

On Passive and Perfect Participles

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Abstract

In this chapter, I claim that the English participial suffix *-EN* (as in *written*, *closed*, etc.) is the default inflection for English verbs when no other suffix is selected by the verb's immediate syntactic environment, explaining the occurrence of *-EN* in a puzzlingly heterogeneous variety of contexts. Contrary to previous literature, I argue against any role for *-EN* in passivization. I claim instead that the auxiliary *be* is critically involved in marking the lack of agentivity in English passives. Even this aspect of the passive construction is a relatively superficial feature of English though, since it does not hold in languages that express passive synthetically as a verbal inflection, rather than analytically.

1 Introduction

This paper seeks to clarify the way in which the three uses of the English participle exemplified by *repaired* in (1) are related to each other. The three examples illustrate what are often called the verbal passive participle, the adjectival passive participle, and the perfect (or past) participle respectively. These terms refer to usages of the participles, not their morphological form, since the form itself, derived by *-ed* suffixation in this case, is identical in all three usages.

- (1) a. The motorcycle was repaired by a qualified mechanic [Verbal Passive]
b. The motorcycle looks (expertly) repaired. [Adjectival Passive]
c. The mechanic has repaired the motorcycle. [Perfect]

The participle-deriving morpheme is either *-ed* (with allomorphs *-t* and \emptyset) or *-en*, sometimes accompanied by stem vowel changes selected by the verbal stem. I refer to the abstract morpheme underlying this variety of surface forms as '*-EN*'. Stem-specific variation in the form of the participial morpheme (*write*~*written*, *catch*~*caught*, etc.) is preserved across the three usages, indicating that the same morphological components are present in all three. This means that any function or meaning the participle has in one usage but not the others cannot be attributed to *-EN*, since *-EN* is present in all three contexts, but must be attributed to the context it occurs in in that usage. I claim below at length that by this logic, no meaning or function at all can be attributed to

-EN. I conclude that the verbal passive/adjectival passive/perfect participle is a default verb form in English, and identify the selecting environments for the other verb forms.

2 Characterizing properties of the participles

This section reviews the properties that characterize the English participles in *-EN* in the three contexts in (1), with the aim of demonstrating that none of these properties are common to all three contexts.

2.1 Verbal passive participles

Example (1a) represents a canonical passive construction in English, in which the ‘primary’ object of the verb is promoted to subject. The primary object is the first object that follows the verb, be it the direct object of the monotransitive verb in (1a) (cf. *A qualified mechanic repaired the motorcycle*) or the indirect object of a ditransitive verb such as *sell* in (2b), the passive of (2a).

- (2) a. The artist sold the collector several valuable paintings.
- b. The collector was sold several valuable paintings.

The passive verb is expressed morphologically analytically, as a non-finite participle derived in *-EN* together with the auxiliary *be*. The complex *be + V-EN*, though, has the same argument structure and aspectual profile in the verbal passive as the underlying V. It has the same argument structure since the suppressed agent interacts with its syntactic environment in the same ways as in active constructions, in contrast to unaccusative derivatives of the underlying V (for Vs that have an unaccusative counterpart). For example, the implicit agent of passive *be sunk* may surface in a *by*-phrase, while the unaccusative counterpart *sink* does not license a *by*-phrase, as (3) shows (Wasow 1977). Likewise, the implicit agent of the passive may bind the implicit subject of a purpose clause, while binding fails in the unaccusative, as shown in (4) (Roeper 1987).

- (3) a. The ship was sunk by enemy.
- b. *The ship sank by the enemy.
- (4) a. The ship was sunk to collect the insurance money.
- b. *The ship sank to collect the insurance money.

For such reasons, it is widely held that the passive and active do not differ in underlying argument structure; the two constructions differ only in the mapping between arguments and grammatical functions. The agent is demoted to oblique in the passive while the primary object is promoted to subject in its place. Standard theories of this alternation seek to connect the distinct morphological form of the passive construction (the auxiliary *be* and the participial morpheme *-EN*) to the availability of Case positions for the arguments of the verb, in

such a way that an object Case position is missing in the passive, necessitating promotion of one object to subject (Jaeggli 1986, Baker et al. 1989).

In addition to the fact that actives and passives do not differ in argument structure (but rather the allotment of Case positions), the passive verb form *be + V-EN* has the same aspectual profile as the underlying verb. If underlying V is eventive, then *be + V-EN* has the distribution of an eventive predicate; if it is stative, then the passive is stative. Since active *repair* describes an event, it may be put in the progressive (5a), as is characteristic of eventive verbs (Vendler 1957, Vlach 1981). Also characteristic of eventive verbs, it has a future-shifted interpretation in the context of modal verbs like *might*, so that (5b) means that it might be the case now that the mechanic will repair the motorcycle in the future (Hoffmann 1966, Condoravdi 2002).

- (5) a. The mechanic is repairing the motorcycle.
 b. The mechanic might repair the motorcycle. [future-shifted]

These very same possibilities offer themselves to the passive counterpart *be repaired*, as the examples in (6) show.

- (6) a. The motorcycle was being repaired.
 b. The motorcycle might be repaired. [future-shifted]

If the underlying verb is stative, though, the passive counterpart functions as a stative predicate as well. Stative *know*, for example (here as an ECM verb, i.e., a verb whose primary object is the underlying subject of the non-finite complement clause), may not be put in the progressive, as is typical of stative verbs (7a). And when it occurs as the complement of modal *might*, the time of knowing is understood as simultaneous with the time of the likelihood that *might* expresses (7b). As (8) shows, the passive patterns the same.

- (7) a. *The inspector is knowing Mary to be a spy.
 b. The inspector might know Mary to be a spy. [simultaneous]
- (8) a. *Mary is being known to be a spy.
 b. Mary might be known to be a spy. [simultaneous]

These and other diagnostics show that verbal passive predicates behave like their active counterparts in all respects except the mapping of arguments to grammatical functions. This is why the verbal passive is referred to as ‘verbal’. The construction *be + V-EN* is a verb in analytic form.

2.2 Adjectival passive participles

Adjectival passive participles have, as mentioned previously, the same morphological form as verbal participles, but display a number of distinguishing distributional and interpretational properties.¹ Wasow (1977) observes that under

¹This discussion of the differences is focused on the properties relevant for the analysis in section 4 and is not exhaustive. As a reviewer remarks, adjectival but not verbal participles

some circumstances, passive participles may occur in positions designated for adjectives, for example in the canonical pre-nominal position of English adjectives or after quasi-auxiliary verbs like *seem*.

- (9) a. Mary bought an expertly repaired motorcycle.
 b. The motorcycle seems expertly repaired.

Wasow notes that in such contexts, participles differ from verbal participles discussed in the previous section in a number of respects. For one, they do not readily license *by* phrases.

- (10) *The motorcycle seems repaired by John.

Further, participles derived from ditransitive verbs do not license a secondary object in such contexts (cf. (2b)).

- (11) *The collector seems sold several valuable paintings.

Wasow claims that participles in these contexts are truly adjectival. Like other adjectives, they have no external argument, hence the impossibility of *by*-phrases, and they are not able to assign Case to an object, hence the impossibility of secondary objects. This explanation also covers the fact that like other adjectives, passive participles in such contexts are compatible with the negating prefix *un-*, as (12) shows, where *unrepaired* means ‘not yet repaired’.

- (12) a. The unrepaired motorcycle
 b. The motorcycle still seems unrepaired.

The behavior in (12) mimics the behavior of adjectives in general (13a), but not verbal passive participles, as when a *by*-phrase is present (13b).

- (13) a. The motorcycle seems unsafe.
 b. *The motorcycle was unrepaired by the mechanic.

Further, adjectival passive participles are aspectually stative, regardless of the aspectual type of the underlying verb. In clear cases of adjectival passives, then, as in combination with the prefix *un-*, the participle cannot be put in the progressive, as (14a) shows. In the context of a modal verb, it has the simultaneous interpretation characteristic of stative predicates, as shown in (14b), where the time at which the motorcycle is not yet repaired is understood as simultaneous with the likelihood that *might* expresses. That is, (14b) asserts that it might be the case now that the motorcycle has not now been repaired yet.

- (14) a. *The motorcycle is being unrepaired.
 b. The motorcycle might still be unrepaired. [simultaneous]

combine with adjectival degree morphology (e.g. *very* vs. *very much*), and can be coordinated with bare adjectives. See Wasow (1977), McIntyre (2013) and Bruening (2014) for additional discussion.

Two last remarks about adjectival participles are relevant to the analysis to come in section 4. First, adjectival participles of eventive verbs are most felicitous when the underlying verb has a salient result state, and the participle describes this state. Adjectival *repaired* refers to the state of having been repaired. The participle asserts that an event with the underlying verb description occurred in the past, and describes the state resulting from this occurrence. Such participles are referred to as ‘resultant state’ passive participles. But some adjectival passive participles have a reading that does not implicate any causing event (Parsons 1990, Kratzer 2000). Expressions like *a hidden valley* or *an obstructed blood vessel* do not imply that anyone hid the valley or anyone obstructed the blood vessel. Both might have always been in the hidden and obstructed state respectively. Parsons refers to these as ‘target state participles’. Embick (2004a) observes that the morphological uniformity of the three usages of passive participles in (1) sometimes does not carry over to target state uses. For example, he points out that *rotted* implies a rotting event and so is a resultant state participle, but *rotten* does not, and so is a target state participle, *sunk* implies a sinking event but *sunken* does not, likewise *melted* and *molten*, etc. This lack of morphological correspondence might mean that target state participles fall out of the purview of analyses that seek to relate the three other usages.

I point out in this connection that Romance languages have been argued to morphologically distinguish adjectival from verbal participles systematically (see Loporcaro et al. 2004 on Portuguese). One possibility, of course, is that the present analysis does not extend to Romance, where the formative corresponding to *-EN* is not default, but is assigned by aspects of the (nano-) syntactic context. Another possibility is that Romance lacks resultant state passive participles, so that the only adjectival participles are target state participles. The special morphological marking of target state participles (also found in English) then ends up distinguishing adjectival participles from verbal participles in general. Though I cannot resolve this issue here, an observation made by Heather Burnett (p.c.) supports the latter view. In French, whenever a participle competes with a bare adjective from the same root, only the bare adjective and not the participle may be put in contexts for adjectives.

- (15) *Les cheveux de Marie ont l'air rouges / *rougies.*
 the hair of Mary have the-air red / *reddened
 ‘Mary’s hair seems red / reddened.’

Embick (2004a) claims that bare adjectives in such pairs (in English) correspond to target state participles. If that is true for French as well, then sentences like (15) indicate that when a differentially marked target state participle exists (*rouge* ‘red’), the regularly marked participle (*rougie* ‘reddened’) cannot function as an adjective. This could be taken to mean that a participle can only be adjectival when it is a target state participle; there are no resultant state adjectival participles in French. If this is so, then French otherwise aligns with English: target state participles are often morphologically distinguished from their resul-

tant state or verbal participle counterparts. In French, this ends up looking like differential morphological marking of verbal and adjectival participles because of the absence of resultant state adjectival participles. This conclusion aligns with Loporcaro et al.’s observations about Portuguese. Whether this hypothesis will hold up to closer scrutiny remains to be seen.

The second remark about adjectival participles relevant to the analysis to come in section 4 is that the past-shifting seen in resultant state adjectival participles only obtains when the underlying verb is eventive. If it is stative, then the participle describes the state the underlying verb already describes. While *a repaired motorcycle* implies a past repairing event and *a resolved issue* implies a past resolving event, *a well-known problem* does not imply a past knowing state. On the contrary, it asserts that people know the problem now, just as *a cherished hope* is a hope that someone cherishes now. In such examples, we observe that the adjectival passive participle of a stative verb describes the same state that the underlying verb describes. Such participles would be indistinguishable from verbal participles of stative verbs except that they may occur in canonically adjectival contexts, such as the pre-nominal position in the examples just mentioned, represented in (16a), or the complement of *seem*, as in (16b). The generalization therefore presents itself that the adjectival participle of an eventive verb describes the state resulting from that event, which is itself past-shifted, while the adjectival participle of a stative verb describes the same state the verb describes with no past-shifting. So the ‘stativization’ associated with adjectival participle formation goes hand in hand with past-shifting when the underlying verb is eventive but not when it is stative.

- (16) a. a well-known problem
 b. These problems seem well-known.

Lieber (1979), Levin and Rappaport (1986) and others claim that the stativity of modern English adjectival participles is not contributed by the suffix *-EN* itself, but by a null adjectivization process. This conclusion is based on parallels in argument structure between verbal and adjectival participles. Levin and Rappaport show that, for example, the *with*-phrase that is optional in the active construction in (17a) is also optional in the adjectival passive derivative in (17b). But the *in*-phrase that is, for whatever reason, obligatory in the alternant in (18a) is also obligatory in the adjectival passive derivative in (18b).

- (17) a. We stuffed the pillow (with feathers).
 b. The pillow remains stuffed (with feathers).
 (18) a. We stuffed feathers *(into the pillow).
 b. The feathers remain stuffed *(into the pillow).

Levin and Rappaport claim that these parallels support an analysis in which the verbal participle is a component of the adjectival participle. They claim that *-EN* passivizes, deriving a verbal participle, illustrated in (19a), while the corresponding adjectival participle is in turn derived from the verbal participle by a null stativizing/adjectivizing head, illustrated in (19b). I expand on the signif-

icance of this in the following section, which turns to the perfect construction.

- (19) Modern English
- | | | |
|----|----------------------------|-----------------------|
| a. | $[V+EN]_V$ | Verbal participle |
| b. | $[[V+EN]_{V+\emptyset}]_A$ | Adjectival Participle |

2.3 Perfect participles

While the uses of the *-EN* participle described above are passive, the same form also occurs in an active construction with the auxiliary *have* illustrated in (1c), repeated below.

- (20) The mechanic has repaired the motorcycle.

A number of studies have pursued a uniform treatment of the participle in passive and perfect constructions, according to which the participle is uniformly passivizing, but the auxiliary *have* ‘undoes’ passivization, converting the construction back into an active one (Haider 1984, 1986, Hoekstra 1984, Kayne 1985, Grewendorf 1989). In other studies, the participle is considered not only passive but adjectival, so that it is the participle that contributes the characteristic past-shifting associated with the perfect, rather than the auxiliary *have* (Emonds 2006, 2007, Kratzer 2000, Musan 2002). The veracity of these claims is important for the present purposes because if the first is true, it means that *-EN* is always passivizing, representing a commonality between the three usages of the *-EN* participle, and if the second is true, it implies the first. But I endeavour to show below that the participle in the perfect is not an adjectival participle but a verbal participle, whose aspectual profile is not stative, but rather identical with that of the underlying verb, whether eventive or stative. Secondly, I provide evidence that the past-shifting associated with the perfect is contributed specifically by the auxiliary *have*, not the participle. Finally, I attempt to show that *have* does not undo the passivizing effect of *-EN*, but rather that *-EN* is not passivizing in the first place in perfect constructions.

The idea that the perfect participle is adjectival is recommended by intriguing similarities between the adjectival passive and perfect constructions. The perfect construction (by which I mean the entire phrase *have + V-EN*, not just the participle) shares with the adjectival passive participle the past-shifting of the event time with respect to the reference time when the underlying verb is eventive. Both the adjectival passive in (21a) and the perfect in (21b) assert that a repairing event took place in the past with respect to the utterance time. Also like the adjectival passive, the perfect construction in (21b) displays properties of stativity. For example, it cannot be put in the progressive, as shown in (21c), and it receives a simultaneous reading with the modal *might* in (21d), although the simultaneity holds between the modal evaluation time and the resultant state of repairing, not the repairing event itself, so that (21d) means that it might be the case now that the mechanic already repaired the motorcycle (the addition of *already* here excludes another reading of (21d) that is described in more detail below). This accords with the intuition that the perfect describes

the result of the event the underlying verb describes, again like the adjectival passive participle.

- (21) a. The motorcycle looks (expertly) repaired.
b. The mechanic has repaired the motorcycle.
c. *The mechanic is having repaired the motorcycle.
d. The mechanic might have already repaired the motorcycle.
[simultaneous]

But it is unclear that these properties of the perfect construction are located in the participle itself, and a preponderance of evidence speaks against this conclusion. For one, the perfect construction shows a sensitivity to the aspectual status of the verb underlying the participle, that is incompatible with the idea that the participle is adjectival, since adjectival participles are uniformly stative. The perfect construction comes in two main variants referred to as the ‘existential’ and the ‘continuous’ perfect (McCawley 1971, McCoard 1978, Mittwoch 1988). The existential perfect is found with an eventive predicate, as in (22a) or a stative predicate, as in (22b), and describes, as discussed above, a state holding after the completion of the event or state in question. (22a) asserts that the repair is finished and (22b) that Mary no longer lives in Paris.

- (22) a. Mary has repaired the motorcycle. [existential]
b. Mary has lived in Paris. [existential]

The continuous perfect, on the other hand, is found only in combination with a stative predicate together with an adverb expressing duration. In this constellation, the perfect asserts that the state in question holds for the specified duration and continues up to the reference time—the utterance time in the present tense, shown in (23). The duration adverbial is obligatory for the continuous perfect reading. Without it, the reading in which the state continues to the reference time is not available; the construction reverts to the existential variant shown in (22b) (Iatridou et al. 2001, Portner 2003, 2011).

- (23) Mary has lived in Paris for three years. [continuous]

If the participle in the perfect construction is the adjectival passive participle described in section 2.2, then the predicate in the perfect—the adjectival participle—should always be stative. Consequently, the addition of a duration adverbial should derive a continuous perfect construction for sentences like (22a). But this prediction is not borne out, as the ungrammaticality of (24a) attests. The only way of construing (24a) as grammatical is by coercing *repaired* into a meaning corresponding to the progressive counterpart in (24b), to the extent this is possible. The continuous perfect is natural in (24b) because the progressive is stativizing (Vlach 1981, Kamp and Reyle 1993).

- (24) a. *Mary has repaired the motorcycle for three hours.
b. Mary has been repairing the motorcycle for three hours.

In fact, adjectival participles are natural in the continuous perfect, which requires a stative predicate, but only with the auxiliary *be*, itself in the *-EN* form, as in *been finished* in (25a), and with the duration adverbial that is obligatory in the continuous perfect. Here, the contrast with the corresponding transitive perfect with verbal *finished* is illustrative. Neither the auxiliary *be* nor the duration adverb is possible. I claim this is because the participle is verbal (and eventive) in (25b), not adjectival (and therefore stative), and flesh out an analysis in section 4.

- (25) a. The project has been finished for three months.
 b. Mary has (*been) finished the project (*for three months).

This means that the participle in (22a) is not an adjectival participle, and consequently that the perfect is not simply a re-transitivized adjectival passive participle. It supports this conclusion that unlike the adjectival participles in (26), perfect participles cannot be negated by *un-*, as (27) illustrates.

- (26) Adjectival participles
 a. The motorcycle seems unrepaired.
 b. The project seems unfinished.
- (27) Perfect participles
 a. *Mary has unrepaired the motorcycle.
 b. *Mary has unfinished the project.

If the past-shifting of the event time in the perfect is not part of the meaning of the participle (since the participle is verbal), then it must originate in the other characterizing component of the perfect, namely the auxiliary *have*. I describe an observation below that supports that conclusion, corroborating the claim that the participle itself is not adjectival. Condoravdi (2002) notes that sentences like (28a) are ambiguous between two temporal interpretations, which she associates with the possibility of scoping *have* below or above the modal, as the logical forms in (28b) and (28c) illustrate. The logical form in (28b) corresponds to the surface order of morphemes in (28a) and has the meaning discussed above in connection with (21d), where *already* is inserted to emphasize the reading where the perfect is internal to the modal statement. This logical form means that it might be the case now that the mechanic has repaired the motorcycle—the resultant state of the repair coincides with the modal evaluation time. The logical form in (28c), however, has the predicate *repair the motorcycle* in the scope of the modal, while *have* is outside. In this logical form, the eventive main predicate is interpreted as future-shifted with respect to the modal evaluation time, while the modal evaluation time is located in the past with respect to the utterance time, so that the sentence asserts that there was a past point in time at which it was the case that the mechanic might repair the motorcycle (in the future with respect to that past time point).

- (28) a. The mechanic might have repaired the motorcycle.

- b. The mechanic [might [have [repair the motorcycle]]]
- c. The mechanic [have [might [repair the motorcycle]]]

Condoravdi claims that the function of *have* in both logical forms is to shift the the temporal index of its complement phrase into the past with respect to a reference time. In the logical form in (28b), *have* shifts the time of the repair into the past of the modal evaluation time, yielding the reading described above in which it might be the case now that the mechanic repaired the motorcycle in the past. In (28c), *have* scopes above the modal and so shifts the modal evaluation time into the past with respect to the utterance time, while the modal has only the phrase *repair the motorcycle* in its scope. The fact that the repair is future shifted means that this phrase is eventive in the logical form in (28c). This configuration yields the reading that says it was the case in the past that the mechanic might repair the motorcycle.

If this structural analysis of the ambiguity in (28a) is correct, it shows both that the participle is not adjectival, (it is not stative), but also that it is the auxiliary *have* that contributes the past shifting in perfect constructions. This conclusion implies that the participle we find in perfect constructions is a verbal participle like the one we find in the verbal passives discussed in section 2.1; the particular aspectual profile of the perfect construction as a whole is associated with *have*, not the participle.

But there is another difference between the verbal passive and the perfect construction beyond the resultative reading of the latter, namely the fact that the latter is syntactically active. The perfect construction shows the same mapping of arguments to grammatical functions as the corresponding active. Not only does the perfect construction support secondary objects (again unlike adjectival passives, cf. (11)), the external argument is mapped to subject (29a), as in the corresponding active (29b).

- (29) a. The artist has sold the collector several valuable paintings.
- b. The artist sold the collector several valuable paintings.

As mentioned above, a number of studies have pursued the hypothesis that the perfect participle is one and the same thing as the passive participle, but the auxiliary *have* serves to reinstate the active syntax that is passivized in the first instance by *-EN*. On this view, *-EN* is consistently passivizing, and *-EN* participles receive a uniform analysis. Haider (1984, 1986), Hoekstra (1984), Kayne (1985) and Grewendorf (1989) develop similar views of auxiliary selection in languages in which *have* alternates with *be* in a manner sensitive to the argument structure of the underlying verb, as in German, French and Italian. On this view, *-EN* consistently blocks assignment of the external argument, but in the perfect, the auxiliary *have* ‘debblocks’ the blocked theta role, which is ‘assigned externally’ in Haider’s terminology or ‘transmitted’ in Kayne’s, to the subject of *have*. In German, for example, the auxiliary verb *be* has no deblocking force, and so occurs both in the perfect of passives, where the external argument remains blocked, as in (30a), and the perfect of unaccusative verbs that have no external argument to deblock in the first place, as in (30b), while *have* occurs

in the perfect of transitive verbs whose external argument must be deblocked in order to reinstate the active syntax, as in (30c).

- (30) a. *Das Motorrad ist repariert worden.*
the motorcycle is repaired become
'The motorcycle has been repaired.'
b. *Hans ist angekommen.*
Hans is arrived
'Hans has arrived.'
c. *Hans hat das Motorrad repariert.*
Hans has the motorcycle repaired
'Hans has repaired the motorcycle.'

This analysis does not extend readily to English, where *have* occurs in the perfect of passive and otherwise unaccusative predicates, as seen in (31a) and (31b), in addition to the perfect of transitive predicates like (31c).

- (31) a. The motorcycle has been repaired.
b. John has arrived.
c. John has repaired the motorcycle.

If *have* is responsible for deblocking in (31c), it is unclear what it is doing in the passive and unaccusative examples in (31a) and (31b), and in particular why it fails to deblock the suppressed external argument in (31a)—in which a passive predicate occurs in the perfect. A reviewer of the present work also points out that in certain Romance varieties, particularly dialects of central-southern Italy but also some spoken in Piedmont and some varieties of northern Catalan, auxiliary selection is not argument structure-driven, but person-driven. In these varieties, typically 1st and 2nd person subjects align with *be* in perfect constructions while 3rd person subjects align with *have* (Tuttle 1986, Ledgeway 2000, Legendre 2007, McFadden 2007). Here, *have* and *be* do not modulate which argument of the verb is externalized. In some dialects spoken in southern Italy, furthermore, *have* is used in both the perfect and, surprisingly, in the verbal passive construction, sometimes in free variation with *be* in the latter case (Loporcaro 2012). Though these remarks on Romance may not reflect on the proper analysis of English, they at least circumstantially undermine the idea that *have* is inherently connected to 'reinstating' active syntax in passive environments.

Conversely, an analysis of German in which an abstract perfect auxiliary *PERF* is spelled out as either *haben* 'have' or *sein* 'be' conditioned on both thematic and aspectual considerations, covers both German and English. Then again, it does not seem to afford a uniform analysis of *-EN*, which then must be passivizing in the passive but not in the perfect. I attempt to reconcile this apparent lack of uniformity in what follows.

2.4 Interim Summary

The facts discussed above appear to show that:

- Verbal passive participles are passive but have the aspectual profile of the underlying verb.
- Adjectival passive participles are passive, stative, and 1) past-shifting when the underlying verb is eventive, but 2) non-past-shifting when the underlying verb is stative.
- Perfect participles are active and have the aspectual profile of the underlying verb.

This summary does not reveal any property common to all three usages of the *-EN* participle. Adjectival and verbal passive participles are passive but perfect participles are not. Verbal passive and perfect participles are verbal but adjectival passive participles are not. Adjectival passive participles are stative (and past-shifting when the underlying verb is eventive), but verbal passive and perfect participles are not. Consequently, there is no semantic or syntactic function that can be consistently pinned on *-EN*. In light of this impasse, I suggest instead that *-EN* is a semantically bleached formative that occurs by default when the context does not select some other verb form. That *-EN* is neither adjectivizing nor passivizing directly accommodates its use in the perfect. This represents a uniform analysis of the function and meaning of *-EN*. *-EN* does not add any information to the semantic composition, but rather signals that the verb in question appears in an unmarked context. Before fleshing out an analysis, I review the diachronic development of the three uses of *-EN* participles and claim that this development presents a historical rationale for the picture I will sketch for modern English in section 4.

3 The diachrony of *-EN*

The suffixes *-ed* and *-en* that function as realizations of *-EN* in English and other Indo-European languages go back to the Proto-Indo-European (PIE) suffixes **-to-* and **-no-* respectively, where they derived a description asserting that an entity is affected by an event of the underlying verb description (Brugmann and Delbrück 1897, vol. 4, p. 483ff; Benveniste 1948). That the forms that continue **-no-/*-to-* in Old English functioned historically as adjectival participles is undisputed. Lieber (1979) cites the Old English examples in (32) among others in this connection, where the participle in (32a) occurs in the pre-nominal position associated with adjectives, and in (32b) with negating *un-* characteristic of adjectivehood (see sec. 2.2). The adjectival passive use of *-EN*, then, is the oldest use, continued from PIE.

- (32) a. *be þam gecwedenan andagan*
on the agreed_{M.DAT} appointed-day_{DAT}
'on the agreed upon day.'

- b. *an almihtz God æfre unbegunnen and unzeandod*
 an almighty God ever unbegun and unended
 ‘one almighty God ever without beginning or end’

In PIE, passive was one of the functions of the ‘middle’ inflectional paradigm, that also occurred in anticausative, reflexive, and other intransitive contexts (Bopp 1837, Kuryłowicz 1932, Watkins 1969, Neu 1968a,b, Kulkov 2006, Kulikov and Lavidas 2013). Vestiges of the PIE middle inflections may have survived into Proto-Germanic in the form of the Gothic passive morpheme *-ada-*; see Brugmann (1921) for a (skeptical) review of the evidence for this claim. The middle inflections do not persevere in Old English, though. Rather, the modern periphrastic passive construction stepped into the role left vacant by the middle inflectional paradigm very early in the development of the Germanic languages, but the point at which the earlier adjectival passive construction *be + V-EN* became ambiguous with a verbal passive in English is disputed. Lightfoot (1979) claims that the verbal passive only reached its fully productive modern form in the Early Modern English period, but Lieber (1979) and others point to examples from the earliest English texts that can only be analyzed as verbal passives. The passive examples in (33) display a secondary object, which cannot occur in an adjectival passive (cf. *This town is/*seems called Bethania*). The adjectival *-EN* participles therefore apparently became ambiguous with verbal participles rather early in the development of English.

- (33) a. *un tun þatt wass Bepania zehatenn.*
 a town that was Bethania called
 ‘a town that was called Bethania.’
 b. *Rod wæs ic aræred.*
 cross was I raised
 ‘I was raised [up] a cross.’

The PIE suffixes **-to-/*-no-* themselves had stativizing force. They were not ambiguous with a verbal construal; they applied to a verb and derived a description of the result state of that verb. The middle inflection, on the other hand, was one of a variety of inflectional paradigms that occurred in finite contexts. Middle inflected verbs distributed as verbs. This state of affairs is schematized in (34), where MI=Middle Inflection.

- (34) PIE
 a. [V+MI]_V Verbal Passive
 b. [V+no/to]_A Adjectival Participle

As discussed in section 2.2, Lieber (1979), Levin and Rappaport (1986) and others claim that modern English *-EN* does not itself have stativizing force. Rather, they claim *-EN* passivizes, deriving a verbal participle, illustrated in (35a). The corresponding adjectival participle is in turn derived from the verbal participle by a null stativizing/adjectivizing head, illustrated in (35b).

- (35) Modern English
- | | | |
|----|---------------------------------------|-----------------------|
| a. | [V+EN] _V | Verbal participle |
| b. | [[V+EN] _V +∅] _A | Adjectival Participle |

This means that the original **-no-/*-to-* suffixes, which were stativizing, lost their stativizing force at the time of the emergence of the verbal passive use of *-EN*, which, as mentioned above, was quite early in the development of English. At that stage, *-EN* still correlated with intransitivity. What we witness in this development is a partial bleaching of the function of *-EN*, from adjectivizing/stativizing and de-transitivizing to merely detransitivizing, with its adjectivizing/stativizing function (together with the past shifting in adjectival derivatives of eventive verbs) displaced onto an innovated null affix.

As for the perfect, *-EN* participles with *have* also appear early in the attested history of English, but primarily as adjectival participles in a construction where *have* is interpreted in its usual possessive sense, rather than as a perfect auxiliary. Example (36) asserts that the person in question is in the speaker's possession, in a bound up state (Traugott 1972:p. 93).

- (36) *Ic hæfde hine gebundenne*
 I had him bound
 'I had him in my possession in a bound up state.'

Examples such as (36) involve objects capable of being possessed. But over time, examples proliferate with objects that meet only the selectional criteria of the participle, not *have*. In (37), for example, the speaker does not 'have' the internecine struggles of the pronoun referent. Rather, he has told them (Traugott 1972:p. 94).

- (37) *ic hæbbe nu gesæd hiora ingewinn*
 I have now told their in-struggles
 'I have now told their internecine struggles.'

In the development from (36) to (37), *have* is grammaticalized as an auxiliary and the participle is reanalyzed as the main verb. This development was widespread in European languages (Meillet 1921, Bybee and Dahl 1981, Bybee et al. 1994, Heine 1997, Haspelmath 2001, Heine and Kuteva 2006, Drinka 2003, 2017). Like the development of the verbal passive use of the *-EN* participles, this picture of the development of the perfect involves bleaching of the original functions of *-EN*. *-EN* originally had the same adjectivizing/stativizing and de-transitivizing function found in adjectival passives with the copula *be*, but was gradually reconstrued as the main verb in perfect constructions, entailing the loss of the adjectivizing function of *-EN* and the reattribution of the stativizing and past-shifting function to the auxiliary *have*, so that the perfect construction makes use of the same participle found in verbal passives. But furthermore, even the de-transitivizing function of *-EN* still found in the passive was lost in the reconstrual of the possessive structure in (36) as the perfect structure in (37). That is, the history of English has witnessed a progressive loss of function and

meaning in the *-EN* participle, so that no function or meaning is currently consistently associated with it. This development has progressed further in French and certain German and Italian dialects, where certain semantic idiosyncrasies of the perfect have been lost, yielding an analytic preterit construction. In summary:

- In the development of the verbal passive, the de-transitivizing function of *-EN* was retained but the adjectivizing and past-shifting function was transferred to a null morpheme.
- In the development of the perfect, the de-transitivizing and adjectivizing functions of *-EN* were lost, and the past-shifting function was transferred to the auxiliary *have*.

Given that both the verbal passive and the perfect appear early in English, the two changes schematized above probably developed in parallel. In the following section, I develop an analysis of *-EN* participles in which, as the outcome of the historical development sketched above, *-EN* has no semantic or syntactic function at all.

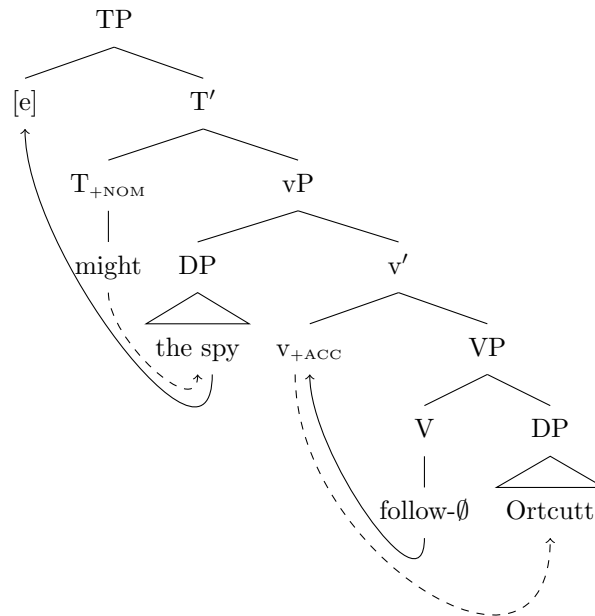
4 Analysis

On the basis of the considerations fleshed out in the previous sections, I propose an analysis of *-EN* that makes it the default form of the English verb when no other inflection is selected. This analysis is closely related in spirit to other analyses that seek to attribute a uniform function to *-EN* in adjectival, verbal and perfect participles. Embick (2004a) and Ramchand (2018) claim that these participles correspond to different layers of structure within the verb phrase, with perfect participles containing the most structure, verbal participles less and adjectival participles still less. Differences between the participles correlate with the amount of structure they contain, not with the function of *-EN*. The account I describe below does not analyse *-EN* as a syntactic head that complementizes some amount of syntactic structure, but rather as an affix of the relevant verbal head, occurring by default in a morphological position of exponence within the prosodic word. One initial observation that speaks in favor of this view is that, as mentioned in section 1, morphological idiosyncrasies of one participle carry over to the others (e.g. *caught* for *catch*). If *-EN* in perfect participles, for example, embedded an entire verb phrase with associated functional material, we might expect this extra material to interrupt the morphological relation between *-EN* and the underlying verb stem that lexically selects the appropriate allomorph of *-EN*. The fact that this is not so at least circumstantially implicates that *-EN* bears the same structural relation to the verb stem in all three participles. The analysis that I spell out in what follows makes this the case.

I follow Chomsky (1995), Harley (1995), Kratzer (1996), and others in decomposing the verb into a light verb ‘little-*v*’ that licenses an agent and a

main verb *V* that licenses a theme. In a transitive construction, little-*v* licenses the accusative Case of the object under the ‘Agree’ relation between a probe (accusative-assigning little-*v*) and a ‘goal’ (the Case-marked DP). The feature [+ACC] represents the accusative-assigning potential of little-*v*. Finite *T* licenses the nominative Case of the agent under Agree (represented as the feature ‘+NOM’). I assume that the element in *T* selects the form of the next lowest verb, the main verb *follow* in (38a). Specifically, a modal verb like *might* selects the null suffix, PRES tense selects the suffix *AGR* (whose phonological value is determined by the ϕ -features of the element in [spec,TP], and PAST tense selects *-ED*, whose phonological value depends on the verb stem. Lastly, the EPP requires the highest DP to move to the subject position [spec,TP], marked ‘[e]’ for ‘empty category’ in the surface structure. These dependences are illustrated in the tree in (38b) for the sentence in (38a). Dashed arrows indicate the Agree relation and solid arrows indicate movement.

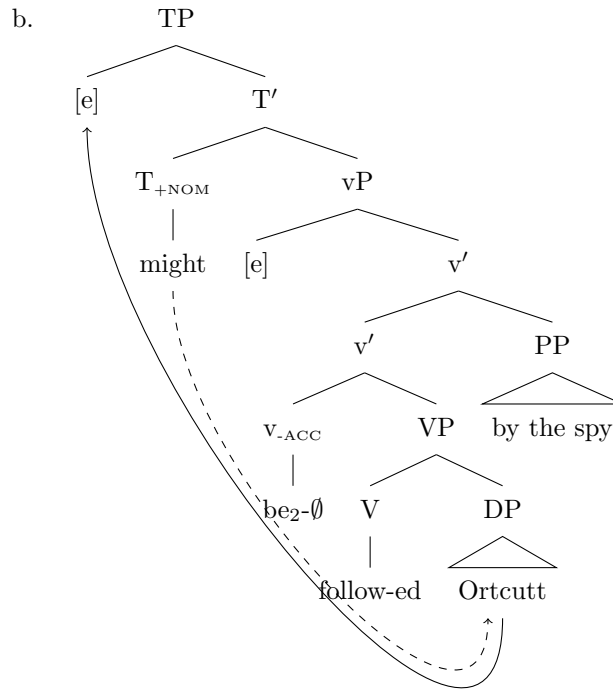
- (38) a. The spy might follow Ortcutt.
 b.



It is characteristic of the passive that what is the external argument in the active is suppressed or put into a *by*-phrase in the passive. Chomsky (1981), Burzio (1986), Jaeggli (1986), Baker et al. (1989) claim that this goes hand in hand with the suppression, or ‘absorption’ of accusative Case, in present terms the suppression of little-*v*’s capacity to license accusative on a goal. Following Bruening (2013), I analyze *by*-phrases as adjuncts of *v*’ that semantically attribute the property that *v*’ denotes to the object of *by*, and in doing so perform

the same function as direct predication of the external argument on v' in actives. The occurrence of the *by*-phrase instead of direct predication goes hand in hand with withdrawal of accusative Case, which I notate as the feature [-ACC] in v . Lastly, I propose that the feature [-ACC] is marked in v by the auxiliary I call ' be_2 ' (distinct from ' be_1 ', which functions as a copula for non-verbal predicates, as described in detail below). That is, be_2 occurs in little- v when v is [-ACC]. Being the highest verbal element in this context, be_2 receives the inflection assigned by the modal verb *might*, which is expressed by a null affix. The main verb, in this case, stays in V . The occurrence of *-EN* (in the form of *-ed* in the case of *follow*) on the main verb in this case is treated below. The passive example (39a) has the structure in (39b) on this view.

(39) a. Ortcutt might be followed by the spy.



I now propose the following principle governing the occurrence of *-EN* in modern English:

(40) A verb (i.e., an element of category v or V) bears *-EN* when no other inflection is selected.

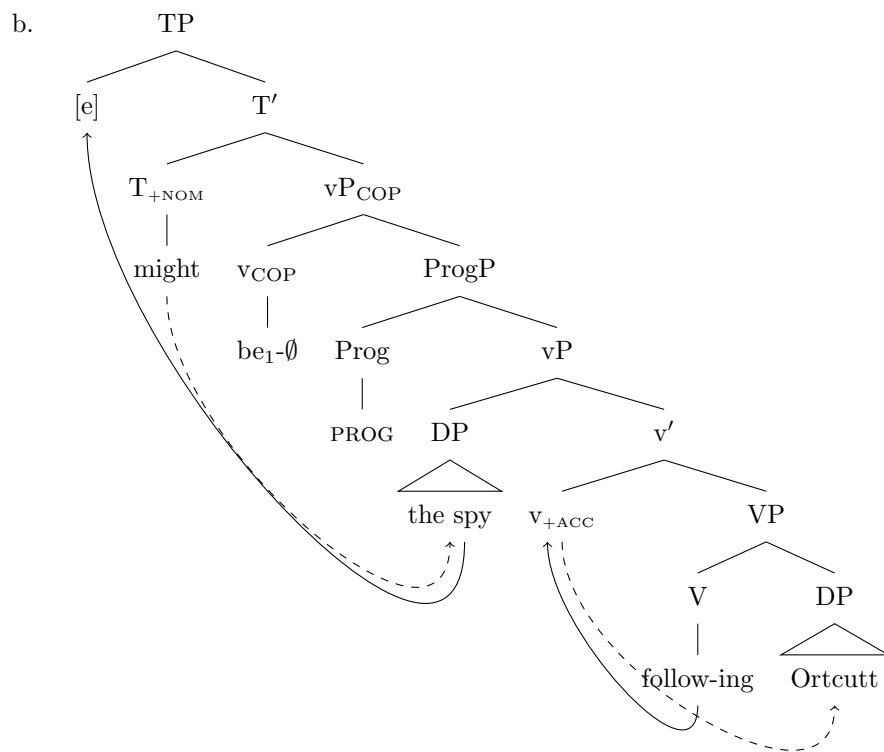
This characterization makes *-EN* marking a default procedure. To make this idea more precise, I propose that every English verb contains a suffixal morphological position of exponence for an inflection whose value is determined by syntactic factors. That is, every verb has the form $V + \text{AFF}$, where AFF (=affix) is a variable that ranges over $-\emptyset$, *-ing*, *-ED* (past tense inflection), *-AGR* (present tense inflection), and *-EN*. Of these values, the first four are assigned under specific syntactic conditions (see Bjorkman 2011 for a formal implementation of selection in auxiliary systems), while the fifth—*-EN*—is assigned by the rule in (40). This rule dictates the value *-EN* for AFF in (39b), since V receives no other inflection.

Progressive constructions involve a progressive operator that scopes over vP . The rationale for this scopal claim is that the progressive may have scope over the subject, since examples like (41) describe a situation in which different people tripped over the hole in the sidewalk at different times.

(41) People were tripping over the hole in the sidewalk all day.

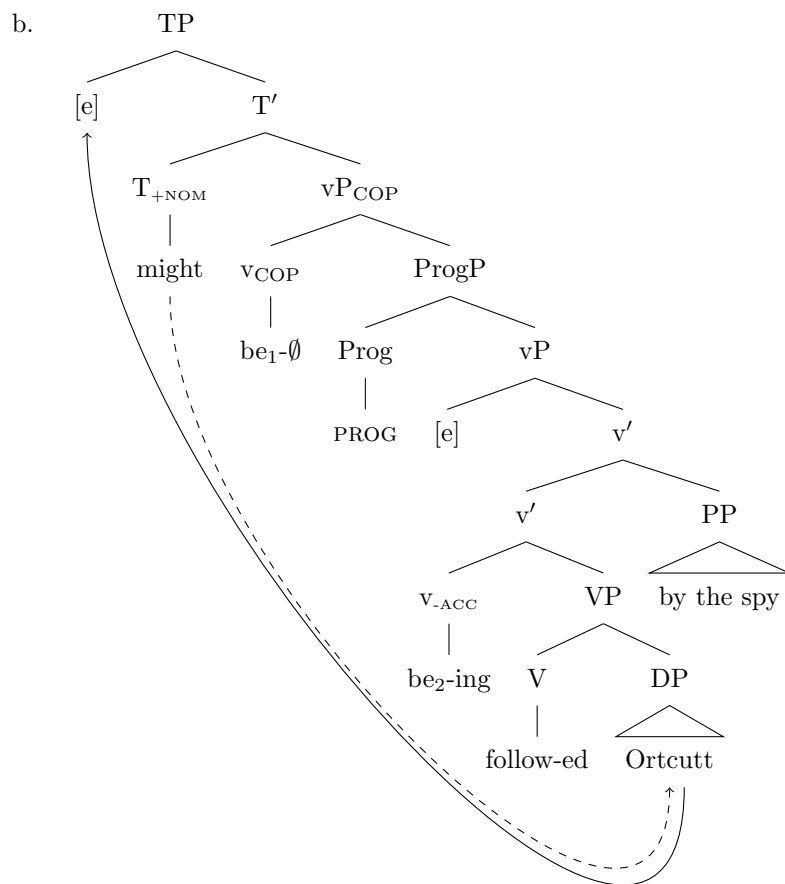
I take this to mean that the semantic force of the progressive occurs above the lowest reconstruction site for the subject, which is in vP . Accordingly, I posit a null progressive operator PROG that selects *-ing* on the following verb. In the structure in (42b) for the example in (42a), the main verb raises to little- v , where it receives the *-ing* inflection under selection by PROG . The complex ProgP is embedded under the copula be_1 , which is inserted to verbalize the non-verbal ProgP and which receives the null inflection under selection by the modal. I attribute to be_1 the category little- v , like be_2 , but again, this is a different little- v than that which introduces an external argument, and that hosts the passive *be* when marked [-ACC]. I call the little- v that hosts copular be_1 ‘ v_{COP} ’ to distinguish them. The two *be*’s can co-occur, as discussed below.

(42) a. The spy might be following Ortcutt.



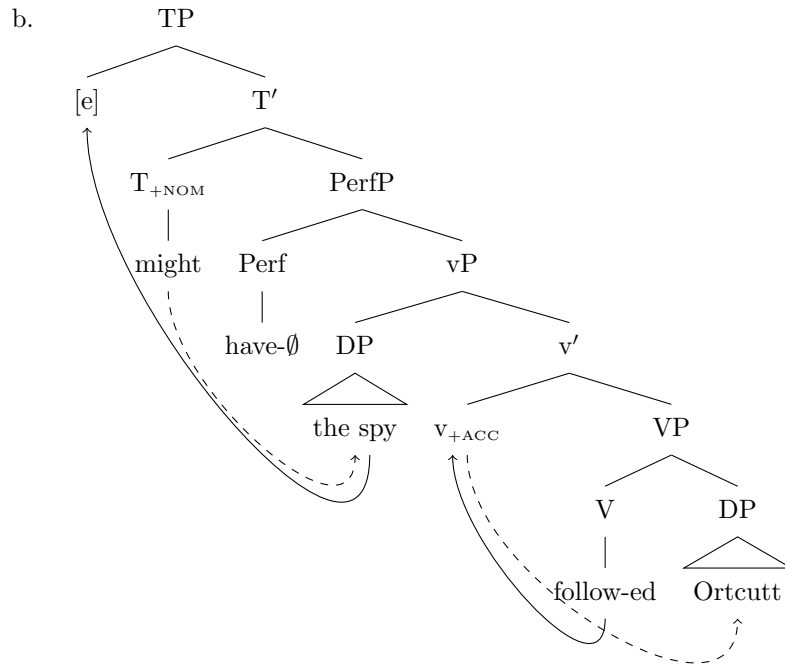
In the passive progressive example in (43a), the passivizing be_2 that occurs in little- v receives the *-ing* inflection from PROG, which in turn occurs under be_1 , which receives the null inflection from *might*, while the main verb *follow* receives *-EN* by the rule in (40).

- (43) a. Ortcutt might be being followed by the spy.



In the perfect, the auxiliary *have*, to which I attribute the category Perf, is the highest verb and therefore receives the null inflection from the modal, while the main verb receives *-EN* by the rule in (40).

- (44) a. The spy might have followed Ortcutt.

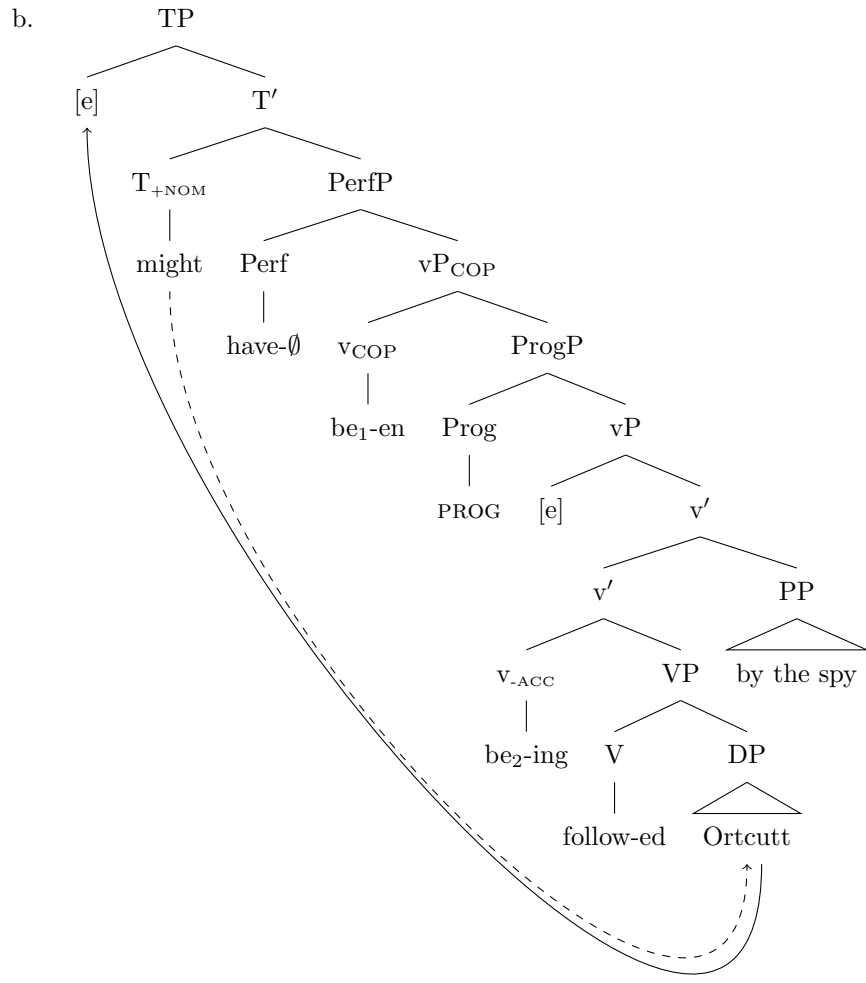


In the passive progressive perfect, both *have* and copular *be*₁ occur in that order, in addition to *be*₂ that marks passive in the [-ACC] little-v. In this case, *have* is assigned the null inflection by the modal, *be*₁ verbalizes the following progressive predicate, which is itself headed by passivizing *be*₂.² *Be*₂ receives the *-ing* inflection from PROG, while the remaining verbs, *be*₁ and the main verb *follow* receive the default *-EN* inflection by the rule in (40), since neither is marked by any other process.

(45) a. Ortcutt might have been being followed by the spy.

²The semantic force of the progressive is internal to the perfect auxiliary *have*, since (i) describes a situation in which *different* people tried to solve the problem, and this situation persists to the present. That is, the subject is within the scope of the progressive, but the progressive is in the scope of the perfect.

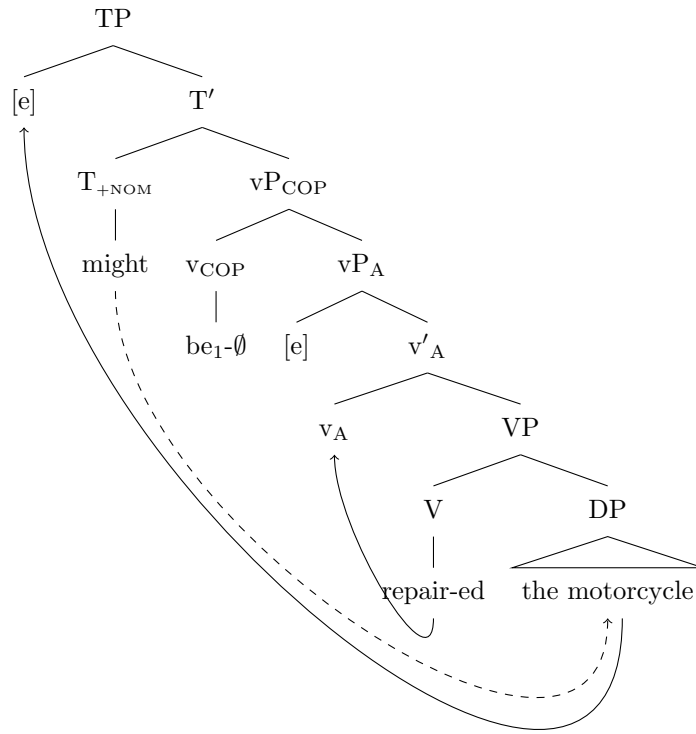
- (i) People have been trying to solve this problem for years.



Returning to the adjectival passive, I follow Grimshaw (1990), Pesetsky (1995), Maienborn (2009), Meltzer-Asscher (2011), Bruening (2014), Alexiadou et al. (2014), Doron (2014), Gehrke (2015), Alexiadou et al. (2015), and others in claiming that the process of deriving an adjectival passive does not eliminate the external argument. These works identify vestiges of agentivity in result state adjectival participles that indicate that vP is present there, though the

external argument is obligatorily suppressed (see Gehrke 2015 for an aspectual explanation for this point). I integrate this conclusion into the present analysis in the following matter. Suppose there is a ‘flavor’ of little-v, as Folli and Harley (2005), Kallulli (2007) and others put it, that is adjectivizing and is associated with the particular aspectual profile of adjectival passives (past shifting when the underlying verb is eventive but not when it is stative). This adjectivizing little-v, which I label ‘v_A’, does not itself host *be*₂, but, being adjectival, has the same distribution as other adjectival phrases, which occur with copular *be*₁. The structure of an adjectival participial construction in (46a) looks like (46b) on this view.

- (46) a. The motorcycle might (already) be repaired.
 b.



In the following section, I address two issues facing this analysis, one relating to the structure of unaccusative verbs and the other to the possibility, which the adjectival structure in (46b) does not entirely exclude, of voice alternations

occurring within adjectival participles.

5 Unaccusatives and Synthetic Passives

Unaccusative verbs like *freeze*, *dry*, *fall*, *arrive*, etc. license neither an agent nor an accusative object. Their deep object surfaces as subject, as in passives, for which reason they are often characterized as inherently passive verbs. If they occur with a little-vP layer, this little-v shares the [-ACC] feature with passives. But throughout this chapter I have characterized passive be_2 as a marker of [-ACC] little-v. If this is so, then (47a) with the unaccusative verb *freeze* should be ungrammatical (it lacks be_2) while the periphrastic example in (47b) should have the interpretation of (47a), contrary to fact. The idea that passive be_2 marks [-ACC] therefore requires some refinement.

- (47) a. The lake froze.
 b. The lake was frozen.

One analytical option would be that unaccusatives do not have a vP layer at all, hence no possibility of occurring with be_2 . But some considerations militate against this idea. Unaccusative verbs form adjectival participles quite productively, as in (47b). Adjectival participle formation was analyzed in section 4 as a certain flavor of little-v, responsible for the particular aspectual profile typical of adjectival participles. If adjectival passives are a flavor of little-v, that little-v should be present in non-adjectival contexts.

Further, in some languages, unaccusatives *are* marked just like passives. Arabic presents such a case (example from modern Syrian; NA = ‘non-active’). The *t-* prefix (which has stem-selected allomorphs) correlates with unaccusativity in (48a), which asserts that the circumstances changed spontaneously, but with passivization in (48b), which asserts that the first person plural subject referent of the purpose clause is responsible for changing the names. Arabic displays feminine singular agreement with non-human plural subjects.

- (48) a. *t-yayyr-it l-ʔaḥwāl.*
 NA-change-FS the-circumstances
 ‘The circumstances changed.’
 b. *t-yayyr-it l-asmā mʔān na-ḥmi n-nās*
 NA-change-FS the-names to 1PL-protect the-people
l-bariʔe.
 the-innocent
 ‘The names were changed to protect the innocent.’ (lit. ‘for us to protect the innocent’)

The occurrence of non-active morphology in unaccusatives in Arabic is another reason to believe that unaccusative verbs project little-vP. The same morphology marks non-activeness in unaccusatives in Arabic as in passives, which definitely involve little-v, implicating little-v in unaccusatives as well, associ-

ated with the non-active prefix. Both contexts for *t-* involve a [-ACC] little-*v*. If English were like Arabic except that it marks [-ACC] with the free morpheme *be*₂, then unaccusative constructions would be periphrastic like passive constructions.

I therefore claim that the difference between Arabic and English is that English is slightly more differentiating in marking non-active constructions. What English *be*₂ marks is the particular feature combination [+ θ , -ACC]. Verbs with an external argument have the feature [+ θ], those that do not, i.e., unaccusatives, are [- θ]. Passivization does not eliminate the external theta role, so passive verbs retain the feature [+ θ]. Rather, as discussed above, passivization involves withdrawal of accusative case, so that passivized little-*v* bears the feature complex [+ θ , -ACC]. It shares the [-ACC] feature with unaccusative verbs, but not the [+ θ] feature; unaccusative little-*v* is [- θ , -ACC]. In Arabic, *t-* (and its allomorphs) marks [-ACC], while in English *be*₂ marks [+ θ , -ACC].

Recall at this juncture that English also disposes of a copular auxiliary *be*₁ that occurs with non-verbal predicates and has no relation to passivization or unaccusativity; that is, not all occurrences of *be* correlate with [+ θ , -ACC]). The occurrence of *be*₂ in passives in English is, according to my analysis, a relatively superficial, essentially stipulative, property of passive constructions, not a grammatical necessity. This is, I think, as it should be, since many languages, such as Arabic above, express the passive in a synthetic construction, where the verb bears non-active morphology but still reflects finiteness distinctions. The difference between Arabic and English is that in Arabic, [-ACC] is marked by a bound morpheme, so that passive and unaccusative fall together in a synthetic construction, while in English [+ θ , -ACC] is marked by the free morpheme *be*₂, which differentiates passive from unaccusative and makes passive a periphrastic construction, since the main verb cannot fuse with the free morpheme *be*. It receives the default inflection *-EN* instead. Cross-linguistically, not only may passive little-*v* be marked by a bound morpheme, as in Arabic, it may be marked by a verb other than *be*, as in German, where *sein* ‘be’ plays the role of copular *be*₁ but *werden* ‘become’ plays the role of passive *be*₂.

- (49) a. *Das Motorrad war repariert.*
the motorcycle was (=be₁) repaired
‘The motorcycle was repaired.’ [adjectival passive only]
- b. *Das Motorrad wurde repariert.*
the motorcycle became (=be₂) repaired
‘The motorcycle was repaired.’ [verbal passive only]

I address lastly, in connection with Arabic, an attribute of the tree for adjectival passives in (46b). There, I analyzed adjectival passives as a certain flavor of little-*v*. A question that this analysis and others that posit vP in adjectival passives pose is: if little-*v* is present in adjectival passives, why must they be passive? What blocks an active adjectival participle? In fact, the restriction of adjectival participles to passive voice, while common cross linguistically, is not universal (Haspelmath 1994). Consequently, a general theory of syntax should

in principle be able to generate such constructions, as the present analysis does. Syrian Arabic is itself such a language (Hallman 2017). The adjectival participle forming morpheme *mi-* may attach to either the passive stem (with *t-*), forming a passive participle, as in (50a), or to the active stem without *t-*, forming an active adjectival participle, as in (50b). That these participles are adjectival is demonstrated by their compatibility with the inflected particle *lissāt* meaning ‘still’. The copula drops in the present tense in Arabic.

- (50) a. *l-ʔasmā lissāt-a mi-t-yaʔyr-a.*
the-names still-FS PART-NA-change-FS
‘The names are still changed.’ (i.e., we haven’t changed them back yet)
- b. *niħne lissāt-na m-yaʔyr-īn l-ʔasmā.*
we still-1PL PART-change-PL the-names
Lit. ‘We are still changed the names’ (i.e., we changed the names and we haven’t changed them back yet.)

Example (50b) is difficult to translate in English, which has no counterpart structure. It is identical to the adjectival passive participle in (50a) except that it is active. Its meaning is similar to the perfect due to historical connections between the perfect and adjectival participles discussed in section 3. But it is not a perfect construction; the perfect is not compatible with *still* (cf. *‘We have still changed the names’).

Haspelmath (1994) observes that languages with productive active adjectival participles are relatively rare, and, when they exist, they tend to be languages in which participle morphology is distinct from voice morphology, as is the case in Arabic. In such languages, participle formation presumably involves applying the participle forming prefix *mi-* to little-vP, which hosts voice morphology, while in English, the two processes (passivization and participle formation) are conflated in a specialized flavor of little-v. Haspelmath observes that in languages that conflate the two processes in this way, adjectival participles are never active (i.e., a language only has active adjectival participles if it also has passive adjectival participles). This observation indicates that the external argument apparently interrupts the adjectivization in little-v, but not adjectivization external to little-v. Why this is the case is unclear, but it is clear that cross-linguistically, adjectivization is compatible with an active base in principle, a fact the present analysis accommodates.

It is unclear whether it is fruitful to apply this analysis to the relatively unproductive ‘active’ use of adjectival participles in English illustrated in (51) (Levin and Rappaport 1986, Bresnan 1995, Embick 2004b, Bruening 2014). Bruening points to synonymous pairs that do not equally support abstraction over the external argument, cf. *a well-prepared / *well-readied teacher*, meaning the phenomenon is limited in productivity. Bresnan claims that these adjectives are derived from perfect participles, i.e. the participles that occur in the perfect construction, and retain the meaning of the perfect, so that (51a) refers to a woman who has read widely. But I have tried to show that there is no ‘perfect

participle’. The meaning of the perfect resides in the auxiliary *have*, and the participle is the verb in its default form. The ‘perfect’ reading seen in such examples is just the past shifting typical of adjective passives derived from eventive verbs. Bruening suggests that examples of Bresnan’s like *a confessed killer* have an underlying structure resembling *confess oneself to be a killer* and the participle is abstracted over *oneself*, an internal argument. It is hard to see this analysis extending to cases like (51), though.

- (51) a. a widely read woman
b. a well traveled student

I consider it an advantage of the present analysis that it syntactically projects the external argument of the adjectival passive, so that examples like (51) are not predicted to be a structural impossibility. Their lack of productivity shows that the process that abstracts over the external argument in these cases is not the regular process involved in the passive construction, but an idiosyncratic process associated with certain lexical items. That is, this analysis localizes the idiosyncrasy in the abstraction process. What restricts this process in these case remains unclear.

6 Conclusion

In this chapter, I have claimed that the participial suffix *-EN* in English is a default form of the verb that occurs when no other form of the verb is selected. This is supported by both synchronic evidence (no component of meaning is common to the three main usages of *-EN*) as well as diachronic evidence (the historical development of the verbal and perfect use involves bleaching of the meaning and function of the adjectival use). An analysis was presented according to which tense selects finite verb suffixes, modals the infinitival (null) suffix, and the progressive operator *PROG* selects the *-ing* suffix. In other contexts, *-EN* appears. Passive in English is marked not by *-EN* but by one of two verbs pronounced *be*. Passive *be₂* occurs in a little-*v* that bears the features [+ θ , -ACC]. The other, copular, *be₁* functions as a verbalizer for non-verbal predicates. The participles in verbal passive and perfect contexts are verbal participles; the *be* that occurs there is the marker of passive *be₂*, not the copular *be₁*. Adjectival passive participles, on the other hand, are formed by a flavor of little-*v* that adjectivizes, which in turn requires copular *be₁*.

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