** <<u>a man</u>> in the garden.

(14) a. There <*<u>a man</u>> **could** <*<u>a man</u>> **be** <<u>a man</u>> standing in the garden.
      b. There <*<u>a man</u>> **could** <*<u>a man</u>> **be** <<u>a man</u>> hung for his crimes.
      c. There <*<u>a man</u>> **could** <*<u>a man</u>> **be** <<u>a man</u>> in the garden.

(15) a. There <*<u>a man</u>> **had** <*<u>a man</u>> **been** <<u>a man</u>> singing in the rain.
      b. There <*<u>a man</u>> **has** <*<u>a man</u>> **been** <<u>a man</u>> hung for his crimes.

---

[5] Some adverbs may be merged on the very edge of vP, but this is standardly assumed to be above the Spec-vP in which the agentive subject is merged.

c.   There <*<u>a man</u>> **had** <*<u>a man</u>> **been** <<u>a man</u>> in the garden.

It seems that associates raise to a position above auxiliary *being*, but below all other auxiliaries. Moreover, since agentive and derived associates share such a similar distribution, it is reasonable to claim that they raise to the same position.

To summarize, we have seen that in general, both agentive and derived associates of existentials do not surface in their base positions. They appear to raise to a mysterious intermediate projection above the lexical verb, low adverbs and auxiliary *being*, and seem to be frozen in this position, as they cannot precede higher auxiliaries. The only instance in which an associate appears to surface in its base position, is in non-progressive unaccusative existentials.[6]

In sum, the generalization is that associates, whether agentive or derived, must precede all verbs and auxiliaries that are inflected for progressive or passive morphology, and must follow all those with higher inflections, i.e. perfective, infinitival or finite. Our aim is to account for this ordering data:

(16)   Exp <*<u>as</u>> T <*<u>as</u>> Inf <*<u>as</u>> Perf <**<u>as</u>**> Prog <*<u>as</u>> Pass <*<u>as</u>>

3 Prerequisites

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

3.1 Auxiliary raising

Adapting ideas from Cinque (1999) and Thoms (2010), I assume the TP layer contains four separate functional projections where auxiliary and modal verbs are merged.[7] I assume perfective *have*, progressive *be* and passive *be* all head a vP shell (vP$_{perf}$, vP$_{prog}$ and vP$_{voice}$), and that modals are merged in a separate ModP.[8]

The sentence in (17) illustrates that auxiliary and modal verbs rigidly occur in the order modal>perfective *have*>progressive *be*>passive *be*:

(17)   He could have been being punished.[9]

I therefore assume these four functional projections are arranged in the following order: ModP>vP$_{perf}$>vP$_{prog}$>vP$_{voice}$. Moreover, I assume that each of these phrases
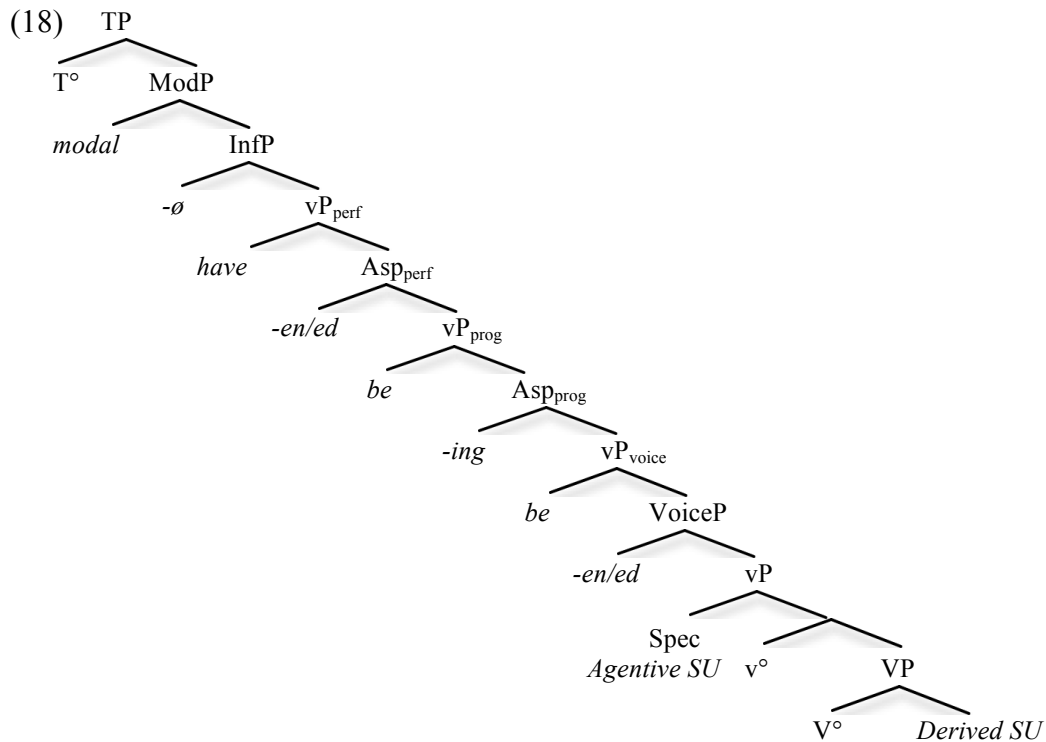
---

[6] As unaccusatives do not seem compatible with lower adverbs such as *completely* or *loudly*, it is impossible to test whether here too, the associate has moved, or whether it occurs in its true base position. I adopt a unifying approach and claim that the associate raises in all cases.

[7] There may very well be more than four functional projections for modals and auxiliaries, but for the purposes of this paper I restrict myself to these four.

[8] I furthermore assume copula *be* is merged in v°

[9] Some native speakers of English find sentences containing four auxiliary verbs difficult to parse, i.e. *could have been being V*, though such sentences are standardly still considered grammatical.

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 with a –ø inflection generated in its head; vP$_{perf}$ selects Asp$_{perf}$, with the relevant -en/ed inflection as a head; vP$_{prog}$ selects Asp$_{prog}$, with –ing in the head; and vP$_{voice}$ selects VoiceP, with the passive –en/ed inflection.

(18)

```
        TP
       /  \
     T°    ModP
          /    \
       modal    InfP
               /    \
             -ø      vP_perf
                    /       \
                  have       Asp_perf
                            /        \
                        -en/ed        vP_prog
                                     /       \
                                   be         Asp_prog
                                             /        \
                                          -ing         vP_voice
                                                      /        \
                                                    be          VoiceP
                                                               /      \
                                                           -en/ed      vP
                                                                      /   \
                                                                  Spec     \
                                                            Agentive SU  v°  \
                                                                              VP
                                                                             /  \
                                                                           V°   Derived SU
```

I assume auxiliaries and modal verbs raise overtly to T° for tense inflections in English. I also assume auxiliaries in English raise overtly for aspectual/infinitival inflections (Akmajian & Wasow 1975, Thoms 2010 and Cinque 1999).

For instance, if *have* or a form of *be* is preceded by a modal, then *have* or *be* will raise to Inf° in order to pick up the –ø inflection and surface as *be* or *have*:

(19)   a.   I <u>could</u> **have** died.
       b.   We <u>could</u> **be** eating by now.

If a form of *be* is preceded by *have*, then *be* raises to Asp$_{perf}$° in order to receive the relevant –en/ed inflection and surface as *been*:

(20)   We <u>have</u> **been** defeated.

Finally, if passive or copular *be* is preceded by progressive *be*, it raises to Asp$_{prog}$° in order to receive the progressive –ing inflection and surface as *being*:

(21)   We <u>were</u> **being** rather loud.

Importantly, auxiliary *be* only raises as high as $Asp_{prog}°$ to surface as *being*, but raises beyond this position in order to be spelt out as *be, been* or finite *be*.[10]

Recall that associates obligatorily precede *being*, but not *be, been* or tensed *be*. This implies that they must raise to a position somewhere between $Asp_{prog}°$ and $Asp_{perf}°$. This could be either Spec-vP_{prog} or Spec-Asp_{prog}. The next task is to motivate this raising, which calls for a discussion on the nature of subject raising.

3.2 Subject raising

Movement is traditionally believed to be target-driven. That is, a moving element is never assumed to move of its own accord. Instead it must wait for the final target of movement to be merged higher in the derivation. The target for movement is merged with an uninterpretable feature which must be checked. This motivates the target, a.k.a. the probe, to search its domain for an element with a corresponding interpretable feature that is able to check the uninterpretable feature on the probe. Once such an element is found, it raises to the specifier of the head containing the probe, from where it is able to check the relevant uninterpretable feature through a Spec-head agreement relation. Thus, moving elements are pulled up by the target of movement.

Since the introduction of phase theory (Chomsky 2000, 2001) however, this form of raising has run into problems in terms of look ahead. Crucially, if an item inside the lower phase needs to check an uninterpretable feature in the higher phase, the moving element must first raise to the phase edge in order to escape spell-out of the lower phasal domain. This movement critically takes place before the target of movement has been merged in the higher phase. The question thus is, what motivates raising to the phase edge?

Traditionally this movement is motivated by positing an EPP feature on the phase head. The EPP feature would drive movement of the required element to the phase edge. However, as Boskovic (2007) notes, this EPP feature on the phase head does not solve the look ahead problem. That is, the EPP feature exists as a formal property on the phase head which pulls a necessary element up to the phase edge in order to ultimately check a feature in the higher phase that has not yet been merged. This implies that the syntactic computation can predict what is to be merged later in the derivation, and project an EPP feature on the phase head accordingly, thus the look ahead issue remains. I assume Boskovic's (2007) solution to this problem for present purposes, which works as such:

Rather than being target driven, movement is foot driven. The moving element is merged with an uninterpretable feature, which causes the element to act as a probe itself, looking inside its own domain for a corresponding interpretable feature. Failing to find such a feature, the element raises to the next

---

[10]   I use auxiliary *be* as a cover term for any form of *be*, auxiliary or copula.

available position and once again searches inside its domain for the relevant interpretable feature. The moving element continues this process of raising and searching inside its domain until the correct interpretable feature is found and the uninterpretable feature on the moving element is checked. This causes the moving element to begin raising as soon as it enters the structure, without having to wait for the final target of movement to be merged. Therefore, the moving element will proceed via successive cyclic movement through the phase edge if its feature remains unchecked, without having to rely on the EPP feature on the phase head, which can subsequently be dispensed with.

I assume subjects raise to check their [uCase] feature with a case assigning head bearing an [iCase] feature. This implies that we may also dispense with the EPP on T°, as the subject will ultimately raise of its own accord to Spec-TP where it can check its [uCase] feature with the interpretable [Case: Nom] feature on T°. A detailed discussion of the intricacies of this proposal is beyond the scope of this paper, but for a more thorough explanation, see Boskovic 2007. For now, it suffices to say that movement of the subject is driven by a [uCase] feature on the subject itself, and furthermore, that this causes the subject to undergo successive cyclic raising as soon as it enters the structure, without having to wait for T° to be merged. This allows the subject to proceed through the clause internal phase edge, and all the way up to the canonical subject position, without recourse to the EPP.

We now have all we need in order to proceed with a full analysis of the different word orderings of existential constructions.

4 Analysis

In this section I will argue that the VS ordering of non-progressive unaccusative existentials can be derived from the SV ordering of all other existential constructions. That is, in both instances the associate raises, but the VS ordering is derived by additional lexical verb raising to the clause internal phase head. Section 4.1 deals specifically with deriving the SV order of passive, transitive and unergative existentials, whilst section 4.2 concentrates on the SV order of progressive unaccusatives and the VS order of non-progressive unaccusatives.

Before we start, however, a claim must be made about the size of the phasal domain. Usually, $v°$ is considered the clause internal phase head. I argue counter to this claim, and propose that in fact $v_{prog}°$ is the clause internal phase head.[11] Due to limitations on space, I cannot go into arguments as to why this is the case, though see Harwood (*To appear*(a)) for a list of arguments in support of this claim. Deal (2009), Aboh (2005, 2007, 2009), Rocquet (2010) and Preminger & Coon (2011) have also made similar claims to this effect, based on independent grounds.

---

[11] I assume here a cartographical framework as per Rizzi (1997) and Cinque (1999) in which, even without progressive *be*, vP_{prog} always projects, always delineating the clause internal phase.

4.1 Passive, transitive and unergative existentials

I claim, as per Deal (2009), Bowers (2002), Richards (2007) and Richards & Biberauer (2005), that expletive *there* is merged on the clause internal phase edge, as opposed to on Spec-TP (Chomsky 1981, Burzio 1986, Akmajian & Wasow 1975), or as part of a complex DP (Chomsky 1995, Frampton 1997, Boskovic 2007). Due to space limitations, I cannot explain the reasoning for this claim, but the reader is directed towards the relevant literature cited above.

This implies, in accordance with the claim that $v_{prog}°$ acts as the clause internal phase head, that expletive *there* is merged on Spec-vP_{prog}, the clause internal phase edge. Let us now consider the associate, which enters the derivation with a [uCase] feature and instantly begins raising in order to have this feature checked. Both agentive and derived associates therefore proceed successive cyclically through the various intermediate specifiers as the phase is constructed. However, they may only raise as far as Spec-Asp_{prog}, from where their progress is halted. The reason for this is the merger of expletive *there* in the specifier of the following phrase. That is, upon construction of the following phrase, namely vP_{prog}, the clause internal phase, expletive *there* is inserted immediately into Spec-vP_{prog}. For the associate to continue raising it would have to skip the specifier of vP_{prog} which hosts *there*. This would constitute A-movement across an A-spec, a clear locality violation, therefore causing the derivation to crash. Instead, the associate freezes on Spec-Asp_{prog}. This is illustrated in (22).

(22)
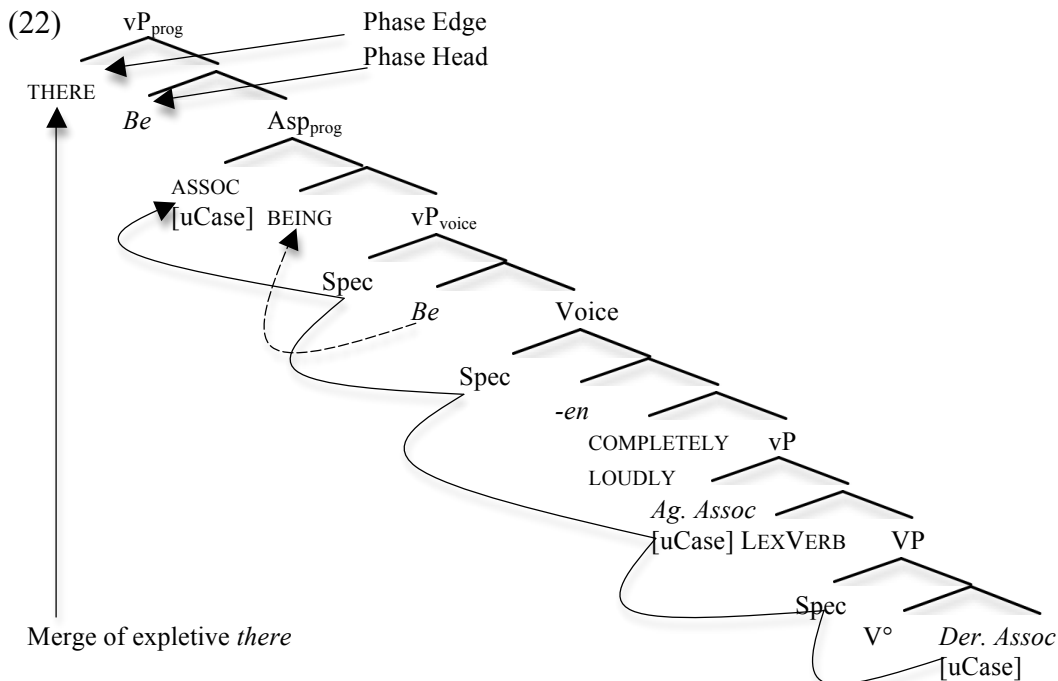
Crucially, this means that the associate ends up above the final landing site for *being*, which resides on $Asp_{prog}°$, the surface positions of low adverbs, generated below Voice° (Cinque 1999, Ernst 2001) and the lexical verb, which is spelt out

on v°. It is also below the final landing sites for all other auxiliaries, which are either merged above Spec-Asp$_{prog}$ or raise beyond it to Asp$_{perf}$°, Inf° or T°. This derives the correct distribution of the associate.

At this point however, our derivation is in danger of crashing as the associate still has an uninterpretable Case feature which requires checking. The associate may have risen to the correct surface location, but unless this uCase feature gets checked, the derivation will fall apart. Therefore, how can the associate's uCase feature be checked without raising further? A second issue at present is also how the expletive is able to raise to the canonical subject position of Spec-TP. As illustrated in (6)a (repeated here as (23)), expletive *there* precedes the finite auxiliary, providing evidence that the expletive does indeed surface in Spec-TP:

(23)   There **were** several buildings destroyed.

Recall however that, under foot driven movement, the EPP has been abolished. We must therefore motivate expletive raising via other means. I deal first with expletive raising, then with agreement and Case assignment on the associate.

4.2   Expletive raising and Case assignment

Following Belletti (1988), Lasnik (1992) and Boskovic (2007), I assume expletive *there* also enters the derivation with an uninterpretable [uCase] feature which must be checked. Once merged on the clause internal phase edge, the expletive searches inside its domain for a Case assigner and, failing to find one, raises of its own accord to the next available specifier to begin the search again. This process continues until the expletive arrives at Spec-TP where it is able to have its [uCase] feature checked by the nominative Case assigner T°. The expletive, with its [uCase] feature satisfied, now has no more features which require checking. It therefore becomes unavailable to further syntactic operations, and is subsequently frozen in place, in Spec-TP.

It should be stressed however, that the expletive contains nothing more than a [uCase] feature. It is devoid of all other phi-features that are normally found on a DP, such as number, person and gender (Chomsky 1995). Hence, though having had its [uCase] feature checked, the expletive is unable to check T's own [uφ] features. I follow Hiraiwa (2001), Koizumi (1994), Morikawa (1993), Takahashi (1994, 1996), Takezawa (1987) and Ura (1996) in claiming that T° may potentially assign nominative Case to more than one element. Specifically, I follow Fukui (1986) in claiming that T° is only 'closed off' after it has had all of its own uninterpretable features checked. That is, unless it has had its [uφ] features checked through agreement, the head of TP remains active, including its property of assigning nominative Case. This means T's interpretable [Case: Nom] feature may potentially continue to assign nominative Case to other elements until its [uφ] features are satisfied.

Hence, T°, having been unable to enter into a Spec-head agreement relationship with the expletive, still bears [uφ] features, implying that its [Case:

Nom] feature remains active. This means that T° must search for an alternative source to agree with, so it probes inside its own search domain for the relevant [iφ] features. The first element it encounters to bear such features is the associate, sitting in Spec-Asp$_{prog}$. T° enters into an agreement relation with the associate via Agree, with the phi-features of the associate checking the [uφ] features on T°.[12] Nominative Case assignment then operates off the back of this agreement relationship, with T's interpretable Case feature valuing the associate's [uCase] feature. Finally, now that T's [uφ] features have been satisfied, T° is 'closed off', i.e. it becomes unavailable for further syntactic operations, including its ability to assign nominative Case. Thus, the associate receives the necessary nominative Case without having risen to Spec-TP, and the existential derivation is saved.

To summarize, the associate raises successive cyclically via foot driven movement over the lexical verb, low adverbs and auxiliary *being* to Spec-Asp$_{prog}$. Here its progress is halted by merger of expletive *there* on Spec-vP$_{prog}$, the clause internal phase head, as crossing of this position by the associate would constitute a locality violation. Expletive *there* then raises to Spec-TP to check its own [uCase] feature with T's interpretable [Case: Nom] feature. However, the expletive is unable to value T's [uφ] features, so T's [Case] feature remains active until T° has entered into the necessary agreement relation. T° probes into its domain and agrees with the associate's [iφ] features, valuing the associate's [uCase] feature in the process. This derives the correct ordering of unergative, transitive and passive existentials, whilst still permitting the necessary Case assignment and Agree relations. Next we account for the SV and VS properties of progressive and non-progressive unaccusatives respectively.

4.3 Unaccusative existentials

Here I account for the SV ordering of progressive unaccusative and the VS ordering of non-progressive unaccusative existentials respectively.

I assume, similar to passives, that the derived associate of the unaccusative existential raises over the unaccusative verb on v°, and proceeds to Spec-Asp$_{prog}$ where it is halted by merger of expletive *there* on Spec-vP$_{prog}$. As before, the expletive then raises to Spec-TP to check its own [uCase] feature and T° Agrees with the associate, assigning nominative Case in the process.

---

[12] An issue arises here as to how T° can see inside the lower phase. Since the associate is sat within the lower phase and not on the phase edge, it is predicted, under the PIC (Chomsky 2000), that the associate should be unavailable for agreement with T°. A couple of solutions exist to this problem. Firstly, Boskovic (2007), Stjepanovic & Takahashi (2001), McGinnis (2004), Nevins (2004), Legate (2005) and Lee (2003) have all shown that Agree is not constrained by phase boundaries, unlike movement. The other alternative is to appeal to the second PIC (Chomsky 2001). I do not commit myself to either solution here, though both options remain distinct possibilities.

I now appeal to an observation made by Caponigro & Schütze (2003), which shows that lexical verbs inflected for perfective aspect raise over adverbs such as *beautifully*, whereas those inflected for passive morphology do not:

(24) a. She had \<played\> **beautifully** \<*played\>.
      b. The flute was \<*played\> **beautifully** \<played\>.

Caponigro & Schütze use this to claim that when inflected for perfective aspect, the verb raises over the associate in existentials. This observation is extendable to verbs bearing finite and infinitival inflections, which also appear to raise.

(25) a. She might \<play\> **beautifully** \<*play\>.
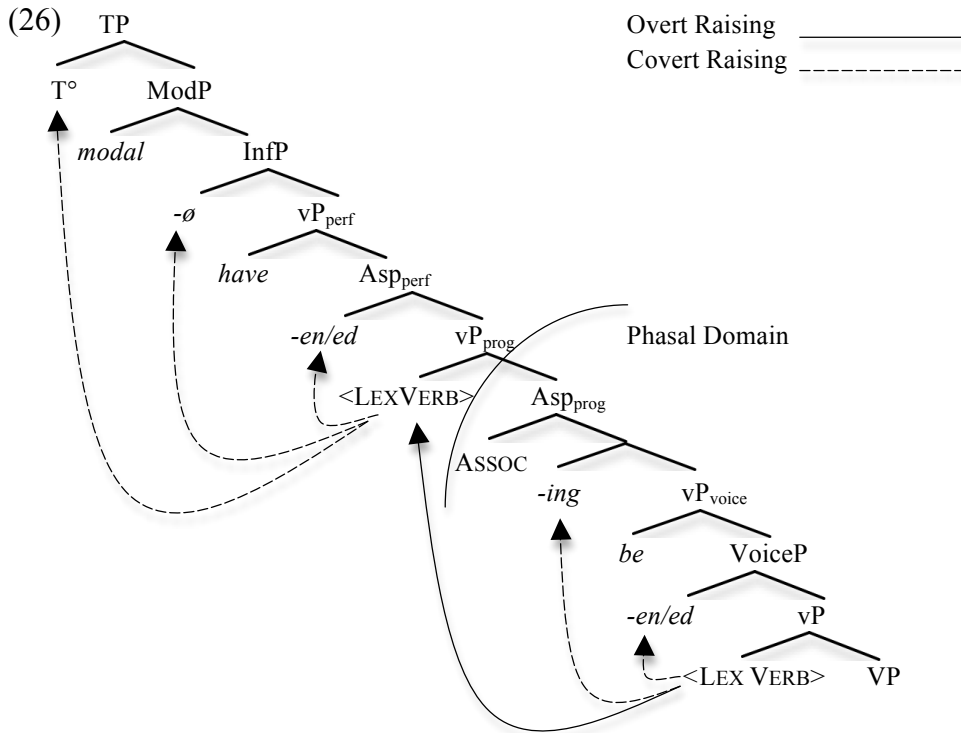   b. She \<played\> **beautifully** \<*played\>.

Given the fact that in English, finite lexical verbs never precede negation, escape VP ellipsis or undergo SAI, we may conclude that the verb raising observed in (24) and (25) is not to T°, but rather to some intermediate position. I claim that this intermediate position is the clause internal phase head.

Generally, lexical verb raising beyond v° in English is covert. That is, for a lexical verb to receive certain inflections, it will raise covertly to the relevant projections, always being spelt out on v°. I assume one exception to this rule however: if a lexical verb has to cross a phase boundary to receive its relevant inflection, it will proceed overtly to the phase head to escape spell out of the lower phasal domain, before moving covertly into the higher phase.

This claim is not necessarily controversial. Consider that if a lexical verb only raises covertly to the phase head to receive inflections in the higher phase, its lower copy will be spelt out before its higher copy has had a chance to check the relevant inflectional features in the higher phase. Thus the lower copy of the lexical verb has no way of overtly realizing the inflectional features that are yet to be acquired by its higher copy. Therefore, the lexical verb must proceed overtly to the intermediate phase head to escape spell out and receive its (higher) inflections.

Let us now apply this to the case at hand. Recall that $v_{prog}°$ acts as our clause internal phase head. This implies that progressive and passive morphology are generated within the lower phase, whereas perfective aspect, non-finite and finite inflections are all merged in the higher phase. Consequently, the lexical verb will raise covertly to the heads of Asp_{prog} or Voice respectively, in order to receive progressive or passive morphology, and be spelt out on v°. However, to receive perfective, infinitival or finite morphology, the lexical verb must first raise overtly to $v_{prog}°$, the clause internal phase, to escape spell out of the lower phasal domain, before proceeding covertly to the heads of Asp_{perf}, InfP or TP respectively.

We can utilize this to give the correct word orderings for unaccusative existentials. Recall that the associate sits on Spec-Asp_{prog} (as shown in the tree in (26)), crucially below the clause internal phase head.

(26)

TP
T° ModP
modal
ModP → InfP
-ø vP_perf
have Asp_perf
-en/ed vP_prog
<LEXVERB> Asp_prog
ASSOC
-ing vP_voice
be VoiceP
-en/ed vP
<LEX VERB> VP

Overt Raising _____
Covert Raising _ _ _ _ _ _ _ _ _

Phasal Domain

This means that when the unaccusative verb is inflected for perfective, infinitival or tense inflections (those generated in the higher phase), it must raise overtly to the clause internal phase head, over the associate. From there it covertly raises into the higher phase. This derives the correct VS order of non-progressive unaccusative existentials observed in (7). When the unaccusative verb is inflected for progressive morphology, however, it raises as far as Asp_prog° *covertly*, and is spelt out on v°, below the associate. This derives the correct SV order of progressive unaccusative existentials observed in (8).

Recall that unergative and transitive existentials are only possible with progressive morphology, thus the lexical verb will only ever covertly raise as far as Asp_prog° and be spelt out on v°, below the associate, as in (10). The same goes for passive existentials, in which the lexical verb only *covertly* raises as far as Voice°, and is spelt out on v°, below the associate, as in (9). In sum, the proposals put forward in this section on lexical verb raising in English to derive the correct word orderings for unaccusative existentials, predict the correct word orderings for passive, transitive and unergative existentials as well.

To summarize, it was claimed that lexical verbs realized for perfective, non-finite or finite inflections must proceed *overtly* to the clause internal phase head, crucially, over the associate, from where they can *covertly* raise into the higher phase to receive their relevant inflections. This derives the correct VS word orderings for non-progressive unaccusative existentials. On the other hand, lexical verbs realized for lower, phase internal inflections i.e. progressive and passive

morphology, only raise *covertly* to receive their relevant morphemes and are instead spelt out on $v°$, below the associate. This derives the correct SV word orderings for progressive unaccusative, unergative, transitive and passive existential constructions.

5 Conclusion

In conclusion, it was shown that all the correct word orderings of standard English existential constructions could be derived in one fell swoop through recourse to subject raising via foot driven movement, merger of expletive *there* on the clause internal phase edge, and additional intermediate verb raising to the clause internal phase head.

Moreover, the analysis shed new light on the existence of Spec-Asp$_{prog}$ as an intermediate subject position, as well as the precise details of auxiliary raising. The size of the phasal domain was also challenged, as I claimed that $v_{prog}°$ acts as the clause internal phase head as opposed to $v°$. Finally, support was also given for Boskovic's (2007) theory of foot driven movement in which EPP stipulations and issues regarding look ahead are dispensed with by positing an uninterpretable feature such as [uCase] on the moving element.

References

Aboh, E. 2005. Object shift, verb movement and verb reduplication. In *The Oxford Handbook of Comparative Syntax*, ed. By G. Cinque & R. Kayne, 138-177. New York: OUP.

Aboh, E. 2007. A 'mini'relative clause analysis for reduplicated attributive adjectives. *Linguistics in The Netherlands* 24.1–13.

Aboh, E. 2009. Clause Structure and Verb series. *Linguistic Inquiry* 40.1-33.

Akmajian, A & T. Wasow 1975. The constituent structure of VP and AUX and the position of the verb *be*. *Linguistic Analysis* 1.205–245.

Belletti, A. 1988. The case of unaccusatives. *Linguistic Inquiry* 19.1–34.

Boskovic, Z. 2007. On the locality and motivation of move and agree: an even more minimal theory. *Linguistic Inquiry* 38:4.589-644.

Bowers, J. 2002. Transitivity. *Linguistic Inquiry* 33.

Burzio, L. 1986. *Italian syntax: a government-binding approach*. Dordrecht: Reidel.

Caponigro, I. & C. Schütze. 2003. Parameterizing passive participle movement. *Linguistic Inquiry* 34:2.293-307.

Chomsky, N. 1981. *Lectures on government and binding*. Dordrecht: Reidel.

Chomsky, N. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, N. 2000. Minimalist inquiries: the framework. In *Step by step*, ed. By R. Martin, D. Michaels & J. Uriagereka, 89-156. Cambridge MA: MIT Press.

Chomsky, N. 2001. Derivation by phase. In *Ken Hale: a life in language*, ed. By M. Kenstowicz, 1-54. Cambridge MA: MIT Press.

Cinque, G. 1999. *Adverbs and functional heads: a cross-linguistic perspective*. Oxford: OUP

Deal, A. 2009. The origin and content of expletives: evidence from selection. *Syntax* 12:4.285-323.

Ernst, T. 2001. *The syntax of adjuncts*. Cambridge: CUP.

Fukui, N. 1986. *A theory of category projection and its applications*. PhD dissertation, MIT.

Frampton, J. 1997. Expletive insertion. In *The role of economy principles in linguistic theory*, ed. By C. Wilder, H-M. Gärtner & M. Bierwisch, 36–57. Berlin: Akademie Verlag.

Haegeman, L. 2004. Speculations on subject positions, predication and predicate inversion in English. Ms, University of Ghent.

Harwood, W. To appear(a). There are several positions available: English intermediate subject positions. *Proc. ConSOLE XIX*.

Harwood, W. To appear(b). Phasage: a phase-based account of English existential constructions. *Proc. 13th SICOGG*. Seoul: Hankuk Publishing.

Hiraiwa, K. 2001. Multiple agree and the defective intervention constraint in Japanese. *MITWPL* 40. 67-80.

Koizumi, M. 1994. Nominative objects: the role of TP in Japanese. In *Formal approaches to Japanese linguistics 1: MITWPL* 24, ed. By M. Koizumi & H. Ura. 211-230.

Koopman, H. & D. Sportiche. 1991. The position of subjects. *Lingua* 85:3.211-258.

Lasnik, Howard. 1992. Case and expletives: Notes toward a parametric account. *Linguistic Inquiry* 23. 381 – 405.

Lee, J. 2003. Phase sensitivity in *wh*-dependencies. *Korean Journal of Linguistics* 28.67–89.

Legate, J. 2005. Phases and cyclic agreement. In *Perspectives on phases*, ed. By M. McGinnis & N. Richards, 147-156. Cambridge, MA: MITWPL.

McGinnis, M. 2004. Lethal ambiguity. *Linguistic Inquiry* 35. 47–95.

Morikawa, M. 1993. *A parametric approach to case alternation phenomena in Japanese*. Tokyo: Hituzi Syobo.

Nevins, A. 2004. Derivations without the activity condition. In *Perspectives on phases*, ed. By M. McGinnis & N. Richards, 287–310. Cambridge, MA: MITWPL.

Preminger, O. & J. Coon. 2011. Towards a unification of person splits. Paper presented at the 47th *CLS*, Chicago, IL.

Rezac, M. 2006. The interaction of Th/Ex and locative inversion. *Linguistic Inquiry* 37:4.685-697.

Richards, M. 2007. On object shift, phases, and transitive expletive constructions in Germanic. In *Linguistic Variation Yearbook* 6, ed. By P. Pica et. Amsterdam/New York: John Benjamins.

Richards, M. and T. Biberauer. 2005. Explaining *Expl*. In *The Function of Function Words and Functional Categories*, ed. By M. den Dikken & C. Tortora. Amsterdam/New York: John Benjamins.

Rizzi, L. 1997. The fine structure of the left periphery. In *Elements of grammar: handbook in generative syntax*, ed. By. L. Haegeman, 281–337. Dordrecht: Kluwer.

Rocquet, A. 2010. Past participle agreement in French: a matter of phases and case-accessibility. In *Movement in Minimalism: Proc. 12th SICOGG*, ed. By D. K. An. & S. Y. Kim. Seoul: Hankuk Publishing.

Stjepanovic, S. & S. Takahashi. 2001. Eliminating the phase impenetrability condition. Paper presented at the workshop on *Motivating movement: Explaining the displacement property of natural language*, University of Ulster.

Takahashi, C. 1994. Case, agreement, and multiple subjects: subjectivization in syntax and LF. In *Japanese/Korean linguistics* 4, ed. By N. Akatsuka. 394-411. Stanford: CSLI.

Takahashi, C. 1996. *Multiplicity, optionality and constraints on the distribution of nominative case in Japanese*. PhD dissertation, Cornell University.

Takezawa, K. 1987. *A configurational approach to case-marking in Japanese*. PhD dissertation, University of Washington.

Thoms, G. 2010. Verb-floating and VPE: towards a movement account of ellipsis licensing. Paper presented at *BCGL* 4, Brussels.

Ura, H. 1996. *Multiple feature-checking: a theory of grammatical function splitting*. PhD dissertation, MIT.