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BEYOND THE PERFECT CONSTRUCTION: AUXILIARY SELECTION IN ENGLISH*
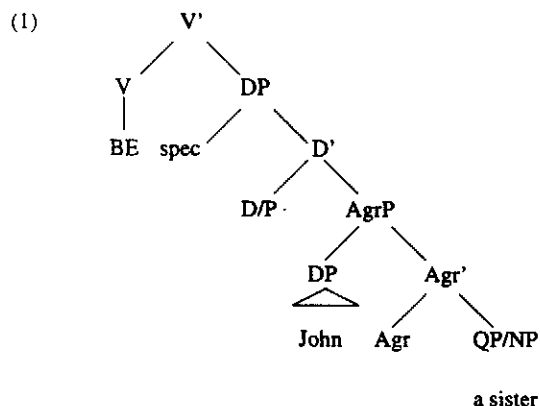
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1. Introduction

Kayne (1993) proposes a theory of auxiliary selection (AS) in which there is no actual specific rule of auxiliary selection that determines the distribution of the auxiliaries *have* and *be* in languages which use both of these in the auxiliary + past participle construction (the perfect). Rather, the distribution of *have* and *be* in the perfect is governed by independent principles of the grammar which interact in such a way as to cause *have* to emerge in some cases and *be* to emerge in others. Given Kayne's proposal, the phenomenon of "auxiliary selection" simply turns out to be an epiphenomenon that results from more general grammatical principles. As such, the term "auxiliary selection" can be descriptively used to refer to the general use of the auxiliaries *have* and/or *be* in any language, and more importantly, in any construction. That is, given Kayne's analysis, there is no reason to believe that the phenomenon of AS should not encompass the question of the distribution of the auxiliaries *have* and *be* in non-perfect constructions as well, such as the auxiliary + progressive participle construction (*John is eating*) and the auxiliary + passive participle construction (*John was beaten*) in English. In my paper I adopt the essence of Kayne's theory of AS in the perfect and apply it to the problem of AS in the non-perfect constructions. In doing so, I attempt to provide an account of the use of *be* with the progressive and passive. My account will make reference to the difference between the temporal interpretation of the perfect participle on the one hand and the progressive and passive participles on the other. In doing so, I adopt Giorgi & Pianesi's (1991a,b) theory of the syntax of temporal relations, which predicts that progressive and passive participles do not make a contribution to the temporal interpretation of the sentence. It will be shown how this notion, combined with Kayne's theory of AS, can account for the use of *be* in the non-perfect constructions.

2. A review of Kayne's (1993) theory of auxiliary selection

Essential to Kayne's account of auxiliary selection is Szabolcsi's (1981, 1983) analysis of possessive constructions in Hungarian, which he modifies and applies cross-linguistically. According to Kayne's version of Szabolcsi's analysis, the possessive construction, such as *John has a sister*, consists of an abstract copular form (which Kayne notates BE) plus a single DP argument. Heading this DP argument is a null P.[1] As such, the d-structure representation of *John has a sister* is as follows:

(1)

```
              V'
            /    \
          V        DP
          |       /   \
         BE   spec      D'
                       /   \
                    D/P ·    AgrP
                            /    \
                         DP       Agr'
                        /\        /   \
                    John    Agr      QP/NP

                              a sister
```
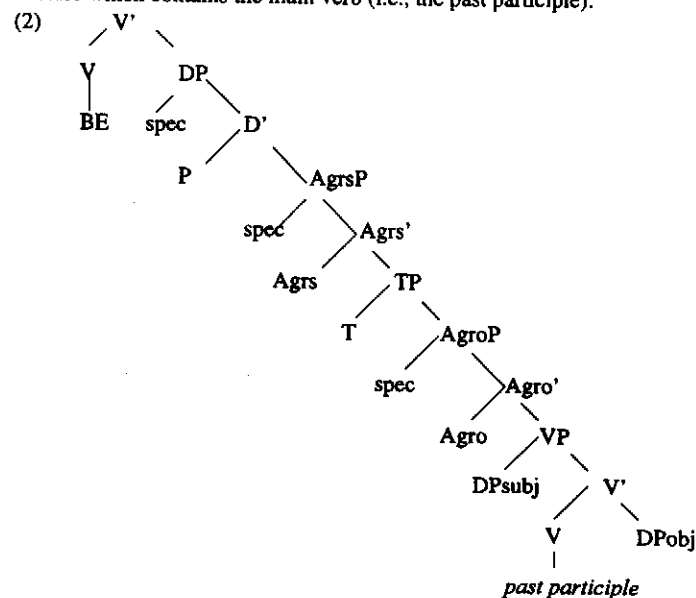
To derive *John has a sister*, the lower DP *John* must move through the spec of the larger DP, and continue to move out. Kayne claims, however, that it is plausible to take the spec of the larger DP to be an A'-position.[2] As such, movement of the lower DP *John* through this position and up to an A-position would constitute an instance of improper movement. In order to avoid improper movement, this [spec, DP] must be turned into an A-position. Kayne claims that this is accomplished by incorporation of P into BE, which, by virtue of Baker's (1988) Government Transparency Corollary, causes [spec, DP] to become an A-position. As such, the lower DP can move through [spec, DP] and continue to the higher A-position. Adopting Freeze's (1992) position, Kayne further claims that the complex BE+P,

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[1] Drawing an analogy between DP and CP, this empty P is to be taken as analogous to a prepositional complementizer heading a CP.

[2] Maintaining that DP is similar to CP.

resulting from incorporation of the preposition into the copula, is spelled out as *have*. BE without the preposition incorporated into it is spelled out as *be*.[3]

Kayne then claims that this analysis of possessive (main verb) *have* should be extended to auxiliary *have*. He proposes that the abstract auxiliary BE also takes a DP complement. This participial DP complement, however, contains a full clausal structure which contains the main verb (i.e., the past participle):

(2)

```
            V'
          /    \
         V       DP
         |      /   \
        BE   spec    D'
                    /   \
                   P     AgrsP
                        /    \
                     spec     Agrs'
                             /    \
                          Agrs      TP
                                  /    \
                                 T     AgroP
                                      /     \
                                   spec      Agro'
                                            /    \
                                         Agro     VP
                                                /    \
                                           DPsubj      V'
                                                      /   \
                                                     V     DPobj
                                                     |
                                              past participle
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[3] In Hungarian, the copular form in the possessive construction is spelled out as *van*, which Szabolcsi translates 'be.' If Kayne's analysis of possessive constructions is to be taken as a universal, then we must explain why the abstract P does not have to incorporate into BE in Hungarian. For the moment, we may note that there is evidence (I. Kenesei, pers. comm.) that the DP which moves through the A'-spec of the larger DP ultimately moves to an A'-position. In this case, there would be no instance of improper movement, so the spec of the larger DP would not have to be turned into an A-position through incorporation of the P into BE. As such, BE in Hungarian possessive constructions would be spelled out as *be*.

Kayne uses the structure in (2) to explain an array of AS facts found in several Romance languages. For the purposes of this paper, however, I will only review Kayne's account of the AS facts exhibited by standard Italian and standard Spanish.

It is well known that in Italian perfect constructions, the auxiliary *have* is used with transitive and unergative verbs (3a,b), while the auxiliary *be* is used with unaccusative verbs (3c):

(3) a. *Maria ha comprato i libri.*   (= M. has bought the books)

    b. *Maria ha dormito.*   (= M. has slept)

    c. *Maria è arrivata.*   (= M. is ('has') arrived)

Languages like Italian contrast with languages like Spanish, which invariably uses *have* for transitives, unergatives, and unaccusatives (4a,b,c) in the perfect constructions:

(4) a. *Maria ha comprado los libros.* (= M. has bought the books)

    b. *Maria ha dormido.*   (= M. has slept)

    c. *Maria ha llegado.*   (= M. has arrived)

In order to explain the difference between Spanish and Italian, Kayne claims that Spanish uses the participial structure in (2) for transitives and unergatives, as well as for unaccusatives. The P will incorporate into BE in all cases, always yielding the auxiliary *have*. Kayne proposes that Italian, on the other hand, uses the participial structure in (2) for transitives and unergatives, but uses the participial structure in (5) for unaccusatives:[4]

(5)

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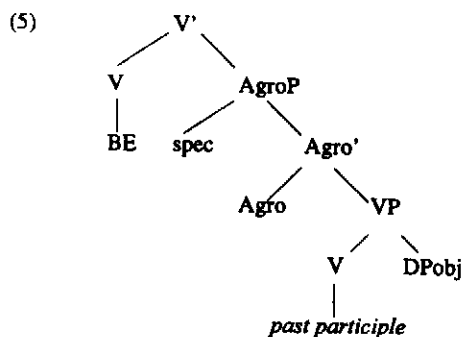
[4] Note that the structure in (5) contains no T node. We will return to this question in § 3.3.

Kayne motivates the structure in (5) in the following way. He claims that AgrsP can never function as an argument to a higher predicate, so when it is present, a DP must be present. However, if there is no AgrsP, then the presence of DP is not required. Kayne further assumes that an unaccusative participial VP with a single non-oblique (object) argument need not be associated with Agrs. As such, no DP need be present, and consequently no abstract P will be present either. Thus, in a language like Italian, with no P to incorporate into BE in (5), the auxiliary BE is always spelled-out as *be* in the unaccusative perfect construction.

In the following section we will see how Kayne's account of the Italian unaccusative perfect can be used to explain the use of the auxiliary *be* in the non-perfect constructions in English.

3. Explaining auxiliary selection in English

3.1 The auxiliaries have and be in English

While English is not traditionally considered to be a language which exhibits any AS phenomena, if we adopt Kayne's theory, we must assume that auxiliary selection is really the result of independently motivated principles of the grammar interacting in such a way as to cause *have* to emerge in some cases and *be* to emerge in others. Given this view, then, any language that uses the auxiliaries *have* or *be*, or both, in any construction, exhibits the phenomenon of AS.

As is well known, English uses the auxiliary *be* for the progressive (6a) and for passive (6b), while it uses *have* in the perfect constructions, with transitives (6c), unergatives (6d), and unaccusatives (6e) (like Spanish):

(6) a. John is beating the eggs.

    b. John is beaten by his opponents.

    c. John has beaten the eggs.

    d. John has slept.

    e. John has arrived.

A question that immediately comes to mind, however, is why English does not use *have* for the progressive and passive:

(7) a. *John has beating the eggs.   progressive

    b. *John has beaten by his opponents.   passive

In answering this question, I concur with some brief comments made by Kayne (1993: 8; footnote 18) and claim following. The use of *be* in the non-perfect

constructions is directly related to the lack of a temporal contribution made by the progressive and passive participles. In order to explain how tense relates to the choice of auxiliary, I adopt the theory of the syntactic representation of temporal relations proposed by Giorgi & Pianesi (1991a,b), which I will briefly summarize at this point.

3.2. Giorgi & Pianesi: Syntactic constraints on temporal representations

In developing a theory that can predict the presence of auxiliary verbs, Giorgi & Pianesi (1991a,b) (G&P) adopt the model of the representation of temporal relations developed by Comrie (1985) and Hornstein (1990) (adapted from Reichenbach (1947)). According to this model, there are three relevant points represented on a time line: an *event* (E), the *moment of speech* (S), and some *reference point* (R). The temporal location of the event (E) is specified by an indirect relationship to the moment of speech (S), mediated by the reference point (R). In other words, the relation among these three points is split into two distinct relations: one between S and R (S/R), and one between E and R (E/R). *Tense* is a linearly ordered complex made up of these three points. Hornstein (1990) claims that the structure of the six basic tenses of English are as follows:

(8) a. S,R,E   present
     b. E,R__S   past
     c. S__R,E   future
     d. E__S,R   present perfect
     e. E__R__S   past perfect
     f. S__E__R   future perfect

The points separated by a comma are to be interpreted as contemporaneous. If two points are separated by a line, the leftmost point is to be interpreted as temporally earlier than the rightmost point.

G&P propose that the two relationships S/R and E/R have syntactic reflexes. According to G&P, there are two tense morphemes, referred to as T1 and T2, which syntactically instantiate the relations S/R and E/R, respectively. In other words, T1 (structurally higher, associated with the auxiliary) instantiates the relation between S and R, while T2 (structurally lower, associated with the participle) instantiates the relation between E and R. Furthermore, they claim that when the relations between the points are represented by a comma (i.e., interpreted as contemporaneous), as in the present tense (8a), no temporal relation is expressed, and consequently, no T

node is instantiated in the syntax.[5] In the past perfect on the other hand (8e), the relations S/R and E/R are expressed, and as such both T1 and T2 are instanti in the syntax. G&P claim, then, that the structure of the past perfect (such as . *had beaten the eggs*) is as follows:

(9)
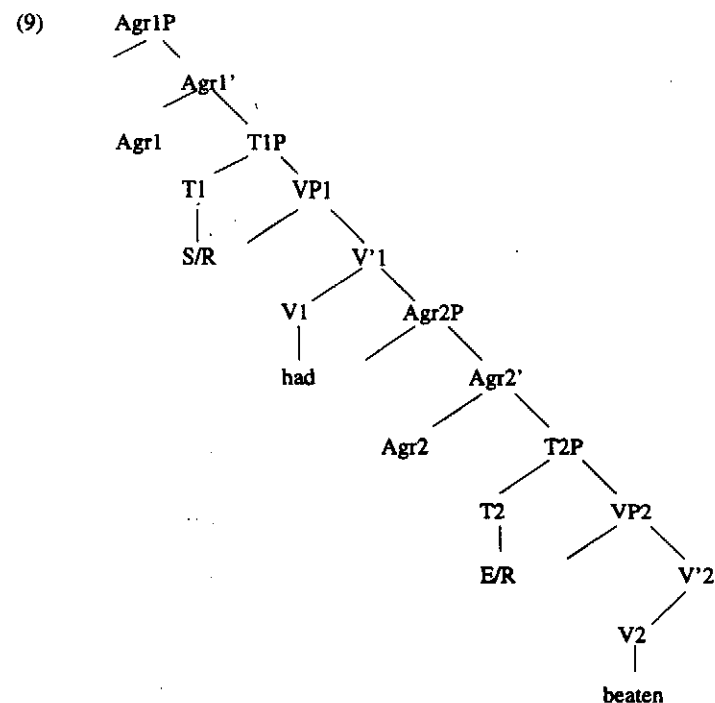
As can be seen, the relation S/R projects T1 and the relation E/R projects Thus, if a particular tense does not express the relation S/R, then T1 is instantiated in the syntax, and similarly, if a particular tense does not express relation E/R, then T2 is not instantiated in the syntax.

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[5] This follows from G&P's Biunique Mapping Principle (BMP), which states that temp morphemes and T-relations are in biunique correspondence.

Note that the lower part of the structure in (9) is similar to the participial substructure proposed by Kayne. The only major difference is that G&P do not posit the existence of a DP dominating Agr2. In other words, G&P's structure (9) can be translated into Kayne's (2) as follows. V1 in (9) corresponds to the abstract auxiliary BE in (2). Agr1 and T1 are associated with the auxiliary (not represented in (2)).[6] The Agr2 and T2 that are associated with the participle in (9) correspond to the participial Agrs and the participial T in Kayne's structure. Thus, the existence of a participial T proposed by Kayne is independently motivated by G&P, in their terms as the syntactic instantiation of the temporal relation E/R.

In the following subsection, I will show how G&P's system combined with Kayne's analysis of AS allows us to provide a natural explanation of the AS phenomenon exhibited in English.

3.3. Why be *is used with progressives and passives in English*

The main question we set out to answer in this section is why English uses *be* in auxiliary + progressive participle and auxiliary + passive participle constructions. In order to answer this question, let us consider sentences (10a) and (10b) and compare their temporal structures with the simple present active (10c):

(10) a. John is beating the eggs.   S,R,E   present progressive

      b. John is beaten.   S,R,E   present passive

   c. John beats his opponents.   S,R,E   present active

As can be seen, the present progressive and the present passive have the same temporal structures as the simple present active. In other words, the progressive and passive participles do not make any contribution to the temporal arrangement of the points S, R, and E, which are all separated by commas (i.e., interpreted as contemporaneous). In G&P's terms, because there is no relation E/R expressed in (10a) or (10b), there is no T2 instantiated in the syntax. In other words, there is no participial T associated with either the progressive or the passive participle.

Having established that there is no T node associated with the progressive and passive participles, I would like to provide an explanation of the use of the auxiliary *be* with these participles. In particular, I would like to pursue a suggestion made by Kayne (1993: footnote 48) and claim that the presence of Agrs implies the presence of T. However, given G&P's view that there is no T1 instantiated in the syntax in the present tense (due to the absence of the relation S/R), this implication could not hold for the "matrix" (overt) Agrs. Let us claim more specifically, then, that the

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[6] Assume further that Agr1 corresponds to matrix Agrs.

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presence of participial Agrs implies the presence of participial T. Given this implication, the absence of the participial T would imply the absence of a participial Agrs.[7]

Now recall Kayne's reason for eliminating the DP in the Italian unaccusative participial structure. His claim was that AgrsP can never function as an argument to a higher predicate, so when it is present, a DP must be present. However, if there is no AgrsP, then the presence of DP is not required. Following this reasoning for progressive and passive participles, I claim that because there is no participial Agrs in the absence of a participial T, DP is likewise absent. As such, I propose that the structure of the progressive and passive participles is as follows:

(11)

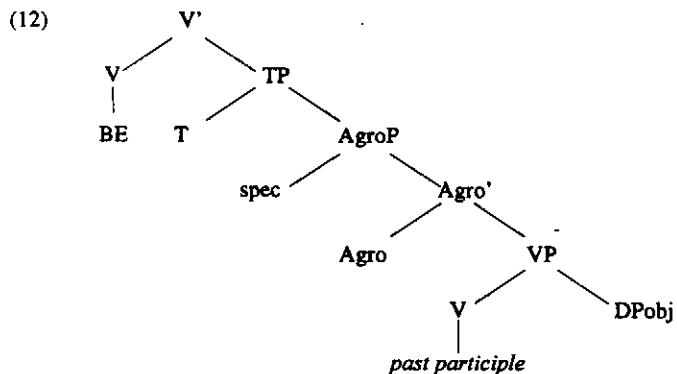*passive participle/*
progressive participle
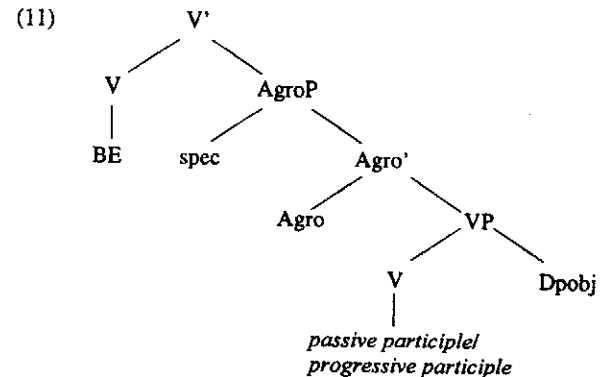
The structure proposed in (11) is identical to the structure Kayne proposes for the Italian unaccusative perfect participle (5). Thus, as with the structure in (5), because there is no DP, the abstract P is not present either. As such, with no P to incorporate into BE in (11), the auxiliary BE is always spelled-out as *be* in the progressive and passive constructions.

Note that the above explanation of the use of *be* with progressive and passive participles involves reference to a dependency between the participial T node and the DP. That is, when the participial T is absent, so is the DP projection. Furthermore, as noted by Kayne (1993, footnote 4) (as well as in footnotes 1 and 2 of this paper), Szabolcsi claims that there is a parallelism between DP and CP. Given that a parallelism between DP and CP is argued for, we would expect that if

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[7] This does not mean that the presence of participial T implies the presence of participial Agrs; see the discussion of the Italian unaccusative (and footnote 8) below.
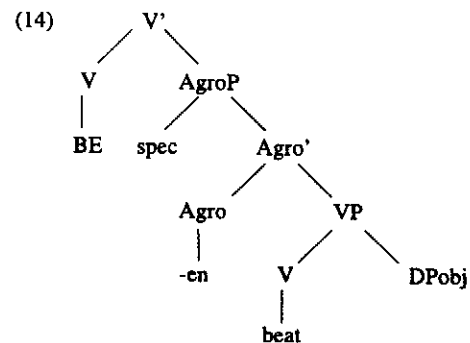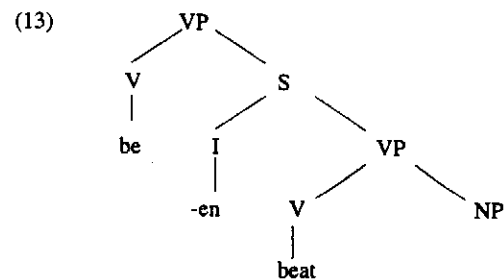
some sort of dependency holds between the participial DP and its T, then the same dependency should also hold between a CP and its T. Interestingly, Stowell (1982) argues that clauses which lack a tense operator (such as gerunds) also lack a COMP position. Thus, the proposal that the absence of participial T results in the absence of DP (independently argued for above) is supported by Stowell's (1982) claim that the absence of a tense operator results in the absence of CP.

At this point, I would like to make some comments concerning the structure in (11). First of all, as stated above, this structure is identical to that proposed by Kayne for the Italian unaccusative perfect participle (5). However, note that the unaccusative perfect participle has a different temporal interpretation than the passive and progressive participles (which make no temporal contribution). As such, we do not want the unaccusative perfect participle to have the same structure as the passive/progressive participle. That is, if we follow G&P in claiming that the perfect participle contains a T node (representing the temporal relation E/R), the structure proposed by Kayne for the unaccusative perfect participle in Italian (5) cannot be correct. As it stands, there is no T in this structure. However, because the unaccusative perfect has the same temporal structure as the transitive or unergative perfect (in which the relation E/R is expressed), we must posit the existence of a T in the unaccusative participial structure as well:

(12)

```
          V'
        /    \
       V      TP
       |     /  \
      BE    T    AgroP
                /    \
             spec    Agro'
                    /    \
                 Agro     VP
                        /    \
                       V      DPobj
                       |
              past participle
```

The unaccusative participial structure now differs from the passive/progressive participial structure in that the unaccusative contains a T, instantiating the temporal relation E/R, while the passive and progressive contain no such T.[1]

Note, too, that the structure proposed for passives in (11) (repeated here as (14)) is compatible with the structure proposed for passives by Baker, *et al.* (1989):

(13)

```
              VP
            /    \
           V      S
           |     /  \
          be    I    VP
                |    /  \
               -en  V    NP
                    |
                  beat
```

(14)

```
          V'
        /    \
       V      AgroP
       |     /    \
      BE   spec   Agro'
                 /    \
              Agro     VP
              |       /  \
             -en     V    DPobj
                     |
                   beat
```

Baker, *et al.* (1989) claim that the passive morpheme (*-en*) is base generated under Infl. However, given the split-Infl hypothesis, we must identify what node I

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[1] Thus, the implications concerning participial Agrs and participial T can be stated more clearly as follows:

(i)	participial Agrs	implies	participial T
(ii)	~participial T	implies	~participial Agrs
(iii)	* participial T	implies	participial Agrs
(iv)	* ~participial Agrs	implies	~participial T

really is in (13). We argued above that there is no T associated with the passive participle, so it must be Agro. As can be seen in (14), Baker, *et al*'s (1989) proposal can thus be directly translated into the structure proposed in this paper.

Furthermore, the structure in (14) allows us to account for the facts exhibited by Romance passives as well. That is, as can be seen in (15), the passive construction in the Romance languages looks like the Italian unaccusative perfect construction in the sense that (i) the passive participle always agrees with the s-structure subject, and (ii) the auxiliary *be* is used.' This is the case even in languages like Spanish, which invariably uses *have* for the perfect and which displays no d-structure object-participle agreement otherwise:

(15) a. *La ciudad fue destruida.*   Spanish

   the city.FEM was destroyed.FEM

   'The city was destroyed.'

  c. *La mela   era mangiata.*   Italian

   the apple.FEM was eaten.FEM

   'The apple was eaten.'

While the structure proposed for passives by Baker *et al.* cannot account for the agreement facts found in Romance passives, the structure proposed in (14) can, given the [spec, Agro] position through which the d-structure object can pass. Of course, the use of the auxiliary *be* in Romance passives is accounted for in the same way as English (above).

' Of course, given that passives, just like unaccusatives, take a single (object) argument, one could ask why we do not motivate structure (11) for passives in the same way that Kayne motivates structure (5) for the Italian unaccusative perfect (§ 2 above). The problem with such a move is that Kayne's explanation of the Spanish vs. the Italian unaccusative perfect seems to involve some sort of parameter whereby some languages choose to project a participial Agrs in the absence of an external argument (e.g., Spanish), whereas other languages choose not to project a participial Agrs in the absence of an external argument (e.g., Italian). Given this sort of variation, if we used Kayne's reasoning to motivate structure (11) for passives, we would expect that languages like Spanish should also project a participial Agrs in the passive construction. In other words, there would be no way of accounting for the invariable occurrence of subject-participle agreement and the use of *be* in the Spanish passive (or in the Romance passive in general), because we would still be left with the option of positing the existence of a participial Agrs (as well as a DP) in the Romance passive.

A final issue that is worth raising concerning the structure in (11) involves the progressive construction. That is, note that while we find object-perfect participle agreement in Italian unaccusative and clitic climbing constructions (16a,c), we never find object-progressive participle agreement in unaccusative and clitic climbing constructions (16d,f):

(16) a. *Maria è arrivata.*

   b. *Mario ha mangiato la mela.*

   c. *Mario l'ha mangiata.*

   d. **Maria sta arrivanda.*

   e. *Mario sta mangiando la mela.*

   f. **Mario la sta mangianda.*

Thus, there seems to be no evidence of the existence of an Agro in the progressive participial structure. Perhaps it is the case, then, that there is no Agro associated with this structure. As such, I would like to tentatively propose the structure in (17) for the progressive participle, in which an AspP is projected by the aspectual morphology of the progressive:

(17)
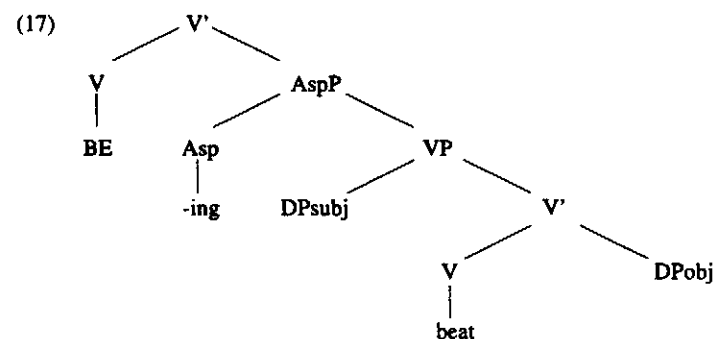
Of course, the issues revolving around the Romance progressive construction are complicated by the fact that most Romance languages use a different auxiliary for progressive participles, represented by Italian *stare*. How *stare* (which is generally translated into English as *be*) fits into the proposal that *have* and *be* are the same auxiliary underlyingly is an open question.[10] Nevertheless, both Corvetto (1982:

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[10] See Postma (1993) for a proposal concerning the status of *stare*.

157) and Rohlfs (1954: 109) point out that there do exist some Romance languages which use *essere* instead of *stare* in progressive constructions. Apparently this is the case in Sardinian and in some northern Italian dialects:

(18) Sardinian   (Corvetto (1982: 157-158))

   a. *era   juźęndi.*

       (she)was sewing

   b. *seu   pappendi.*

       (I)am eating

(19) Old Lombard   (Rohlfs (1954: 109))

   le man me son lavando.

   the hands self (I)am washing

It may be fruitful to examine the facts concerning progressives in such languages in light of certain AS phenomena exhibited in the perfect constructions of some dialects discussed in Kayne (1993). For example, Kayne discusses the existence of varieties such as Novarese which exhibit the following phenomenon in the perfect. If a clitic appears in a position below the participle, the auxiliary surfaces as *be*. However, if the clitic climbs to a position preceding the auxiliary, the auxiliary surfaces as *have*. Kayne accounts for this by claiming that movement of the clitic to a pre-auxiliary position causes the P to incorporate into the abstract copula BE, yielding *have*. These facts, combined with the structure I propose for progressive participles (namely, a structure without a DP), predict the following. If there exists a variety which is like Novarese in that it exhibits *have* in the presence of a pre-auxiliary clitic, and which is like Sardinian / Old Lombard in that it uses *essere* with progressives, then such a variety should exhibit *essere* in the presence of a pre-auxiliary clitic in progressives ('lo sono mangiando'), given the absence of a P in the progressive participial structure. Whether such a variety exists (and whether this prediction is borne out) is a matter for further research.

4. Conclusion

Given our assumption that the absence of participial T implies the absence of participial Agrs, and hence the absence of the participial DP, we were able to establish that there exists a dependency between participial T and the participial DP, such that when participial T is absent, so is the participial DP. Given the view that there is a parallelism between DP and CP, we further noted that Stowell's (1982) argument for a similar dependency in clauses between a tense operator and CP supports our claim concerning T and DP. Furthermore, by applying G&P's theory of

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the syntactic instantiation of T nodes, we demonstrated that progressive and passive participles have no participial T node associated with them. As such, they are not associated with a participial DP. Applying Kayne's theory, this explains why the auxiliary *be* (as opposed to *have*) is used in the presence of progressive and passive participles. Thus, the analysis provided in this paper serves as support for the central claim of Kayne's proposal: the various AS phenomena found in different languages turn out to be epiphenomena resulting from the interaction of more general grammatical principles.

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