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Where the Past is in the Perfect

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1. The perfect and the past

Many West European languages conventionally convey past tense by means of the **perfect construction**, consisting of an auxiliary verb (usually *have*, though sometimes *be*) and the perfect participle (traditionally called the past participle). The perfect participle is formed by adding the perfect participial suffix (conventionally referred to as *-en* in the generative tradition) to the main verb stem. This participle is also used to form passive constructions, though in this use it is often referred to as the passive participle. Each of the traditional names for the participle (past, perfect, and passive) is either theoretically loaded or appropriate only for a subset of its uses. To finesse this terminological dilemma, I will refer to the participle henceforth as the ***p-participle***.

In some languages, such as French and Austrian German, the perfect construction is the standard tense/aspect form used to report past-time events. In many other languages, including English, the perfect construction alternates with other past tense forms, such as the preterit past (English) or the imperfect (French and many other languages), and there is considerable cross-linguistic variation on the precise usage conditions and semantics associated with each type of past tense form. Many of these languages exhibit the *have/be* alternation in the formation of the perfect, using *have* with transitive and unergative verbs, and *be* with unaccusative verbs. Many other languages, including English, use *have* uniformly.

In this article I will seek to identify **the syntactic source of the past tense meaning associated with the perfect construction**. Because of the problem posed by the cross-linguistic variation in perfect semantics mentioned above, it is perhaps foolhardy to seek a single answer to this question for all languages, and a comprehensive treatment would require a dissertation-length study. For this reason I will focus on the English perfect construction, though I will occasionally rely on comparative evidence, especially with regard to the *have/be* alternation, and I will suggest the possibility of parametric variation.

Even by focusing on the English perfect, we cannot fully avoid the problem of semantic variation, since the perfect construction does not have a uniform semantics in all its uses; according to many accounts, there are at least two, and perhaps as many as five, different uses of the perfect, each with a different tense semantics. For example, Brugger and D'Angelo (1994) have argued that the so-called universal perfect does not convey past tense; this claim is based on a particular set of syntactic/semantic diagnostics for *past* that they use, and is supported by the fact that many other languages convey the semantics of the universal perfect by means of the present tense. (The universal perfect is exemplified in English by sentences such as *John has lived at his current address for ten years*.) Nevertheless, Brugger and d'Angelo argue, and I concur, that the perfect construction in English, in at least some of its uses, does convey past tense.

But what is “past tense”? There is no general agreement about this, in large part because there is a lot of cross-linguistic variation in the syntax and semantics of tenses in general and of past tense in particular. The most obvious way of explaining this variation is to assume that there are several different kinds of “past tense” morphemes in the world's languages, and that “past” in Language X is not necessarily the same kind of animal as “past” in Language Y. Tense

morphemes may have a number of syntactic or semantic features that can vary independently across languages, resulting in a complex array of differences with respect to finiteness, perfectiveness, indexicality and logophoricity, susceptibility to sequence-of-tense phenomena, and so on.

The notion that there are different types of past tenses has sometimes been expressed by reserving the category “tense” for just one type, and classifying the others as belonging to other syntactic and/or semantic categories, such as aspects, adverbials, or whatever. Thus, it has sometimes been suggested that many languages lack any true past tense, and that many types of verbal affixes or temporal/aspectual particles that are traditionally glossed as “past” should really be classified as instances of perfect aspect instead. The usual motivation for such claims is that the putative past tense does not behave like the past tense morpheme in English and/or other West European languages, and behaves more like the perfect construction in these languages. Since past tense is often distinguished from perfect aspect in this way, the notion that perfect aspect conveys past tense may seem contradictory.

To a large extent, the issue here is terminological. It is generally agreed that the semantics of past tense involves what is usually called **past-shifting**. The term ‘past-shifting’, which has its origins in the tense logic of Prior (1957), involves the notion of shifting the time of evaluation of the truth of a declarative sentence away from the present (the time of utterance) to a time in the past (i.e. to a time located prior to the time of utterance). Recasting this notion in terms of the temporal location of events and situations (as opposed to truth evaluation), we can say that a past tense occurring in a main clause is normally understood to locate the event or situation denoted by the extended verb phrase prior to the actual utterance time, i.e. in the past relative to the utterance time. In this respect, the utterance time functions as a defined reference-point, or anchor, for the tense. When a past tense occurs in a subordinate clause, the reference point for the past tense may be a time other than the utterance time, typically the event time of the main clause (especially the case of a past tense occurring in the complement of an intensional verb of speech or belief).

I take the semantic property of past-shifting to be the criterial diagnostic property of what I call true past tense. Since this assumption is not universally shared, I will sometimes use the term “past-shifting” rather than “past” to refer to the semantics that is usually associated with past tense cross-linguistically. By defining past tense cross linguistically in terms of past-shifting, it is possible to refer to this semantic function while abstracting away from the many cross linguistic differences in the array of properties of particular tense morphemes and from the issue of whether a particular morpheme should be analyzed as a past tense or as a perfect aspect. Thus, when I say that certain uses of the English perfect construction convey past-shifting tense, what I mean is not that they convey the same semantics as the past tense morpheme in English (although this appears to be true in some cases) but rather that they convey past-shifting. The question to be addressed here, then, is what part of the perfect construction conveys past-shifting.

Given that the perfect construction is composed of the auxiliary verb *have* and the p-participle, there appear to be three logical possibilities of where the past tense meaning originates in it:

- (1) a. Past-shifting is conveyed by the auxiliary verb *have*;
- b. Past-shifting is conveyed by the perfect participle affix;
- c. Past-shifting is conveyed by the perfect construction as a whole (i.e. by the combination of the auxiliary verb *have* and the perfect participle affix).

The first two proposals are problematic on empirical grounds, as I will show in Sections 2 and 3. In Sections 4 and 5 I will work out a version of the third proposal. In the course of doing so, I will compare the perfect construction with other constructions involving the combination of *have* and the *p*-participle, and I will also compare finite and nonfinite uses of the perfect.

2. Locating the past in the perfect (I): *have* and *be*

The first view (1a) is problematic from an empirical point of view: the verb *have* occurs in a number of other uses besides the perfect construction, and in none of them does it convey anything resembling past-shifting:

- | | | | |
|-----|----|---|--------------------------|
| (2) | a. | Max {has/had/will have} blue eyes. | (inalienable possession) |
| | b. | Brent {has/had/will have} the car today. | (temporary possession) |
| | c. | Janet {has/had/will have} to leave early. | (modal necessity) |
| | d. | Karen {had/will have/?has} the tenants evicted. | (causative passive) |
| | e. | The car has a wheel loose | (circumstantial) |

The verb *have* is used to convey inalienable possession in (2a) and temporary alienable possession in (2b). In (2c), *have* is used in conjunction with an infinitive to convey modal necessity; in (2d) *have* is used in conjunction with a small clause headed by a passive participle to convey an (eventive) causative predicate; in (2e) it combines with an AP small clause in a non-agentive circumstantial construction. In all of these cases, the only past-shifting semantics in evidence is the past-shifting associated with finite preterit past tense on *had*. Although the preterit past morpheme is realized morphologically on *have*, it is not part of the syntactic construction containing *have*. The only time-shifting semantics that can be attributed to *have* per se (or to the construction containing it) involves future-shifting rather than past-shifting, in (2c) and (2d), where the complement of *have* is eventive, and the construction has the semantics of a modal (2c) or causative; in these cases the time of the event of leaving or evicting follows the modal evaluation time or causation time.

Thus, in order to maintain (1a), one would have to posit two (or more) distinct subtypes of *have*; only one of which conveys past-shifting (the subtype occurring in the perfect construction). This is undesirable from a meta-theoretical point of view, because it violates the desideratum that each morpheme has a uniform semantics. Moreover, (1a) is close to unfalsifiable if one is free to posit additional subtypes of *have* at will.

A different type of empirical problem for (1a) is posed by languages with *have/be* alternations in the formation of the perfect, such as French, Italian, and Dutch. With unaccusative verbs in these languages, the verb *have* is absent entirely from the perfect construction, and the auxiliary copular verb *be* occurs in its place, but the past-shifting semantics of the perfect is fully maintained. In other words, not only does *have* lack past-shifting semantics outside of the perfect construction, but past-shifting semantics sometimes occurs in the perfect construction without *have*. Moreover, past-shifting semantics is no more typical of *be* than it is of *have*; in none of the other (non-perfect) contexts where *be* occurs does it convey past-shifting. So, to account for unaccusative perfects, (1a) would have to be modified to attribute past-shifting semantics not only to a special subtype of *have*, but also to a special subtype of *be*. Abstracting away from the unaccusative distinction, these putative past-shifting subtypes of *have* and *be* occur in precisely the same syntactic environment (namely, the perfect construction), suggesting that the past shifting semantics originates elsewhere in the perfect construction.

3. Locating the past in the perfect (II): the p-participle

3.1 Perfect versus passive

Turning now to (1b), according to which the past-shifting semantics resides in the perfect participle (or the affix that functions as its head), this is also problematic from an empirical point of view: not all occurrences of the perfect participle are used in constructions that convey past-shifting. The source of the problem lies in the fact that the perfect participle is homophonous with, and arguably identical to, the passive participle. The case for identity between the two participles is made most strongly on morphological grounds. The perfect and passive participles are lexically identical in English; even strong verbs with irregular participial forms display the same irregular forms in passive and perfect uses. Therefore, as Hoekstra (1984) has argued, the default assumption must be that the two participles are one and the same. This does not imply that the theory of the passive voice in UG must be based on the perfect participle. Not all languages express the passive by means of a participle, let alone one that is also used to form the perfect. The claim is simply that, in English, passive voice is expressed by means of such a participle. I will refer to the perfect/passive participle henceforth as the p-participle.

When the p-participle is used in any construction other than the perfect, it is used as a passive participle, and lacks any past-shifting semantics. This is true not only of standard passive constructions like (3a), but also of causative passive constructions like (2d) and (3b), and other types of p-participial small clause constructions (3c):

- | | | | |
|-----|----|---|------------------------|
| (3) | a. | Karen's tenants will be evicted by her. | (standard passive) |
| | b. | Karen will have her tenants evicted. | (causative passive) |
| | c. | Karen wants her tenants evicted. | (small clause passive) |

In each of these examples, the eviction event is located in the future, and is not explicitly located prior to any other time located further in the future (such as the time of a resulting state.) Thus, these passive constructions do not display any past-shifting interpretation. The following subsections provide confirming evidence for this conclusion.

3.2 Passive and perfective eventive predicates

That the standard passive construction lacks an intrinsic past-shifting tense is also shown by comparing stative verbs like *love* in (4) with eventive verbs like *bite* in (5), with respect to the tense semantics of the clauses in which they occur.

- | | | |
|-----|----|---|
| (4) | a. | Max loved many women. |
| | b. | Max loves many women. |
| | c. | Sam said that Max loved many women. |
| | d. | Max has loved many women. |
| | e. | Many women are loved by Max. |
| | f. | Sam said that many women were loved by Max. |
-
- | | | |
|-----|----|------------------------------|
| (5) | a. | A dog bit Max. |
| | b. | #A dog bites Max. |
| | c. | Sam said that a dog bit Max. |
| | d. | A dog has bitten Max.. |

- e. #Max is bitten by a dog.
- f. Sam said that Max was bitten by a dog.

With a stative predicate like *love* in (4), present and past tense can both be used freely. In (4b), the present tense in a main clause is used in its “normal” sense, locating the time of the loving situation at the time of utterance. In (4c), the preterit past allows a so-called simultaneous interpretation, locating the loving situation at the time of Sam’s reported utterance. The perfect example in (4d) has a past-tense interpretation, locating the loving situations in the past. In contrast, the passive in (4e) has a present-tense interpretation identical to its active counterpart in (4b). Example (4f) is parallel to (4f).

Eventive verbs like *bite* are perfective when used without the progressive, and the events that they identify cannot be located by a tense at a point simultaneous with (or overlapping) another event. Thus (5b), unlike (4b), cannot be used to locate the biting event at the utterance time, and (5c), unlike (4c), cannot be used to locate the biting event at the time of Sam’s reported utterance. (This constraint was also at work in (2c) and (2d) above, forcing a future-shifted rather than simultaneous interpretation when the predicate in the small clause complement of *have* is eventive.) Exactly the same interpretive restriction applies to the passive examples in (5e) and (5f), indicating that the p-participle here does not convey a past-shifting tense of the sort that occurs with the preterit past in (5a) or the perfect construction in (5d).

Examples (5b) and (5e) can be used as newspaper headlines to report a biting event in the recent past; they can also occur as chapter titles or as captions for drawings or photographs, where they do not locate the reported biting event in time. The critical point is that the passive example (5e) behaves like its active present tense counterpart in (5b), whereas the perfect example in (5d) behaves like the preterit example in (5a), indicating that the perfect contains a past-shifting tense while the passive does not.

3.3 Some passive p-participle modifiers are (or appear to be) past-shifting

When a passive participle based on an eventive verb is used as a modifier of a noun phrase, the temporal interpretation seems to be parallel to that of the perfect, unlike other passive uses I have considered.

- (6) a. The tenant evicted by Karen is taking my class.
- b. The tenant who was evicted by Karen is taking my class.
- c. The tenant who has been evicted by Karen is taking my class.

The participial modifier in (6a) has an interpretation similar to that of a full relative clause containing a past-shifting tense as in (6b-c); it cannot have a present tense interpretation. But this is an effect of the simultaneity constraint discussed above in (5); in fact, the present-tense counterpart to the relative clauses in (6b-c) is anomalous for the same reason:

- (6) d. #The tenant who is evicted by Karen is taking my class.

Just as the present tense cannot be used to locate an event at the utterance time, the same is true of the bare participle in (6a), and for the same reason.

The tense interpretation of stative predicates in participial modifiers provides corroborating evidence that the simultaneity restriction is responsible for the fact that a past-

shifted interpretation is necessary in (6a). In (7a-b), a present tense interpretation is possible, since the simultaneity restriction has no effect on stative predicates:

- (7) a. A politician admired by Bill visited the university last year.
- b. The books owned by Sam were found in an attic.
- c. A politician who is admired by Bill visited the university last year.
- d. A politician who was admired by Bill visited the university last year.

In these examples, the passive p-participle in (7a-b) can be understood to locate the stative situation either at the utterance time, like (7c), or at the time of the main clause event, like (7d). The fact that the present-tense interpretation is possible with p-participles based on stative predicates supports the claim that p-participles functioning as passives do not intrinsically convey past-shifting tense.

A question nevertheless arises. If the p-participle does not itself convey a tense, how do these reduced relative modifiers come to have past-shifted interpretations, corresponding to those in (6b-c) and (7b-d)? Exactly the same issue arises with other types of non-CP modifiers, such as reduced relatives containing progressive participles or adjectives; adnominal adjectives; and prepositional phrases. These are all stative predicates, and they allow the same range of tense interpretations as the p-participles in (7a-b), as (8) shows:

- (8) a. A justice department official claiming to be innocent testified before Congress.
- b. The man angry at Bill left the party.
- c. The angry man stole Bill's car.
- d. A woman in the corner of the room shot the robber.

Whatever factor makes these tense interpretations available in (8) is presumably at work with the p-participial modifiers in (7a-b) and (6a). For concreteness, I will assume that the predication relation holding between a modifier and its head NP is assigned a covert tense that is either past or present. If the predicate is eventive, as in (6a), it is still subject to the simultaneity restriction, just as it is when the tense is overt, in a full relative clause like (6d). Thus, the p-participle is not itself responsible for the past shifted interpretation of (6a).

One might wonder why a future-shifted interpretation is not possible for these null tenses. I adopt the standard assumption that future-shifting is not freely available except by virtue of the presence of a modal, including not only conventional modals but also the future modal *will* (Abusch's (1988) *woll*). In fact a special kind of future-shifted reading is possible with reduced modifiers when the main clause contains a modal, as in (9a), which can be interpreted like any of the paraphrases in (9b-d):

- (9) a. Any tenant evicted by Karen should take swimming lessons.
- b. Any tenant who was evicted by Karen should take swimming lessons.
- c. Any tenant who has been evicted by Karen should take swimming lessons.
- d. Any tenant who is evicted by Karen should take swimming lessons.

Although(9d) contrasts with (6d) in grammaticality, it does not have the interpretation that the simultaneity constraint blocks in (6d) (simultaneity with the utterance time). Crucially, the event associated with the present tense relative clause in (9d) is understood to be located not at the utterance time, but in the future relative to the utterance time. This special type of future-shifted

interpretation is made possible by the presence of the modal in the main clause; the quantified determiner also plays a facilitating role.

Conditional clauses with present tense in modal contexts behave similarly, as (10) shows:

- (10) a. If Karen evicts a tenant, he should take swimming lessons.
b. If a tenant is evicted by Karen, he should take swimming lessons.

This is expected, since it is well known (e.g. from the literature on donkey anaphora) that relative clauses in universally quantified QPs such as those in (9) behave like conditional clauses in modal and generic contexts.

The bare p-participle modifier in (9a), if it does not have a past-shifted tense interpretation akin to that of the(9b) or (9c), can only have the future-shifted interpretation of (9d). The same is true of the bare p-participial conditional analogue of (10b) in (11), which has the same range of interpretations as its reduced relative modifier counterpart:

- (11) If evicted by Karen, a tenant should take swimming lessons.

The fact that the p-participles based on eventive predicates in (9a) and (11) can have these future-shifting interpretations provides further support for the conclusion reached above, namely that the p-participle in its passive use does not itself convey past-shifting. When it occurs in a reduced relative modifier, the modifier's covert tense can be either present or past. If a present tense interpretation is inconsistent with the simultaneity restriction on eventive predicates, that interpretation is excluded, but otherwise it is allowed (either because it is stative or because its interpretation involves future-shifting rather than simultaneity).

4. Locating the past in the perfect (III): a holistic approach

4.1 Framing the problem

We saw in Section 2 that the auxiliary verbs *have* and *be* occur in a number of constructions other than the perfect construction, and that in all these constructions *have* and *be* fail to exhibit a past shifting semantics. In Section 3 we saw that the same is true of the p-participle: it occurs in several constructions other than the perfect construction, and in all of these constructions it functions as a passive form and fails to exhibit a past-shifting semantics.

I turn now to the third approach to the past shifting semantics of the perfect outlined in (1c), namely that the past tense semantics originates neither with the auxiliary verb nor with the p-participle, but rather with the perfect construction as a whole. There are two basic ways of executing this idea. The first approach involves granting ontological status to complete grammatical constructions within the structure of the grammar, making it possible to directly attribute a variety of syntactic and semantic properties to them. This, in effect, is the approach taken by traditional and pedagogical grammars to the morpho-syntax and semantics of the perfect. On this approach, one simply states, for each language, how the perfect construction is formed morpho-syntactically, and what its semantics is. This approach is also typical of construction-based approaches to grammatical theory, including the earliest versions of generative grammar, such as the so-called Standard Theory of Chomsky (1965), as well as more recent approaches such as Construction Grammar.

A construction-based approach to the semantics of the perfect is, of course, also consistent with all the facts reviewed in Sections 2 and 3; if we are free to stipulate that the perfect construction as a whole has a particular semantics that need not be based on the semantics of its component parts, then the absence of past-shifting semantics in other constructions involving *have*, *be*, and the p-participle is unproblematic.

The flaw in this approach is theoretical, or metatheoretical, rather than empirical. Any construction-based model that gives up on the possibility of deriving the semantics of complex syntactic constructions from the semantics of their syntactic components is close to unfalsifiable. Taking past tense semantics to be a property of the perfect construction as a whole amounts to saying that the construction is an idiom. While it may ultimately prove to be necessary to adopt this view, it must be considered the weakest theory and hence the least interesting approach.

This does not mean that we should give up on the idea that the past shifting semantics of the perfect is in some sense a property of the construction as a whole, but it implies that we should try to derive this result in some way from the interaction of the component parts of the construction, rather than simply stipulating that the construction is interpreted in this way. I see four ways of approaching the issue that are consistent with this desideratum; the first two of these are more complex variants of the approach considered and rejected in Section 3.

- (12) a. The p-participle has an intrinsic past-shifting semantics but this is neutralized or switched off when the p-participle functions as a passive.
- b. The p-participle has an intrinsic latent past-shifting semantics that is activated by another component of the perfect construction that is absent in the passive (presumably *have/be*).
- c. The p-participle, in combination with *have/be*, licenses or activates a covert past-shifting tense that is syntactically distinct from the perfect construction per se.
- d. The p-participle has a semantic feature that combines with a semantic feature of another component of the perfect construction (presumably *have/be*) to yield a past-shifting semantics.

Options (12a) and (12b) are distinct but similar executions of the same basic idea, namely that the past-shifting semantics is intrinsic to the p-participle, but that it is either “turned off” by the passive function or “turned on” by another component of the (active) perfect construction. (The reference to *have/be*, as opposed to *have*, in (12b) is intended to include the use of *be* with unaccusative verbs in languages exhibiting the *have/be* alternation.) The main problem with (12a) and (12b) is that these accounts ascribe a mysterious activating property to *have/be*, or a mysterious deactivating property to the passive function) they do not provide an explanation for why *have/be* or the passive function should affect the tense interpretation.

Option (12c) is, in a sense, the logical converse of (12a/b); rather than locating the past-shifting tense in the p-participle and having it activated (or not de-activated) in the perfect, it locates the past-shifting tense outside the perfect and has the p-participle, in combination with *have/be*, function as a licensor or activator. The chief potential drawbacks of this approach are, first, that it relies on a mysterious licensing function, like (12a/b), and, second, that it attributes this function to the combination of *have/be* and the p-participle, letting in non-compositionality

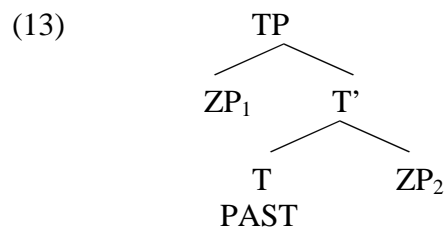
through a back door, as it were. Despite these drawbacks, it does have one empirical argument in its favor, which I will discuss below.

Option (12d) partially resembles (12a/b) in ascribing (partial) past-shifting semantics to the p-participle, but differs crucially from (12a/b) in decomposing the semantics of past-shifting into at least two parts (as yet unspecified), one of which is ascribed to the p-participle. In order to flesh out this approach, it would be necessary to provide a syntax and semantics of the past-shifting function that decomposes it syntactically in a semantically credible way, and which also allows for the p-participle to supply one part of this and for *have/be* to supply the other part.

In the following sections, I will flesh out the latter two approaches, starting with (12d).

4.1 Decomposing past-shifting tense

The notion that the semantics of past-shifting tense should be decomposed into distinct component parts is an idea that I have explored in previous work, including Stowell (1995a) and Stowell (2007a). The essential idea, which I will provide only in outline here, is that a time-shifting tense should be conceived of as dyadic predicate of temporal ordering, taking two time-denoting or event-denoting arguments (identified as ZP_1 and ZP_2 in (13)).

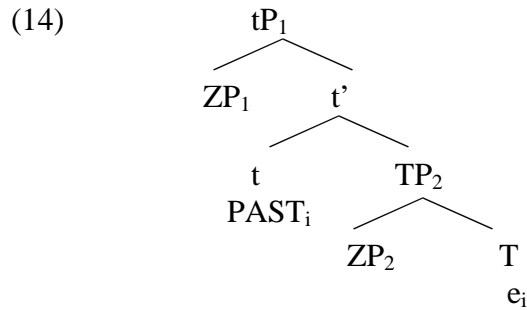


The subject of the tense, ZP_1 , denotes a “reference time”, corresponding to the time of utterance in the case of a main clause tense; the object of the tense, ZP_2 , denotes the “event time” associated with the predicate heading the extended verb phrase of the clause, occurring as a subconstituent of ZP_2 . The tense predicate locates its object argument (ZP_2) prior to its subject argument (ZP_1), analogous the way in which a temporal preposition such as *before* or *after* orders its object in relation to its subject.

The predicate/argument structure attributed to tense predicates in (13) is a “pre-Larsonian” X-bar structure of the sort associated with classical Government-Binding theory; it does not adhere to the claim first advanced by Larson (1988) to the effect that all polyadic predicates should be decomposed into a sequence of monadic predicates, arranged in a hierarchical shell structure. In the case of a dyadic verbal predicate, the arguments occur as subjects of distinct verb phrases (VPs) arranged in a “VP shell”, with the heads of the distinct VPs related by syntactic head movement (verb movement). Larson’s theory, originally developed to account for the syntax of the dative construction, has been incorporated into the theory of transitivity adopted in the Minimalist program of Chomsky (1995), whereby the subject of a transitive predicate is associated with the highest VP in the shell structure, conventionally referred to as vP. The head of vP, “little v”, combines with a VP that lacks an external argument, and converts it into a complex transitive predicate. In languages like English, little v is null and the verbal head of the lower VP undergoes movement to the head position of vP. In languages with serial verb constructions headed by “light verbs”, it is reasonable to interpret the light verb as an overt instantiation of little v, with no verb movement taking place.

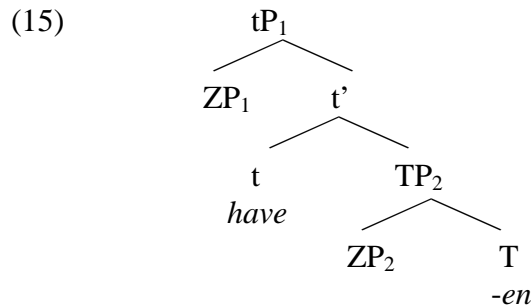
Since the structure of TP in (13) represents a dyadic (transitive) argument structure for

tense, a Larsonian version of (13) will look more like (14):



On this view, a past-shifting tense also involves two distinct temporal heads, related by verb movement from the lower T position to the higher “little t” position.

This structure provides a syntactic basis for a possible decomposition of the past-shifting tense in the perfect construction. Taking *have/be* to occupy a higher little t head position, we can assign the T head of TP₂ to the p-participial affix (-en). The verbal stem raises from a position within ZP₂ to T, combining with -en; verb movement proceeds no further. TP then combines with t, containing *have/be*, forming tP:



This approach to the temporal argument structure of the perfect construction is in the spirit of Hoekstra’s (1984) approach to the syntactic and semantic transitivity of the p-participle. On his account, transitivity is syntactically complex, involving both assignment of an external theta-role and the assignment of accusative case; the p-participle is a de-transitivized stem whose ability to assign the external theta-role associated with the root verb is deactivated by the p-participial morphology; this ability is supplied by *have*.

This proposal for instantiating a complex temporal structure for the perfect construction brings us back to the issue of the disparate syntactic and semantic functions associated with *have*, *be*, and the p-participle. Dealing first with the p-participle, this account provides us for a basis for distinguishing between the temporal semantics of the p-participle in its passive and active forms. We saw that, in the absence of *have/be*, the p-participle never has a past-shifting semantics. This follows from (14) once it is accepted that the past-shifting semantics depends on the existence of a complete tP shell, which the p-participle lacks in itself; only by combining with *have/be* is the full tP structure obtained. On its own, the p-participle has the temporal structure of a passive, yielding a non-shifting interpretation associated with the aspectual semantics of a result state.

Conversely, *have* and *be* lack a past-shifting semantics for the same reason: only by combining with a TP headed by the p-participial affix -en can a tP headed by *have/be* function as a dyadic

past-shifting tense. Of course, *have* and *be* may combine with other types of complements, but in all of these constructions, *have* and *be* can be assumed to function semantically like “light verbs”; much of their semantics derives from the complement with which they combine. For example, the notion of possession commonly associated with “main verb *have*” can be assumed to derive from the internal structure of the DP object of *have*, with the subject of *have* originating as DP-internal possessor argument in a possessor-raising derivation of the sort defended by Freeze (1992) and Kayne (1993). Likewise causative constructions headed by *have* would presumably relate the semantics of causation to a covert causative vP head within the complement of *have*. Although this account is admittedly rather sketchy and in need of a more careful exposition, I believe that the broad outline of the approach is fairly clear and consistent with current approaches to the syntax and semantics of *have* and *be*.

4.3 When the perfect fails to past-shift

In this section I will briefly consider evidence supporting the approach outlined in (12c) above, namely that neither the perfect construction as a whole nor any of its component parts directly conveys past-shifting tense itself, but rather licenses or activates a past tense occurring elsewhere in the structure.

The evidence in question involves the non-finite root form of the perfect construction, which occurs both in classical *to*-infinitives and as the complement of certain modal verbs. I will confine my discussion here to standard *to*-infinitives; for a fuller discussion, see Stowell (2007b), on which this discussion is based. In most cases, the nonfinite perfect does convey a past shifting semantics; this typically involves a relative, or dependent (non-indexical), past-shifting tense interpretation, which locates the event or situation associated with the main verb prior to the time of the matrix predicate. This is most straightforwardly illustrated by cases where the matrix predicate is future-shifted relative to the actual time of utterance, so that the non-indexical past-shifting perfect locates the time of the event/situation prior to the future-shifted time of the matrix predicate but not necessarily prior to the time of utterance. This is true regardless of whether the main verb is eventive, as in (15a), or stative, as in (16b):

- (15) a. Max will believe his sister to have gone to the hairdresser’s (the day before).
b. Max will believe his sister to have been in Rome (the day before).

When the non-finite perfect is embedded within a past-tense main clause, an interesting effect arises:

- (16) a. Caesar believed his sister to have gone to the hairdresser’s (the day before).
b. Caesar believed his sister to have been in Rome (that day).

Although the nonfinite perfect occurring with the eventive predicate in (16a) still has a univocal past-shifted interpretation, the nonfinite perfect in (16b), surprisingly, allows for either a past-shifted or a simultaneous interpretation, where Caesar’s sister’s being in Rome coincides with the time of Caesar’s belief, at least in the world of Caesar’s intension. On this interpretation, the perfect construction in (16b) lacks the semantics of past-shifting. Previous accounts of the semantics of the English perfect construction have implicitly assumed that this type of interpretation never occurs with the perfect; nevertheless I and most other native speakers that I have consulted agree that it is possible.

In this respect, the nonfinite perfect resembles a finite preterit past tense, which also allows for a simultaneous tense interpretation in the same syntactic context (i.e. when embedded in a past-tense main clause).

(17) Caesar believed that his sister was in Rome (that day).

This “simultaneous” interpretation of the preterit past tense is sometimes characterized as a kind of present tense in disguise. It is typically accounted for in terms of the theory of Sequence of Tense (SOT); see Stowell (2007a) and the references cited there for discussion.

In Stowell (1995b, 2007a), I developed an account of the alternation between simultaneous and past-shifted tense interpretations associated with the preterit, based on the idea that the preterit affix does not by itself convey past-shifting tense semantics; rather, it is a “temporal polarity” marker licensed by a covert (null) past-shifting tense occurring higher in the structure, whose presence it therefore signals. On this view, the covert past-shifting tense occurs in T (or in t, in terms of the structure in (14)) and the preterit affix originates not in T (or in t, for that matter) but rather within ZP_2 , from which it raises to T (and to t). When the preterit occurs in a main clause, the sentence as a whole must have a past-shifting tense in T (or t) in order for the preterit in the main clause to be licensed, but when it occurs in a subordinate clause embedded within a past-tense main clause, the licensing past-shifting tense may be the main clause tense, in which case the subordinate clause can have a covert present tense, thereby yielding the simultaneous interpretation.

This account of the tense interpretation of the preterit can be extended to the non-finite perfect in (15-17) provided that it is assumed that the perfect construction, or some part of it, functions as a polarity element licensing a covert higher past-shifting tense in T (or t), along the lines proposed in (12c).

4.4 A Less-than-fully Satisfying Conclusion

In Section 4.2, I proposed an account of the past-shifting semantics of the perfect construction based on a Larsonian-shell approach to the syntax of tense, decomposing the semantics of past-shifting tense syntactically into two distinct tense projections, TP and tP, with *have/be* located in the head of tP, and the p-participial affix located in the head of TP. In Section 4.3, I introduced evidence that appears to favor an alternative approach, according to which the perfect construction as a whole behaves more like the preterit affix, licensing a covert past-shifting tense occurring in a higher T or t. The problem with these two conclusions is that they are inconsistent with each other: the decomposition of tense syntax into a Larsonian shell, which provides a syntactic basis for a compositional account of the past-shifting tense interpretation of the perfect, relies on the idea that each part of the perfect construction corresponds to a component of the dyadic past-shifting predicate as a whole, but the polarity-based approach outlined in Section 4.3 implicitly denies this, given that it treats the perfect construction as a polarity marker that signals the presence of a past-shifting tense located elsewhere in the structure of the clause.

At this point, I am not in a position to offer an account of how these two conclusions should be reconciled. In this respect, this article must be considered a work in progress. On the other hand, if another way can be found to account for the possibility of the simultaneous interpretation in (16b), without relying on the polarity-based theory of the perfect, the account developed in terms of the TP shell structure is viable as it stands.

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