British English *do* and extraction out of vP*

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Park, Myung-Kwan. 2013. British English *do* and extraction out of vP. *Linguistic Research* 30(1), 1-17. This paper examines the peculiar aspects of the British English (BE) *do*, in comparison to those of regular VP ellipsis. In particular, the BE *do* allows A-extraction out of a verbal domain, but it does not allow A'-extraction out of it, though regular VP ellipsis does not have this kind of asymmetry, permitting both types of extraction. This paper argues that the BE *do* involves elision of vP, unlike regular VP ellipsis that involves elision of VP. The restriction on A'-movement out of the elided vP, it is shown, follows from the identity/parallelism condition on ellipsis and the chain uniformity condition. *(Dongguk University)*

**Keywords**  
British English *do*, VP/vP-ellipsis, A/A’ extraction out of elided VP/vP, the identity/parallelism condition, the chain uniformity condition

1. Introduction

As Baker (1984), Baltin (2004), Chalcraft (2006) and Baltin (2012) note, British English (BE) has the anaphoric verb *do*, which behaves differently from the well-known case of morphologically supporting *do*, as illustrated below:

(1) British English *do*  
Terry will eat pasta and Ines will do, too  
(With the second clause interpreted as ‘Ines will eat pasta’)

As in (2), the morphologically supporting *do* occurs in T-position, but in (1) the BE *do* occurs after the modal in the T position. This means that it occurs not in the T position but in the position lower than T.

(2) John didn’t go home, but Bill did.

* I wish to thank anonymous reviewers of this journal for their helpful and valuable comments and suggestions. All remaining errors are, of course, mine.
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One major issue in the previous study of the BE *do* (cf. Baker (1984), Baltin (2004), Chalcraft (2006) and Baltin (2012)) is whether this *do* is a verbal pro-form or the structure after it is elliptical. If the former is true, it means that it does not contain syntactically accessible internal structure. But if the latter is true, it means that it does.

To examine the syntactic identity of the BE *do*, we can apply a number of syntactic diagnostics to this construction. In fact, Baker (1984), Baltin (2004), Chalcraft (2006) and Baltin (2012) report that the BE *do* is unavailable with wh-extraction, topicalization and quantifier raising, which are known to all involve A'-extraction out of VP, as in (3)-(5):

(3) **Wh-extraction**

*Although we don’t know what John might read, we do know what Fred might do ___.

(4) **Topicalization**

*Hazelnuts, I like; **peanuts**, I don’t do ___.

(5) **Inverse scope**

Some man will read every book, and some woman will do ___, too.

(inverse scope impossible; only direct scope possible).

However, Baltin (2004) and Baltin (2012) note that the BE *do* can occur with unaccusative and raising verbs, which both involve A-movement out of VP, as in (6) and (7):

(6) **Unaccusatives**

John might die, and Fred might do ___, too.

(7) **Subject-to-Subject Raising**

John might seem to enjoy that, and Fred might do ___, too.

In contrast to unaccusative and raising verbs, however, the BE *do* is impossible with the passive and the Pseudo-gapping constructions, which both also presumably involve A-movement out of VP, as in (8) and (9):

(8) **Passive**

John was read by every book, and some woman did ___, too.

(9) **Pseudo-gapping**

John read every book, and some woman did ___, too.
(8) **Passive**

*John might be visited by Sally, and Fred might be done ____, too.

(9) **Pseudo-gapping**

*Although he wouldn’t visit MARTHA, he would do ___ SALLY.

In addition, as Baltin (2012) notes, the BE do (and the following null anaphoric expression) can be interpreted as a combination of the two different verbs in the two different clauses. In other words, the BE do (and the following null anaphoric expression) can take a split antecedent, as follows:

(10) **Ellipsis-contained antecedents**

a. When John has to cook he doesn’t want to ____, and when he has to clean, he doesn’t do ____, either.

b. When John has to cook, he doesn’t want to cook, and when he has to clean, he doesn’t want to clean, either.

(10a) is interpreted as (10b). This means that the BE do take as its antecedent both clean in the same conjunct clause and want in the preceding conjunct clause.

In summary, the BE do does not allow A'- nor A- extraction in passives and Pseudogapping, but allows A-extraction in the case of unaccusative and raising verbs. Furthermore, in the construction involving ellipsis-contained antecedents, the BE do can take split antecedent Vs or VPs.

This array of behaviors displayed by the BE do are peculiar, in particular in comparison to the behaviors exhibited by the case of regular VP ellipsis without the BE do. The following examples illustrate the syntactic behaviors of canonical VP-ellipsis when it is subject to the same kinds of syntactic operations that the BE do is.

(11) **Wh-extraction**

Although we don’t know what John read, we do know what Fred did ____.

(12) **Topicalization**

Hazelnuts, I like; peanuts, I don’t ____.
In contrast to the BE *do*, VP ellipsis is possible in all these constructions. Based on the above discussions on the BE *do* and VP ellipsis, we can make a summary of them in the following table.

(19) The BE *do* and the canonical VP ellipsis

<table>
<thead>
<tr>
<th></th>
<th>canonical VP ellipsis</th>
<th>BE <em>do</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wh-extraction</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Topicalization</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Inverse Scope</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Unaccusatives</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Subject-to-Subject Raising</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Passive</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Pseudo-gapping</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Ellipsis-containing Antecedents</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The rest of this paper is devoted to accounting for the differential behaviors of these two types of anaphoric expressions. To make it brief, this paper argues that the BE *do* involves elision of vP, unlike regular VP ellipsis that involves elision of VP.
The restriction on A'-movement out of the elided vP, it is shown, follows from the identity/parallelism condition on ellipsis and the chain uniformity condition.

2. Background assumptions

2.1 Clausal structure

We assume the basic clausal structure of English as follows.

(20)  TP
       /\      \
      /\      /\    
     /\    /\        
    T'   T  VoiceP   
       /\      /\    
      /\    /\        
     /\  Voice' vP   
       /\      /\    
      /\    /\        
     /\  Voice do/be 
       /\      /\    
      /\    /\        
     /\  v' vP       
       /\      /\    
      /\    /\        
     /\  V' VP       
       /\      /\    
      /\    /\        
     /\  V  DP

One remarkable aspect of the structure posited here is that, following Collins (2005), there is another layer of functional category above vP, which is Voice. We suppose that this functional category Voice hosts the passive Voice verb be or the BE do. In other words, in BE the verb do is the active counterpart of the passive Voice verb be. We contend that the sentence in (8), unlike that in (16), repeated below, is ungrammatical, because the passive Voice verb be and the BE do are required to be in complementary distribution, but they are not in (8).
(8) **Passive**

*John might be visited by Sally, and Fred might be done ___, too.

(16) **Passives**

John might be visited by Sally, and Fred might be ___, too.

Given the structure in (20) and given the thesis that the BE *do* is generated in the Voice head, we can say that the complement of the BE *do*, that is, vP undergoes deletion. Alternatively, we may say that the BE *do* is a pro-form verb, substituting for VoiceP or its complement vP is a pro-form verbal phrase. However, the latter two possibilities cannot be maintained, because extraction out of VP is found in the case of unaccusative and raising verbs with the BE *do*, as noted above in (6) and (7).

### 2.2 Constraint on extraction out of VP

In this section we explore the mode of extraction from VP. In particular, we argue that extraction out of the elided VP involves A-movement, but not A'-movement. The crucial evidence supporting this thesis comes from examples like (21):

(21) *Although we know how angry John became, we don’t know [how angry] Bill did ___.*  
    (Baltin (2012: 386))

(21) shows that extraction of AP out of the elided VP is not allowed, though as can be seen in the *although* clause of (21), extraction of AP out of the non-elided VP is legitimate.

Furthermore, the Pseudo-gapping construction provides additional evidence supporting this thesis:

(22) a. *Rona looked annoyed, but she didn’t frustrated ___.

    b. *At first the watchdog appeared (to be) friendly, but later on it did ferocious ___.*  
    (Levin (1986: 26))

---

1 As shown below, when extraction does not take place from the inside of a verbal projection, the sentence is acceptable as follows.

(i) Although we don’t know when John left, we know when Bill did ___.

(ii) Although we don’t know where John put the crayons, we do know where Bill did ___.

(22a) and (22b) show that the AP cannot be extracted out of the pseudo-gapped constituent.

A question arises as to why (21) and (22) are ungrammatical, in contrast to (11) and (17) that are grammatical.

(11) **Wh-extraction**

Although we don’t know what John read, we do know what Fred did ___.

(17) **Pseudo-gapping**

Although he didn’t give BOOKS to Sally, he did ___ MAGAZINES.

The contrast between the former ungrammatical sentences and the latter grammatical ones is that the former involve extraction of non-Case-bearing AP, which cannot take A-movement out of the elided VP, but the latter involve extraction of Case-bearing DP, which in fact can.

To show the exact mode of extraction out of the elided VP, we explore it with the general case where an object DP, A, has undergone movement out of the elided VP. The derivation will proceed in the following way.

(23) $[\text{ellipsis clause} \ldots [\ldots Ai \ldots [\text{VP(elided)} \times Ii y] ] ]$

Following the line of analysis of Fox and Lasnik (2003), suppose that deletion proceeds observing the syntactic parallelism condition. In other words, to license it we also have to take into account the antecedent clause. Generally, there is no movement involved in the antecedent clause of ellipsis, but there is a correlate expression corresponding to the element extracted out of the VP in the ellipsis clause.

(24) $[\text{antecedent clause} \ldots [\text{VP} \times B y] ]$

B in (24) is a correlate expression corresponding to A in (24).

The important point to note when we scan (23) and (24) with respect to the parallelism condition on deletion is that there is a discrepancy between the former and the latter: the former involves movement, whereas the latter does not. To resolve
this discrepancy, following Fox and Lasnik (2003) (See also Willams (1977), Sag (1976), Pesetsky (1981), and Fiengo and May (1994), among others)) we can go one step further to say that a correlate expression in the antecedent clause takes scope at LF, which will be parallel to the wh-dependency in the ellipsis clause. With this conception, (24) will change into (25), as one possibility:

\[
\text{(25) } \exists f \lambda f' \ldots [ [VP x f'(B) y ] ] (\lambda f = \text{choice function})
\]

However, a discrepancy still persists between the ellipsis and the antecedent clauses: the wh-expression in the ellipsis clause undergoes successive-cyclic movement, but its correlate expression in the antecedent clause is bound by existential closure. What is at stake now in this comparison between (23) and (25) is intermediate trace(s): the ellipsis clause where wh-movement occurs has them, whereas the antecedent clause does not. To take a minimal assumption, we can go another step further to adopt Chomsky’s (1991, 1995) idea that in the case of an argument DP which undergoes A*-movement, there is an operator-variable chain, which counts as a legitimate object, with other intermediate traces necessarily deleted in LF. This enables us not to worry about any intermediate traces but just to care about the trace that counts as a variable.

In (23) the VP to be elided apparently meets the parallelism condition on deletion with the antecedent VP in (25). However, there is one problem with this application of the condition. That is, A*-movement can be ‘wild’ in theory, making a very long movement. This implies that in scanning whether VP ellipsis meets the parallelism condition, we may have to examine a domain (far) bigger than the elided VP, as can be seen in (26).

\[
\text{(26)} \quad *\text{Mary seems to think that John believes that Abby DOES want to hire someone who speaks a certain Balkan language, but I don’t remember what kind of language, Kevin seems to think that Julia believes that she DOESN’T want to hire someone who speaks t.}
\]

Presumably this would be computationally costly. To address this problem, we propose that the parallelism condition scans only the category immediately dominating the VP to be elided. In this proposal, we are minimally extending the
domain for parallelism from the traditional assumption: what counts for parallelism is not just the VP to be elided but the category immediately dominating it that extraction from it can proceed into. Let us call this proposal, in more general terms, the economy requirement for the parallelism condition on deletion (See also Park (2005) for a similar conception of this requirement):

(27) Economy requirement for the parallelism condition on deletion: The parallelism condition on deletion applies only to the category immediately dominating the portion to be elided.

This requirement is a reflection of the hypothesis that in parallel fashion to Move, Delete can also affect a cyclic domain in syntax in regard to the parallelism condition on deletion, first vP and then CP, deleting the complement of their phrasal head.

To ensure that the requirement in (27) is enforced properly in the derivation of the elliptical construction, we assume, following ideas of Merchant (2001), that (PF) deletion is triggered by the presence of a feature on a head like v, T, C or D. This feature (E feature, in Merchant’s terms) will have both PF and LF effects in the derivation of the elliptical construction. On the one hand, this feature on the PF side instructs the following complement constituent to be phonologically suppressed or unpronounced. On the other hand, this feature on the LF side instructs the following complement constituent to meet the parallelism condition on deletion with its antecedent constituent. In other words, the former is required to be parallel to the latter in syntax. Otherwise, the derivation with such an ellipsis-licensing feature leads to LF side failure.

The requirement in (27) amounts to saying that in the antecedent clause a correlate expression takes scope at the periphery of VP, and in the ellipsis clause the wh-expression moving from the elided VP leaves an intermediate trace at its periphery, as schematically represented in (28) and (29):

(28) \[ \text{ellipsis clause} \ldots A_i \ldots [vP \ t'_i [vP(\text{elided}) x t_i y] \] ]

(29) \[ \text{antecedent clause} \ldots [vP \ \exists f \ \lambda f_j [vP \ x f(B) y] \] ]
In these structurally parallel situations in regard to the vP domain, we can say that VP ellipsis straightforwardly meets the parallelism condition on deletion.

One last thing to consider is the intermediate trace at the periphery of VP in the ellipsis clause of (28). As we pointed out above, the legitimate object for an A'-moved argument is the operator-variable pair produced by its movement, which (unlike other traces) is relevant to the parallelism condition on deletion. This has it as a consequence that the intermediate trace at [Spec,vP], not the trace inside the VP to be elided, has to be analyzed as a variable; if it were not the tail of an operator-variable chain, the resulting structure would not meet the parallelism condition on deletion that operates in tandem with the requirement in (27). As a working hypothesis, we assume, following Chomsky (1981) and Epstein (1987), that an operator-variable chain terminates with an element in a Case-checking position. This working hypothesis leads us to say that the movement to the periphery of the VP to be elided cannot be A'-movement but must be A-movement for a Case reason. This is why movement out of the VP to be elided is stringently local, contrary to initial expectations. Even though a certain element apparently undergoes movement out of the VP to be elided, it first has to take local A-movement out of the VP to be elided and leave a variable at the periphery of that VP, then proceeding to take A'-movement to a possibly distant target position.

Remember that in our analysis of extraction out of the elided VP, we employ the conception of ‘legitimate object’ formed by A'-moved argument. The new idea we introduce is the requirement in (27). This requirement is, we suggest, a natural one, in that it reduces computational complexity in scanning for parallelism satisfaction. In essence, the Economy requirement for the parallelism condition on deletion in (27) and the conception of ‘legitimate object’ conspire to bring forth the fact that extraction out of VP is possible when it counts as an instance of A-movement.

2.3 British English do

As we saw above, the BE do is possible in unaccusative and raising verb constructions, as repeated below:

(6) Unaccusatives
    John might die, and Fred might do ___, too.
Subject-to-Subject Raising

John might seem to enjoy that, and Fred might do ___, too.

These two constructions involve A-movement into the [Spec,TP] position. Thus when the complement vP of the BE *do* undergoes deletion, the sentence can be schematically represented as follows:

(30) \[
\begin{array}{cccc}
\text{[CP C [TP T [VoiceP Voice(=do) [vP [SUB v [vP V OBJ ]]]]]]} \\
\end{array}
\]

\[
\begin{array}{c}
\uparrow \\
\text{A} \\
\uparrow \\
\text{A} \\
\uparrow \\
\text{A} \\
\uparrow \\
\text{A}
\end{array}
\]

Note that the whole chain is a uniform chain comprising its links in A-positions. Furthermore, extraction out of VP counts as an instance of A-movement. As the derivation in (30) does not violate any constraint, the unaccusative and raising verb constructions turn out to be grammatical, achieving the prediction.

Unlike in unaccusative and raising verb constructions, the BE *do* is not possible in the constructions involving apparent A'-movement out of elided VP:

(3) Wh-extraction

*Although we don’t know what John might read, we do know what ___.

Fred might do ___.

(4) Topicalization

*Hazelnuts, I like; peanuts, I don’t do ___.

Schematically, these two constructions involve the following derivation:

(31) *[CP C [TP T [VoiceP Voice(=do) [vP [SUB v [vP V OBJ ]]]]]]

\[
\begin{array}{cccc}
\text{[CP C [TP T [VoiceP Voice(=do) [vP [SUB v [vP V OBJ ]]]]]]} \\
\end{array}
\]

\[
\begin{array}{c}
\uparrow \\
\text{A'} \\
\uparrow \\
\text{A} \\
\uparrow \\
\text{A} \\
\uparrow \\
\text{A}
\end{array}
\]

In (31), the offending step of derivation is the chain link connecting [Spec,VoiceP] with [Spec,vP]. In the course of forming the legitimate object, the trace in [Spec,VoiceP] undergoes trace deletion. In consequence, the derivation in (31) turns out to involve A'-extraction out of vP to be elided, which is not allowed in terms of
In contrast to the BE do, canonical VP ellipsis is possible in wh-extraction and topicalization constructions, as repeated below:

11  Wh-extraction
    Although we don’t know what John read, we do know what Fred did ___.

12  Topicalization
    Hazelnuts, I like; peanuts, I don’t ___.

These constructions involve the following schematic derivation:

\[
\text{(32) } \left[ \text{CP C \left[ TP VoiceP Voice } vP \left[ vP \text{ SUB v } \left[ \text{VP V OBJ} \right] \right] \right] \right]
\]

\[
\begin{array}{ccc}
A' & A & A
\end{array}
\]

The important difference between (32) and (31) is that the former involves deletion of VP, and the latter, deletion of vP. Therefore, the domain for the parallelism/identity requirement in (27) is vP for the former, but it is VoiceP for the latter. In (32), the chain after deleting copy traces turns out to be a legitimate one, having a Case-checked variable at the periphery of the elided VP. Recall that in (31), however, the chain cannot be a legitimate one, because it has a Case-checked variable within the elided vP.

We now turn to the contrast between the BE do and canonical VP ellipsis in regard to Pseudo-gapping, as repeated below:

9  Pseudo-gapping
    *Although he wouldn’t visit MARTHA, he would do ___ SALLY.

17  Pseudo-gapping
    Although he didn’t give BOOKS to Sally, he did ___ MAGAZINES.

These two sentences can be represented as follows:
It is now easy to see why (33) is ruled out, but why (34) is not. Since [Spec,vP] is the position where Accusative-checking occurs to an object expression, there is no reason for it to undergo an extra step of A-movement as needed in unaccusative and passive constructions. Furthermore, another possibility of the object DP undergoing A'-extraction out of the VoiceP is ruled out, as its extraction out of the VoiceP is not independently motivated.

We can account for the possibility of inverse scope along the same line of analysis for Pseudo-gapping. The generalization that emerges from the contrast between the BE *do* in (5) and canonical VP ellipsis is that inverse scope is possible when extraction out of an elided constituent can be analyzed as an instance of A-movement.

(5) **Inverse scope**

Some man will read every book, and some woman will do ___, too.
(inverse scope impossible; only direct scope possible).

(13) **Inverse scope**

Some man will read every book, and some woman will ___, too.
(inverse scope possible).

Let’s understand this in the framework of the single-cycle model of syntax (cf. Bobaljik (1995) and Brody (1995)). According to this model, quantifier raising (QR) is assumed to be not a covert operation, but an overt operation, and which copy trace is overtly realized is a matter of deletion of a copy trace. Given this model, the BE *do* construction can be represented as follows:
In this representation, the offending step of movement as part of QR² is the one into [Spec,VoiceP], which cannot be A-movement nor A'-movement.

On the other hand, the canonical VP ellipsis construction can be represented as follows:

(36) *[CP C [TP T [VoiceP Voice (=do) [VP QP sub v [VP V QP Ord]]]]

\[ \overset{\text{\textasciitilde}A/\text{\textasciitilde}A'}{\text{QR}} \]

\[ \overset{\text{A as QR}}{\text{A}} \]

In (36), the QR of the object expression to [Spec,vP] is legitimate, as it is an instance of A-movement.

Finally, the ellipsis-contained antecedent phenomenon, as in (37), supposedly follows from the phase-based analysis of ellipsis. This phenomenon shows that more than one verb (one verb is in the higher clause and the other one is in the embedded clause) can be elided and they can correspond to their antecedents in different places.

(37) **Ellipsis-contained antecedents**

a. When John has to cook he doesn’t want to, and when he has to clean, he doesn’t (**do**), either.

b. When John has to cook, he doesn’t want to cook, and when he has to clean, he doesn’t **want to clean**, either.

We can take this to imply that each of the two different verbs that are elided has met the parallelism/identity condition on ellipsis in the course of phase-based derivation. In other words, the projection formed by each verb has undergone deletion at one phase; the verb **clean** in (37b) in the embedded verbal phase and the verb **want** in the matrix verbal phase, as represented schematically below:

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2 We assume that QR is a non-successive-cyclic movement (May (1977)).
3. Comparison of the present analysis with Baltin’s (2012)

In this section, we briefly make a summary of Baltin’s (2012) analysis of the BE *do* and make some comments on it. Baltin first assumes that the BE *do* is generated in v and then argues that its complement undergoes VP deletion. In the case of the unaccusative and raising verb construction, the [Spec,vP] position is empty, hence through it either the complement of the unaccusative verb or the raised subject of the raising verb extracts out of VP, as follows:

(39) ... [
  ... [vP [VP unaccusative verb/raising verb ...]]]

In contrast to this derivation, Pseudo-gapping, passives, wh-extraction and topicalization all have the [Spec,vP] position generated with the external argument or subject. Therefore, extraction out of the VP to be elided cannot capitalize on this position. Baltin argues that this structural make-up prevents extraction out of the VP to be elided. In a concrete way, Baltin proposes that when the little v head where the BE *do* is generated is projected forming the [Spec,vP] position, extraction out of the VP to be elided proceeds. In addition, the complement of the little head v head undergoes deletion; in other words, Delete that applies after the insertion of the little head v removes the formal features of lexical elements within its complement. Hence Pseudo-gapping, passives, wh-extraction and topicalization where the [Spec,vP] position is generated with the external argument or subject cannot achieve extraction out of the VP to be elided. Since in these constructions, extraction out of the VP to be elided has to utilize not [Spec,vP], but the specifier position of a higher functional category (for Baltin, Agr-o), but at the point of the [Spec,Agr-oP] position projected, it is impossible to access the inside of the complement of the little v head, because the formal features within it have already been removed.
The most crucial assumption in Baltin’s analysis of the BE do is that deletion bleeds the syntactic operation of Move. In other words, deletion is regarded as a syntactic operation. The little v head, i.e. the BE do, prevents accessing the inside of its complement by a functional category higher than it. To make this analysis work, it is necessary to adduce more independent evidence supporting this assumption.

4. Summary and conclusion

This paper examined the syntactic manifestations of the BE do in various constructions, in comparison to those of canonical VP ellipsis constructions. Since the BE do allows extraction out of a verbal projection, it is right to say that it involves surface anaphora rather than deep anaphora.

In particular, this paper proposed that the BE do is generated in the Voice head position, in a complementary distribution with the passive auxiliary verb be. Furthermore, its complement vP undergoes deletion. Based on these ideas, we argued that the BE do is possible in unaccusative and raising verb constructions, as these constructions involve A-movement out of the vP to be elided. However, it was argued that the BE do in Pseudogapping, wh-extraction, and topicalization is not possible, as these constructions involve illegitimate A-movement or A’-movement out of the vP to be elided. We showed that extraction out of a verbal projection to be elided is possible when it is an instance of A-movement, and that this restriction follows from both the parallelism/identity condition on deletion and the chain uniformity condition.

References


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