

Stative Puzzles: A Case Against Hidden Modality

Ashley Atkins

Abstract

This paper focuses on a set of modal puzzles that challenge deeply entrenched assumptions about our capacity to interpret natural language. These puzzles arise in connection with sentences like ‘Mary is in Paris for a week,’ among others, which appear not to bear any obvious modal meanings. These sorts of sentences are puzzling, in part, because they unexpectedly give rise to modal interpretations (e.g., it is understood that Mary stays in Paris until the end of the week across projected possible circumstances) which they then, equally unexpectedly, appear to lose (e.g., ‘Mary was in Paris for a week’ says only that she actually spent a week there). Though the practice of explaining modal interpretations in terms of modal meanings has become reflexive, I argue that these sorts of sentences cannot be assumed to have modal meanings; the assumption that they do is, in fact, what generates and sustains these and other apparent puzzles. These modal interpretations call, instead, for an explanation that appeals to an interaction between non-modal language and modal cognition. As I discuss, this conclusion ramifies across a constellation of modal interpretations that are thought to comprise a major natural language modal system (the “imperfective” system). If am right, this system is not a modal system at all, suggesting that linguistic meaning plays a much more circumscribed role in our understanding of language than is currently assumed.

Introduction

Most theorists who want to explain our capacity to interpret natural language are united by a common view: it is, in short, that our knowledge of systematic and non-contextual aspects of meaning consists in our knowledge of *linguistically-encoded* meaning. Even when this view is not held explicitly it nonetheless informs the practice of linguists, philosophers of language, and other theorists engaged in this pursuit. Its influence is seen, most commonly, in the pervasive practice of associating natural language sentences with truth conditions and deriving these conditions compositionally from these sentences.

This paper focuses on a set of modal puzzles that appear, as much as anything, to be amenable to this sort of general approach. They arise in connection with sentences such as ‘Mary is in Paris for a week,’ among others, which systematically give rise to modal *interpretations* despite the fact that they appear, superficially at least, not to bear modal *meanings*. ‘Mary is in Paris for a week’ is, for example, understood to mean (more or less) that Mary is in Paris and remains there until the end of the relevant week in all those possible circumstances in which things go according to plan. That interpretation is a surprising one, though, since neither ‘be in Paris’ nor ‘for a week’ appears to concern plans or the possible circumstances that may or may not be in accordance with them. So, the immediate question is, “Where do these modal interpretations come from?” That there is no *obvious* modal element here does not in and of itself present a challenge to this general approach. After all, one might argue that there is a covert modal element that is responsible for this interpretation and, surely, we sometimes do have good reason to posit covert elements to explain aspects of interpretation¹ even if this approach to explanation is contestable in some of its

¹ For example, we might assume that the sentence ‘It is important not to take yourself too seriously’ is understood as having a covert pronoun; that would explain the fact that the sentence is well-formed though it contains a reflexive element (i.e., ‘yourself’) with no apparent antecedent, which we have good theoretical reason to assume is required (for further examples, see (Radford 2004)).

applications.² So, in the present case, it will be thought that the challenge is simply to provide an analysis that explains these modal interpretations in terms of an appropriate combination of modal and non-modal meanings.

Another puzzle raised by these sentences concerns their interpretation in the past tense. Out of the blue, ‘Mary was in Paris for a week’ appears not to bear a modal interpretation. It appears to be understood as saying, simply, that Mary spent a week in Paris. Now the question is, “Where did these modal interpretations go?” If that sentence shared the modal interpretation of ‘Mary is in Paris for a week,’ we would expect it to speak to the past possibility of a week-long stay in Paris (whether or not Mary did have the pleasure of a week-long stay). Again, it will be thought that this does not compromise the assumption that these modal interpretations are rooted in modal meanings. Our view of these modal interpretations may just be obscured in this context and the challenge would be to say why.

In what follows, I articulate a different conception of our capacity to interpret natural language and develop a response to these and other puzzles that illustrates it. To begin with, I argue that these tricky modal interpretations are not to be explained in terms of modal meanings. Sentences like ‘Mary is in Paris for a week’ and those that pattern with them contribute a common *non-modal* linguistic condition. If Mary is in Paris for a week, this condition requires that Mary is not now in Paris at the end of the relevant week, and, more generally, for any state that holds at a time and is associated with an end, bars that state from being at an end then (so that its end is, as it were, deferred or displaced). On my view, the satisfaction of this non-modal condition results in the emergence of modal interpretations and as such their emergence is not due to modal *language*.

² See, for example, Paul Pietroski’s (2010) and Stephen Neale’s (2007) arguments against the contention that all truth-conditional effects of extra-linguistic context are traceable to elements in syntactic structure (defended by Jason Stanley (2000) and (2002)). There are also numerous local debates concerning the postulation of hidden elements. For two recent examples, see David Liebesman’s (2011), which argues against the postulation of a generic operator (‘GEN’) in sentences like ‘Tigers are striped,’ and see Robin Jeshion’s (2015), which argues against the view that proper names in apparently referential positions are predicates that have combined with covert determiners.

Instead, these interpretations reflect the contribution of modal *cognition*, a modal understanding of a state's having an end but not being at an end, in particular. Since the satisfaction of this non-modal condition takes work in past tense environments, the “disappearance” or, better yet, non-appearance of modal interpretations in unsupplemented past tense environments (e.g., ‘Mary was in Paris for a week’) is explained.

But my view is not simply that our modal interpretations may be accounted for without modals. I argue that the assumption that modals underlie these modal interpretations itself generates and sustains the sorts of puzzles that I discuss, giving us cause to reject the conception of meaning that urges this assumption. (If there are as many puzzles as there are attempts at analysis, the disease may be iatrogenic—*brought forth by the healer or doctor-caused*.) I focus, in particular, on the two most natural approaches to linking our modal interpretations to modals—an approach that links these interpretations to a modal element that does not carry a modal presupposition and one that links them to a modal element that does. The central problem with the former is that any modal meaning that would yield our modal interpretations would itself ensure the satisfaction of the non-modal condition associated with our key expressions,³ leading to the mistaken prediction that these modal interpretations are available in unsupplemented past tense environments.⁴ Moreover, any attempt to trace this supplementation to the satisfaction of a modal presupposition founders on the fact that it satisfies a non-modal condition, not a modal one,⁵ inviting the conclusion that it is not a modal element but the satisfaction of that non-modal condition itself that yields our modal interpretations.

Aside from bearing on broad conceptual questions concerning our capacity to interpret language, the relationship between language and thought, and the forms of explanation that illumi-

³ As I discuss, these modal interpretations reflect the satisfaction of that non-modal condition and what is manifest in them is latent in such an element.

⁴ See section 2 for discussion.

⁵ See section 3.1 for discussion.

nate it, this proposal has far reaching consequences in terms of our understanding of how modality is realized in natural languages—where it is and is not to be found. To begin with, although some of the puzzles discussed in this paper have been noted elsewhere, they have been treated in isolation from the other expressions considered here and, in each case, a modal meaning has been posited to explain the modal interpretations to which they give rise. But when we consider these expressions collectively an impressive pattern emerges that makes it clear that there is a general pattern to be explained, though not in terms of modal meanings. As I discuss, there are good reasons to think that these expressions are to be related to an even broader class of expressions that are currently regarded as comprising a major modal system in natural language—the imperfective system. If that is correct, then the consequences of my findings will be felt across this system, which may no longer have claim to this modal status and which may have a very different organizing principle than we have thought.

With these aims in view, the plan of my paper is as follows. In section 1, I introduce the basic modal phenomenon with reference to a central class of expressions and present an analysis that purports to explain their modal interpretations in terms of covert modality. In section 2, I present some puzzles for such an analysis and show that they arise both in connection with the central class and in connection with other identically patterning expressions, revealing that there is a general pattern of interpretation that requires a general explanation. In section 3, I develop proposals concerning the linguistic and cognitive profile of our central class that avoids all of these puzzles and sketch the extension of these proposals to our other cases. In section 4, I argue that the links between these expressions and the imperfective system serve to undermine the assumption that it is a natural language modal system rather than support the assumption that these expressions are modals.

1 A Modal Puzzle

1.1 The Basic Phenomenon

At first sight, the following sentence does not appear to bear a modal meaning—neither the stative⁶ predicate ‘be in Paris’ nor the ‘for’-adverbial ‘for a week’ is a likely modal:

(1) Mary is in Paris for a week.

And yet, this sentence does receive a modal interpretation. Its truth requires that Mary be in Paris, but also, roughly, that she be there until the end of the relevant week across projected possible circumstances (those compatible with her plans, we suppose). This presents us with a certain puzzle. How do we account for the presence of this modal interpretation in the absence of any apparent modal meaning?

Peter Hallman (2009a), to whom the observation of this phenomenon is due, has claimed that modal interpretations attach to stative locative predicates such as ‘be at x ’ and ‘be in x ’ when these predicates combine with temporal ‘for’-phrases. Consistent with this, we see that (2) is associated with an interpretation according to which Max is at his beachside cottage and would be until the end of summer across projected possible circumstances, and (3) with an interpretation according to which Alice is in jail and would be for the rest of her five-year sentence across projected possible circumstances:

(2) Max is at his beachside cottage for the summer.

(3) Alice is in jail for five years.

⁶ I will treat stative predicates as representing aspects of the world that hold at times (states) rather than those that happen over time (events). There is, at present, a debate concerning whether states should be understood as momentary/durationless (Hallman 2015) or as punctual/partitionless (Giorgi and Pianesi 1997), but settling these issues is beyond the scope of the paper.

So, while each of these sentences tells us something about a present state (e.g., Mary is in Paris, Max is at his beachside cottage, etc.), each also tells us that this state would continue up to some designated terminus (e.g., the week's end, the summer's end, etc.).

Despite their systematic availability, these modal interpretations are easy to miss in the absence of an obvious modal marker. Consider, for a start, that these sentences are not simply understood as locating a state within a given time frame. So, for example, (1) is not understood to mean simply that Mary is in Paris within a given week (this week, let us say). After all, (1) can be false even if that condition is met, as would be the case if Mary were simply on a day-trip to Paris without plans or means to stay longer. Nor do these sentences simply tell us what the duration of a state is. That suggestion is incompatible with the fact that they have a felicitous present tense form, in contrast to the following (which does bear a durative interpretation):

(4) #Max is sick for three days.

But neither should they be thought to tell us how long something will eventually have lasted, as the following sentence reveals:

(5) Mary was in Paris for a week, but she left after a day on account of the bombings.

We recognize that (5) reports the disruption of Mary's stay in Paris, not a contradictory state of affairs.

Now, in this case, as in the others we have considered, there is quite plausibly some sort of intention or plan that is aimed at the realization of a given state of affairs. But though this would seem to invite a modal analysis the presence of such a plan or intention is neither necessary nor sufficient for the truth of the sentences under investigation. So, for example, Mary might have plans to stay in Paris for the week but if her passport has been revoked and she is slated to be deported before the day is done, we are within our rights to judge (1) to be false. Moreover, a claim of

this variety might be true though there is nothing like a plan or intention in play. We can readily imagine contexts in which the following sentences are true though there isn't the least temptation to assume the presence of a plan or intention:

(6) The tulips are in bloom for the season.

(7) The tulips were in bloom for the season, but a freak snow storm killed them off.

To a first approximation, the sentences 'The tulips are in bloom for the season' and 'Mary is in Paris for a week' convey that, across the projected possible circumstances relevant to the continuation of the states in question (barring interruptions or extenuating circumstances like freak snow storms and unforeseen political crises), the tulips are in bloom until the end of the season and Mary is in Paris until the relevant week is done.

1.2 An Analysis: Covert Modals and Special Interpretations

Our modal interpretations appear to present a puzzle and not simply a problem because they fly in the face of a dominant conception of language, one dear to philosophers and linguists alike. According to this conception, systematic and non-contextual ("core") aspects of meaning are linguistically-encoded. Our modal interpretations are puzzling, from this perspective, because they constitute systematic and non-contextual aspects of the interpretation of our stative phrases that appear not to be tethered to modal meanings (meanings that encode modal conditions such as 'can,' 'must,' and '-able,' for example, are assumed to do).

An appeal to covert modality will, then, seem to most to be the obvious way to explain the puzzling modal patterns of these sentences. Certainly, the suggestion that a covert modal element is a component of these sentences is not unreasonable—they do bear modal interpretations though these are not linked to any of the usual suspects. But this is, at present, a reflexive sort of

assumption for theorists working in the formal semantics tradition.⁷

In light of this, it is unsurprising that the only existing account of these phrases to date, also due to Hallman, purports to explain these patterns in just this way. In fact, Hallman *motivates* the presence of modal interpretations by arguing for the presence of a covert modal. The argument relies on assumptions about the non-modal contribution of a phrase such as ‘be in Paris for a week,’ beginning with the assumption that its ‘for’-phrase specifies an interval of time throughout which the state that it describes holds. He then notes that (1) can be uttered at a time that falls within the specified interval so that, if (1) is uttered in the present moment, it characterizes a state that holds now and that falls within a week-long interval. But in consequence, Hallman claims, that portion of the interval that follows the utterance time remains unrealized at the utterance time.⁸ If these assumptions are correct, we need to explain how there can be a commitment to a week-long stay in Paris by Mary that is not yet a commitment to a fully realized week-long stay and all of this in the absence of any *overt* modal. A covert modal can explain just that.

In keeping with this line of thought, Hallman suggests that the past tense provides a particularly good context for seeing that these phrases have covert modal meanings. The reason is that the past tense allows us to draw explicit attention to the possible incompleteness of the states of affairs they report. Take the following sentences for example:

- (8) Max was at his beachside cottage for the summer, but a hurricane forced him to make other arrangements for August.

⁷ This is not due to assumptions specific to the modal domain, though it provides a rich fund of examples (a fact that is not without theoretical significance). Rather, it reflects the widely held conception of semantic theory and its connection to linguistic meaning with which we began (though it does not force the assumption that modal interpretations are linked to *lexical items*, as the work cited below illustrates). This conception constrains, to take just one notable example, Rajesh Bhatt’s (2006) treatment of a variety of surprising modal interpretations that arise in non-finite contexts such as ‘Tim knows how to solve the problem’ (\approx Tim knows how one/he could/should solve the problem), ‘The man to fix the sink is here’ (\approx The man whose purpose is to fix the sink is here), and ‘Will is to leave tomorrow’ (\approx Will is supposed to leave tomorrow). These modal interpretations, which are not linked to any overt modal, are immediately assumed to reflect covert modality and their investigation to reveal how “syntax can construct modal meanings” (2006: 1).

⁸ Notice, for now, that this argument presupposes that there is a portion of the relevant interval that follows the utterance time. This is a fact that calls for explanation, as I discuss further in section 2.1.

- (9) Alice was in jail for five years, but she hired a terrific lawyer who was able to get her released after two.

In each of these cases, as in each of the ones like them above, it is clear that a given outcome or endpoint fails to be reached in the actual world. Max wasn't at his beachside cottage *through to the end of summer* and Alice wasn't in jail *through to the end of her sentence*. Again, the suggestion is that we invoke a covert modal element to explain how there might be a commitment to a week-long stay in Paris by Mary, for example, that isn't a commitment to a fully realized week-long stay—now or ever.

Hallman's positive proposal is that our stative phrases bear a "special reading" (2009a: 35). In addition to attributing duration to states, these phrases bear a covert modal component that indicates that they have that duration "in all worlds compatible with the projected future" (2009a: 35), represented schematically in what follows:

$$(10) \llbracket \Phi_{\text{LOC-PP}} \Psi_{\text{FOR-PP}} \rrbracket^w = \lambda t \in T \lambda e \in E [\phi(t, e) \ \& \ \exists i \in \textcircled{*}T [t \leq i \ \& \ \text{FUT}_w([\Psi(\Phi)](i))]]$$

(10) presents us with a function that takes an instant of time t and state⁹ e and indicates that e is a Φ state that holds at t , that there is an interval i (in the set of non-instantaneous intervals $\textcircled{*}T$)¹⁰ such that t is a part of i , and, finally, that in all of the worlds accessible from the actual world that are compatible with its projected future (FUT_w) there is a Φ state that holds throughout i (where the latter is the condition contributed by temporal 'for'-phrases). As it is designed to do, this analysis predicts the presence of our modal interpretations in both present and past tense contexts.

⁹ The category 'E' includes both states and events, but only states can hold at instants.

¹⁰ Officially, intervals are pluralities of moments, but this is a detail that we can overlook.

1.3 The Legacy of The Imperfective Paradox

It is worth emphasizing that though the claim that our stative phrases have modal meanings is novel, the argument for it is in fact quite traditional. What we saw was that (i) assumptions regarding the non-modal contribution of our stative phrases combined with (ii) the need to avoid the incorrect entailments that would otherwise be generated by those assumptions drove us to assume the presence of a covert modal. This is of a piece with a pervasive pattern of reasoning that is used to motivate the postulation of modal elements where their presence is non-obvious. It is, for example, familiar from the literature on progressive sentences (where it is commonly discussed in connection with the so-called imperfective paradox). In this literature, it is standard to argue that a sentence such as ‘Mary is crossing the Atlantic’ bears a modal meaning on account of the fact that it represents as underway what may only ever be an *incomplete* cross-Atlantic passage whereas its underlying event predicate (‘cross the Atlantic’) represents *complete* cross-Atlantic passages.¹¹ The widely endorsed conclusion in this literature is that that sentence represents an actual part of a cross-Atlantic passage that is completed across certain possible (though perhaps not actual) circumstances.¹² Here, too, the presence of a modal element is assumed to be required to avoid incorrect entailments that would otherwise be generated by (allegedly) non-tendentious assumptions about non-modal aspects of meaning. This is not, however, the only way of proceeding nor clearly the best. How do we know that the policy we’re following isn’t *Break it first, fix it later?*

We earlier motivated the assumption that our stative phrases are associated with modal interpretations by noting that their truth appears to require the realization of certain outcomes across

¹¹ Hallman himself cites this parallel at the conclusion of his argument saying, “In such cases, the portion of the interval that follows the utterance time is unrealized at the utterance time, suggesting that these constructions contain hidden modality, along the lines of a progressive construction” (2009a: 34). I take it, though, that it is the fact that a state or event may never be actualized that is the crucial factor in motivating a modal element. See (Bennett and Partee 1978) for an example of a *non-modal* account of the progressive which assumes that it represents an in-progress event, a portion of which remains unrealized relative to its time of evaluation (which may be the utterance time), but also assumes that its eventual actualization is required.

¹² See, among others, (Dowty 1979), (Landman 1992), (Portner 1998), (Higginbotham 2004), and (Hallman 2009b).

projected possible circumstances. We did not assume that their ‘for’-phrases have a durative meaning as part of this presentation of the case and, so, it was no part of the earlier story that a modal element needs to be invoked to explain why a state fails to hold throughout a given interval in the actual world. We left open *how* these interpretations are generated.

In the sections to follow, I will argue that the differences between these two ways of proceeding are deep and important and that endorsing the set of considerations that informs Hallman’s analysis and results in the postulation of a covert modal leads to serious difficulty. This lays the foundation for my claim that stative phrases like ‘be in Paris for a week’ do not bear a modal meaning and that their modal interpretations, far from being special, issue from various other natural language expressions each of which contributes a common *non-modal* linguistic condition.

2 New Foundations

2.1 Motivational Problems

It is one thing to posit a covert modal to explain the fact that our puzzling expressions give rise to modal interpretations, quite another to claim that this is necessary to even begin to make sense of the non-modal aspects of their interpretation. That would seem to be a forceful consideration in favor of covert modality. But is that claim convincing?

Recall that Hallman’s argument for the claim that phrases like ‘be in Paris for a week’ bear a covert modal element exploits a certain presupposition. While it is explicitly assumed that their ‘for’-phrases attribute duration to states by introducing intervals throughout which those states hold and that these states may be located at a moment within these intervals—at the time of utterance, say—it is presupposed that, relative to such a time, these intervals are incompletely realized. This presupposition is essential to the conclusion that Hallman takes to follow from these assumptions,

namely, that these phrases indicate the duration of a state but not necessarily its actual duration. As we saw, a covert modal element is posited to explain how that can be.

Now something essentially along the lines of this presupposition is correct, though it need not be framed in terms that reflect the assumptions of this argument. So, for example, I take it to be a fact that if Mary is in Paris for the week, she is in Paris but it is not now the end of the relevant week, that if Max is at his beachside cottage for the summer, he is at his beachside cottage but it is not now the end of summer, and that if Alice is in jail for five years, she is in jail but is not now in jail at the end of the five-year term. This is not yet to assume, though, that the ‘for’-adverbials that we see in phrases like ‘be in Paris for the week’ contribute intervals that indicate the *duration* of a state (even if reference to the relevant endpoint takes the form of reference to the endpoint of an interval). In each of our cases, then, there is, invariably, a prohibition against the holding of a given state at the end of a given interval of time.

Notice, though, that Hallman’s argument does not account for this property. Certainly, once a future-oriented modal (FUT_w) is introduced as part of an analysis of our stative phrases, we can deduce that they have this property. All it takes is saying that this modal (invariably) locates a given type of state at some future time within a given interval.¹³ (If ‘Mary is in Paris for a week’ is true, Mary is currently in Paris and there is also a possible future time when she is there, which—along with the present moment—falls within the period of a week.) But, as reflection bears out, the presence of this sort of modal is assumed as part of the conclusion of an argument *that depends on the assumption of this property* and so does not provide an independent account of it.

There is a question, then, about how to account for this property. Though one might argue that the assumption of a future-oriented modal is necessary to explain it or perhaps best explains it, I think we should be sceptical that this is so. A different characterization of the relevant facts might

¹³ In that case, the suggested paraphrase “it will have been the case that” (Hallman 2009a) would be quite misleading.

invite a *non-modal* rather than a modal treatment. Suppose, for example, that we understand a sentence like ‘Mary is in Paris for a week’ as indicating that a certain state holds in the present (i.e., Mary’s being in Paris) and is associated with a distinguished endpoint (i.e., the relevant week’s end). On this view, ‘for a week’ does not tell us how long Mary’s being in Paris lasts or how long it continues, it tells us when it is at an end. ‘Mary is in Paris for the week’ is, then, a characterization that applies in its entirety to a present state (one that is associated with an endpoint). The following comparison might make these alternative ideas more vivid at this stage. Imagine that someone has been named the 2014-2015 Department Chair. This title applies to its holder at every moment throughout a given tenure of time; at every moment throughout the 2014-2015 academic year, the person who holds this title may be said to be the 2014-2015 Chair. The holding of this position is also associated with a distinguished endpoint though the title may, of course, be forfeited before then. Similarly, though *Mary’s being in Paris for a week* is assumed to have as its distinguished endpoint the (relevant) week’s end, it is anyone’s guess how long *Mary’s being in Paris for a week* will actually last. Perhaps something will come up. Things do.

These alternative semantic assumptions allow for a non-modal explanation of our facts and one with distinct advantages. It positions us to say that they are to be explained in terms of a non-modal condition that attaches to our key expressions and prohibits a state associated with a designated endpoint from holding at that endpoint, a condition for which there may be independent linguistic support (unlike the claim that we are in the presence of a special meaning). Though the details of this view need filling in, we can see already that it raises questions about the motivation for a covert modal meaning. The set-up of Hallman’s argument made this assumption seem inevitable. Those assumptions drove us to the view that ‘Mary is in Paris for a week’ commits us to a week-long stay in Paris by Mary, which, since it is not yet (and need not ever be) fully actual, must be realized under possible circumstances. But matters seem otherwise when one examines

the assumption that ‘for a week’ tells us how long Mary’s being in Paris lasts. If we assume, instead, that ‘for a week’ tells us what the designated endpoint of that state is we don’t need recourse to modality to avoid otherwise problematic predictions (such as that Mary actually spends a week in Paris), or to explain why if she’s in Paris for a week, she is not there at the end of the relevant week, or even to explain why ‘Mary is in Paris for a week’ is a felicitous present tense sentence.

This does not, of course, resolve the issue of how it is that our modal interpretations arise. For all that has been said, it may be that these interpretations are linked to modal meanings. Then again, it may be (as I will argue) that the non-modal property isolated by this alternative approach is implicated in the emergence of these modal interpretations and in such a way that we need not posit an intermediary modal meaning at all. What this discussion suggests, in any case, is that consideration of the *non-modal* aspects of meaning contributed by phrases like ‘be in Paris for a week’ does not in and of itself compel us to assume that they harbor hidden modals.

2.2 Disappearing Acts

The discussion so far has proceeded as though the assumption of covert modality is without costs (even if there are questions of motivation). But, in fact, a number of modal puzzles emerge as this assumption is pursued, particularly in connection with the past tense. For a start, if our modal interpretations are due to the presence of a modal element (one that projects the possible continuation of a given state of affairs relative to a given time), we should see modal interpretations in past tense contexts just as we do in present tense contexts. However, the following forms do not give rise to modal interpretations:

(11) Mary was in Paris for a week.

(12) Max was at his beachside cottage for the summer.

(13) The tulips were in bloom for the season.

Without proper context or supplementation, each of these sentences entails the completion of a given state of affairs: Mary did, in fact, stay a week in Paris; Max did, in fact, spend an entire summer at his cottage; the tulips did, in fact, bloom throughout the season. In this respect, these sentences differ from progressives like ‘Mary was crossing the Atlantic’ on which their analysis was explicitly modeled, which do give rise to modal interpretations in past tense contexts (viz., Mary was partway across the Atlantic and eventually arrives across the Atlantic under projected possible circumstances).

Now it might be countered that (11)-(13) do not, strictly speaking, entail that these things came to pass but merely suggest this on pragmatic grounds. In particular, one might venture that (11) does have the expected modal interpretation; interpreters just assume, unless they have reason not to, that the (relative) future was as projected. On this view, though (11) says only that Mary was in Paris at some past time and that, across possible circumstances projected from that time, she was there for the remainder of the week, interpreters conclude that actual (past) circumstances are among those projected circumstances and that Mary was in Paris through to the end of the week.

But while this seems like a natural enough proposal, it doesn’t hold up under scrutiny. (11)-(13) do not tell us that their outcomes were realized across projected possible circumstances. ‘Max was at his cottage for the summer’ might be true under the most quixotic of circumstances; all that is required is his being at his cottage for the duration of summer. This is why the sentence is understood as a contradiction if we suppose that it is uttered *mid*-summer. If it received a modal interpretation, we would expect that interpretation to be blindingly obvious in such a context (after all, Max didn’t actually spend the summer at his cottage).¹⁴ Since these sentences do not represent their states as continuing across projected possible circumstances, they are not associated with the

¹⁴ This highlights the fact that pragmatic story assumes not only that interpreters take the (relative) future to be as projected, but also that they assume that enough time has elapsed for a given state of affairs to be realized in full.

modal interpretations of the sentences in our initial set. In light of this, we should conclude that sentences like (11)-(13) do not merely suggest that the states they describe were realized, they say that they were.

2.3 Reappearing Acts

Equally puzzling are the circumstances under which these elusive modal interpretations re-emerge in past tense contexts. As we have seen, the following sentences do give rise to the modal interpretations of their present tense counterparts (and so need not be heard as contradictions):

(14) Mary was in Paris for a week, but she left after a day on account of the bombings.

(15) Max was at his beachside cottage for the summer, but a hurricane forced him to make other arrangements for August.

(16) The tulips were in bloom for the season, but a freak snow storm killed them off.

These sentences are significant, but not because their modal interpretations are especially clear—whether this is assumed to be due to their explicit “incompleteness” (as on Hallman’s account) or due to the cancelation of an implicature conveying completeness (as on the pragmatic account just sketched). What they reveal is that a particular form of supplementation is required for the emergence of modal interpretations in past tense contexts (supplied in (14)-(16) by explicit supplementary phrases), which are *not* available in minimal contexts.

Notice, though, that this requirement is quite unexpected on the assumption that these interpretations are due to the presence of a future-oriented modal. A modal element of that sort should *itself* provide the information that these supplementary phrases are designed to provide. After all, the supplementary phrases in (14)–(16) ensure that a given state is not at an end relative to the

time at which it is said to hold.¹⁵ (14) tells us that there was a time at which Mary was in Paris (or was in Paris for a week)¹⁶ though she was not then there at the end of a certain week, (15) that Max was at his cottage (or at his cottage for the summer) though he was not then there at the end of the summer, and that the tulips were in bloom (or in bloom for the season) though they were not then in bloom at the end of the season. But if a modal element is present that represents those states as continuing up to and terminating in those ends across projected possible circumstances, their supplementary phrases should be redundant, not required.

2.4 Stative Puzzles Redux: Simple Futurates

It appears that the striking modal patterns of our stative phrases—their seemingly unanchored modal interpretations, their disappearance in the past tense, and their conditional reappearance there (given apparently redundant information)—are not confined to those phrases. They can be seen in connection with other natural language expressions both in English and cross-linguistically. So, what might have appeared to be a quirky pattern stemming from a *sui generis* modal element or a “special reading” of our phrases, is actually a general pattern requiring a general explanation.

In English, our familiar modal pattern can be seen in connection with simple futurates.¹⁷ The following sentences provide us with examples of these expressions:

(17) The Yankees play the Red Sox tomorrow.

(18) Mary flies to Paris tomorrow.

As with our original sentences, (17) and (18) bear future-oriented modal interpretations though

¹⁵ This is not to say that these ends are not eventually realized. ‘Mary was in Paris for the week when I last spoke to her’ has an interpretation on which it says that Mary was in Paris (or in Paris for a week) but was not yet there at the end of the relevant week. Whether Mary’s stay in Paris continued as planned after that point in time remains open.

¹⁶ See the alternative semantic approach sketched in 2.1.

¹⁷ Though we might look no further than sentences like ‘Mary is in Paris tomorrow’ and ‘Mary is in Paris for the coming week,’ which also appear to pattern with simple futurates. To my knowledge, this sort of form has not been noted in the literature on futurate meaning.

their main predicates have no overt inflectional morphology that might anchor these interpretations.¹⁸ (17) is, for example, associated with a modal interpretation according to which some state of affairs (the status of which is to be spelled out by a full analysis of futurate meaning) obtains in the present and leads, across projected possible circumstances, to a Yankees-Red Sox game tomorrow.¹⁹

Like our stative phrases, these simple futurates fail to give rise to these modal interpretations in unsupplemented past tense contexts. Instead, they bear contradictory “future-in-the-past” interpretations.²⁰ The following provide us with an illustration of the phenomenon:

(19) #The Yankees played the Red Sox tomorrow.

(20) #Mary flew to Paris tomorrow.

Without supplementation, (19) and (20) are understood as saying, respectively, that tomorrow’s Yankees-Red Sox game already happened and that tomorrow’s flight to Paris by Mary already took place.²¹ Quite plainly, then, these sentences do not bear the modal interpretations of (17) and (18).

If they did, they would be understood to mean, roughly, that these things were on course to occur tomorrow. Notice, too, that the pragmatic approach earlier considered fails quite dramatically to

¹⁸ Bridget Copley (2009) distinguishes these simple futurates from progressive futurates (e.g., ‘Mary is flying to Paris tomorrow’) on these grounds and anchors the future-oriented interpretations of these progressives in the meaning of the progressive itself (i.e., the semantic contribution of the form ‘be + V-ing’). She provides a *separate* explanation for the modal interpretations of simple futurates. For a different approach, and one consistent with the analysis offered in this paper, see my ‘Modality Without Modals’ (Atkins 2015c) and ‘Back to the Futurate’ (Atkins 2015a).

¹⁹ As expected, the interpretation of these simple futurate expressions differs from that of our stative phrases in various respects. In particular, we can see that (i) the states that hold in the present are not overtly characterized (e.g., a Yankees-Red Sox game is not presently underway) and (ii) that their associated endpoints are overtly characterized (e.g., tomorrow’s Yankees-Red Sox game marks the relevant outcome). Taking these differences as differences in the non-modal contribution of these expressions (i.e., in how their states and ends are characterized) allows us to recognize that they give rise to *identical* modal interpretations, a view that is both plausible and theoretically attractive in light of the striking parallels in their modal patterning.

²⁰ This is a problem that has long been noted in the literature on simple futurates (observed as early as (Riddle 1975)) though it has been presented, wrongly in my view, as an isolated problem.

²¹ Note also that these sentences have eventive, not stative interpretations—a fact that isn’t made manifest in these paraphrases. So, for example, (17) says that there was an *event* of the Yankees playing the Red Sox that took place tomorrow, not that there was a state that held at some past time that bears some (modal) connection to a Yankees-Red Sox game.

account for their interpretations since ‘tomorrow’ should suppress the expectation that these things did happen, rendering the modal interpretations of these sentences even more obvious.

The modal interpretations of simple futurates also re-emerge in past tense contexts if there is supplementation that provides for the exclusion of their endpoints or outcomes. David Dowty (1977) discusses, for example, a particular use of this form which he dubs the “restaurant-order past tense.” We can, with Dowty, readily imagine (21) being addressed to a server “contemplating a table full of customers and a tray full of orders, trying to figure out which order goes with which customer” (Dowty 1977: 72):

(21) I had the cheeseburger with onions.

Clearly, the speaker is not saying that s/he already received the cheeseburger with onions.²² Rather, the speaker does not yet have the cheeseburger with onions that s/he was to have (at some indefinite future time). The exclusion of the outcome associated with (21) is understood implicitly and the result is an interpretation on which there was something underway at the relevant past time (intuitively, an order was placed) that provided, across projected possible circumstances, for the speaker’s having a cheeseburger with onions in and around the present time (we assume).

2.5 Stative Puzzles Redux: Non-culminating Accomplishments

Non-culminating accomplishments provide us with another case for comparison. These expressions take part of their name from the resemblance they bear to expressions traditionally labeled ‘accomplishments’ which like ‘cross the Atlantic’ in ‘Mary crossed the Atlantic’ characterize temporally extended and outcome-associated events (the outcome in this case consisting, intuitively, in Mary’s arrival across the Atlantic). The other part of their name reflects the fact that they need

²² It might be wondered whether (21) just means ‘I ordered the cheeseburger with onions’ (so that we may not be dealing with a simple futurate at all). However, if (21) does mean ‘I ordered the cheeseburger with onions’ it should support the paraphrase ‘I was to order the cheeseburger with onions’ (cf. ‘I was to have the cheeseburger with onions’). But it doesn’t support that paraphrase.

not characterize events as realizing or “culminating” in these outcomes (making them unlike ‘cross the Atlantic’ in ‘Mary crossed the Atlantic’). The following sentences, taken from Bar-el, Davis, and Matthewson’s (2005) work on non-culminating accomplishments in Lilloet and Squamish, provide us with an illustration of these properties:

- (22) k’ul’-ún’-lhkan ti ts’lá7-a, t’u7 aoy t’u7 kw tsukw-s
 make-TR-1SG.SU DET basket-DET but NEG just DET finish-3POSS
 ‘I made the basket, but it didn’t get finished’
- (23) chen p’ats’-an ta hem’-ten kwi chel’aklh welh haw k-an 7i
 1SG.SU sew-TR DET cover- INSTR DET yesterday CONJ NEG IRR-1SG.CNJ PART
 huy-nexw
 finish-LC
 ‘I sewed a/the blanket yesterday but did not finish.’

Interestingly, these sentences do not merely receive an interpretation on which certain events are incomplete. They also give rise to modal interpretations that witness the completion of those events under possible circumstances. As Bar-el et al. report, they indicate that an agent has done something that leads to its completion across projected possible circumstances. The truth of (22) requires, for example, that the basket is made in every projected circumstance that is compatible with the action undertaken by the subject (who is “in control” of the event).

In light of these facts, it is striking that in the absence of supplementation expressions with the *same surface form* as non-culminating accomplishments are understood to characterize completed events. The following sentences provide an illustration:

- (24) ts’áqw-an’-lhkan ta n-kiks-a
 eat-TR-1SG.SU DET 1SG.POSS-cake-DET
 ‘I ate my cake.’

Speaker’s comments: “Sounds like you ate all of it.”

- (25) na xel'-t-as ta s_xwex_wiy'am' lha Mary
 RL write-TR-3 DET story DET Mary
 'Mary wrote a story.'

Speaker's comments: "She wrote it...she finished."

This is precisely the phenomenon that we encountered with sentences like 'Mary was in Paris for a week' and 'Mary flew to Paris tomorrow' in the absence of supplementation.

As was true of those sentences, the modal interpretations that attach to non-culminating accomplishments appear to be present only when a given endpoint or outcome is excluded (e.g., an agent undertakes to do something but *it is not yet done*). The supplementary phrases in (22) and (23) appear, then, to bear on the interpretation of these expressions in just the way that our other supplementary phrases do. Of course, this supplementary information can, in principle, be communicated in a variety of ways—including via the presupposition of a question. Bar-el et al. report that whether a non-culminating accomplishment's outcome has been realized or not can be questioned without inducing an infelicitous sequence. So, for example, they report that (27) counts as a felicitous response to (26):

- (26) na 7ilhen-t-as ta skawts kwa John
 RL eat-TR-3ERG DET potato DET John
 'John ate a potato'

- (27) na 7u huy-nexw-as ta skwats
 RL YNQ finish-LC-3ERG DET potato
 'Did he finish (the potato)?'

But this should not be taken to show that (26) bears a modal interpretation *even in the absence of this supplementation*. The question in (27) *presupposes* that whether John ultimately finished the potato is an open question (and *asks* whether he did). The felicity of the exchange is fully

compatible with the assumption that that presupposition is accommodated.²³ The same can be said of the following sequence, which is also felicitous:

(28) Mary was in Paris for the week.

(29) Did she manage to stay for the week or was she called away?

This exchange is not like the following one where there is no way of taking the initial statement as leaving open the question of whether its associated outcome was eventually realized:

(30) Mary crossed the Atlantic.

(31) Did she arrive across?

Though the movement from (28) to (29) strikes one as a possible conversational exchange—it is in no way an apparent failure—the presupposition of (29) should be thought of as guiding one toward understanding how the initial statement is to be taken.²⁴

These patterns give us good reason to think that the modal interpretations of non-culminating accomplishments should be explained in the same way as those of our other expressions. But the analysis offered by Bar-el et al. assumes that the modal interpretations of non-culminating accomplishments are rooted in modal meanings. In particular, they claim that when a particular type of element—labeled ‘TR’ in the glosses provided—is added to the verbs in those sentences, it contributes the meaning that an agent exercises control and does something that ensures the realization of a given outcome across projected possible worlds (*removing* an entailment to the effect that that outcome is actually realized).

²³ Note that Bar-el et al. must make a similar assumption in order to account for the felicity of this sequence. After all, they have to assume that the presupposition of the question cancels what they take to be the implicature of (26), namely, that John did eat the potato.

²⁴ One may, for this reason, have the sense that it should, ideally, already be assumed by both parties that it is an open question whether Mary reached the end of her stay in Paris. It would not be surprising if this sense of things were not detected by this diagnostic, which appears to cleave (30) and (31) from the other exchanges.

But as with any analysis that would locate our modal interpretations in a modal element, this one too raises more questions than it answers. Why aren't these modal interpretations in evidence when these sentences are presented out of the blue? (The relevant morpheme is, after all, present in these contexts and on the surface no less.) Why do we find "completion" interpretations instead? Why should this same pattern emerge across a variety of natural language expressions? Bar-el et al. claim that completion interpretations emerge for purely pragmatic reasons—in the absence of other information it is assumed that the (relative) future was as projected. There are, however, serious doubts about the viability of this explanation. The pragmatic explanation can only get off the ground if it can be shown that sentences like (24) and (25) describe events that are realized *across projected possible circumstances*. But that has not been shown²⁵ and our other cases give us reason to think that it will not be.

3 A Non-Modal Account

Stative phrases, simple futurates, and non-culminating accomplishments each give rise to the same fugitive modal interpretations. As we have seen, however, the assumption that they bear modal meanings generates a number of puzzles, among which is the unexpected disappearance of modal interpretations in unsupplemented past tense contexts. Even so, the desire to root modal interpretations in modal meanings is so strong that even in the face of these examples it has seemed natural to supplement modal analyses with a novel pragmatic principle, an approach that not only fails to explain why substantive modal interpretations *aren't* present in those contexts, but also wrongly predicts that they are.²⁶

²⁵ What has to be shown is that these sentences are understood to mean, roughly speaking, that certain outcomes were on course to occur (with the pragmatic explanation offering a connection between that understanding and the assumption that they did occur). That they are understood to report completed events doesn't otherwise support the modal-pragmatic hypothesis (cf. 'Mary spent a week in Paris').

²⁶ These remarks call for qualification in the case of non-culminating accomplishments. Where they are concerned, we neither have evidence for these modal interpretations in unsupplemented past tense contexts nor reason to think (based

These puzzles invite us to think critically about the assumption that our modal interpretations are linked to modal meanings and, more fundamentally, about why this sort of link is thought to be essential to explanation. My immediate aim in the sections to follow will be to show in detail that it is possible to explain them *without* appealing to that assumption, taking the lessons that emerged in Part 2 as points of departure. In the spirit of the alternative semantic picture sketched in 2.1, I will pursue the idea that our core class of expressions are (i) associated with ends and (ii) contribute a non-modal linguistic condition that requires the deferral or displacement of these ends. Understanding how this condition is encoded and how it may be satisfied will put us in a position to explain their interpretive differences across past and present tense environments (see 2.2 and 2.3). But this depends, in part, on the assumption that that condition provides a non-modal linguistic basis for the emergence of their modal interpretations. My view is that it does and that these modal interpretations reflect the substantive contribution of modal cognition, not modal language. Along these lines, I propose that these modal interpretations reveal a modal understanding of this non-modal condition (where this modal understanding signals the contribution of modal cognition). Since an important aim in developing this account is to offer an explanation for these modal interpretations that can generalize across the expressions considered in 2.4 and 2.5, I will conclude with a brief sketch of the extension of this account to those cases.

3.1 The Displacement Analysis

(i) An Ambiguity: Endpoint-Designating ‘For’-Phrases

For the sake of simplicity, I will treat the difference between states and events as primitive, reserving the use of the variable ‘*s*’ (rather than ‘*e*’) for states.²⁷ I will represent the meaning of the stative

on their patterning with our other expressions) that this evidence is forthcoming. So, a modal-pragmatic approach is not just without evidence, but also against the evidence that we do have.

²⁷ The composition procedure I follow here is broadly in keeping with that defended in (Pietroski 2014) in that it provides for the conjunction of monadic predicates, a limited form of dyadicity, and a form of variable binding.

predicate ‘be in Paris’ as follows:

(32) be in Paris(*s*)

I assume that when it is located at a time by tense, this predicate simply characterizes a state that holds at that time and, therefore, it promises, in and of itself, no continuation of a state of that type.

It is my contention that the addition of a phrase like ‘for a week’ does nothing to change this on the intended interpretation. It doesn’t indicate the temporal duration of a given type of state, it characterizes it as having a certain end—telling us that it has that end without telling us that it continues up to that end (cf., Mary’s being in Paris *is at an end at the end of the week*). I assume, to take a simple ‘for’-phrase as an example,²⁸ that when ‘for’ combines with the interval expression ‘a week’ it selects the interval-final moment of a week-long interval:

(33) $\exists i[\text{a week}(i) \wedge \text{INT-FIN}(i, t')]$

When combined with a stative predicate such as ‘be in Paris,’ that interval-final moment is interpreted as the end of a state whose description it modifies (as I discuss under ‘Ends and Plans,’ I assume that this compositional meaning correlates with a certain syntactic relationship that exists between them):

²⁸ There are, to be sure, more complicated ‘for’-phrases to consider. In the case of ‘Mary is in Paris for at least a week’ and ‘Mary is in Paris for at most a week,’ the relevant endpoint is not the end of a week-long interval but the end of an interval that is at least a week-long and at most a week-long respectively. Examples like ‘I’m in traffic for a while’ or ‘I’m in NYC for the run of the show’ suggest, in different ways, that it is not a constraint on the meaning of endpoint-designating ‘for’-phrases that they supply a characterization of an endpoint that is independent of the temporal expression with which they combine; whenever the end of a while is that is the end of my being in traffic (though I may be able to hazard a guess based on my view of the cars ahead of me). An example like ‘Fire Scout operations are on ‘operational pause’ for the indefinite future’ (news source) is interesting because it appears to present a problem for the assumption that an *end* is designated by these ‘for’-phrases; it doesn’t seem sensible to say that the pause in operations is at an end at the end of the indefinite future (it would seem to be indefinite precisely in that respect). But the example has to be handled with care. That sentence is no more understood as characterizing a state that persists throughout a limitless span of time than ‘I’m in Paris for now’ is understood as characterizing a state as persisting throughout a span of time that we call ‘now.’ Temporally, their interpretation is like that of ‘Fire Scout operations are on ‘operational pause’ indefinitely’ (the source headline “Fire Scout Operations Suspended” makes no mystery of this) and ‘I’m in Paris presently.’ That there is here a gap here between meaning and interpretation is unsurprising on the assumption that they require alternative interpretations (in the former case because an end of an interval that is understood to be limitless is designated by the relevant ‘for’-phrase).

(34) $\text{be in Paris}(s) \wedge \exists t'[\exists i[\text{a week}(i) \wedge \text{INT-FIN}(i, t')] \wedge \text{END}(s, t')]$

When located at a time by tense, the result of this combination is again a characterization of a state at a time; relative to that time, it is as much the case that a given state holds as that it has a designated end.²⁹ No commitment to the actual or possible continuation of this state follows from that meaning alone.

In assuming that these ‘for’-phrases locate a temporal boundary, I am guided in part by the observation that the modal interpretations of our stative phrases take the form of modal completion requirements. If Mary is in Paris for a week, recall, it is at least possible for Mary to be in Paris through to the end of the week. There is also a striking and, in my view, telling parallel here with progressive sentences like ‘Mary is crossing the Atlantic,’ which are widely assumed to give rise to this sort of modal interpretation (though in their case it is their underlying event predicates that provide a boundary and not one that’s purely temporal, e.g., Mary’s arrival across). The idea that temporal boundaries may be identified by our stative phrases has precedent, of course, in the assumption that they bear a future-oriented modal that locates some portion of a given interval in the future (so that whatever portion is present is non-final). The aim of the present approach, however, is to relate temporal boundaries that are conceptualized as ends to the emergence of modal interpretations and to do so directly, without the mediation of a modal element.

(ii) **An Ambiguity: Durative ‘For’-Phrases**

Stative phrases such as ‘be in Paris for a week’ are, in a certain sense, ambiguous. Their ‘for’-phrases can contribute to an endpoint-designating meaning, in which case they locate a temporal boundary which is designated as the end of a state (as above), but they can also contribute a

²⁹ I will not assume that the time at which a state holds is located, as a matter of meaning, within the interval from which its end is gleaned. If I say that Mary is in Paris for the week, I am committed to the continuation of her stay in Paris through to the end of the relevant week. If I use this sentence in the middle of that week and Mary only just arrived in Paris then, I may very well mislead my hearer by suggesting that she was earlier in Paris. (Why would I be making reference to *that* interval of time and not the remainder of the week?)

durative meaning, in which case they characterize a state as holding throughout a given interval of time (perhaps by characterizing that state as holding at every moment in that interval).³⁰ This allows us to make sense of the proposition that Mary was in Paris for a week (her being in Paris had a certain end), though she was not in Paris for a week (she didn't spend the week).

In addition to bearing distinct meanings, these phrases also appear in distinct linguistic environments. I propose, in particular, that our stative phrases receive a durative interpretation in unsupplemented past tense contexts but not in present tense contexts³¹ and that they receive an endpoint-designating interpretation in supplemented past tense contexts and in present tense contexts.³² This proposal accounts for a variety of observations. This accounts for the fact that these phrases don't receive modal interpretations in unsupplemented past tense contexts, that they generate durative entailments instead (cf., 'Mary spent a week in Paris'), and are heard as contradictions when their 'for'-phrases bear a future orientation (cf., 'Max was at his cottage for the summer' as uttered mid-summer). It also accounts for the fact that these phrases don't carry durative entailments in supplemented past tense contexts, are not heard as contradictions when their 'for'-phrases bear a future orientation in that setting, and makes no mystery of their felicity in the present.

These are important explanatory gains even if, as I have advertised, endpoint-designating meanings also play a crucial role in accounting for our elusive modal interpretations. Whatever the details of the account, though, it is clear that it will not preserve the idea that our modally

³⁰ For one analysis of durative 'for'-phrases that attempts to account for their interactions with a variety of predicates (a non-trivial task since, for example, 'The alarm went off for an hour' may be true even if I repeatedly and expeditiously press the snooze button), see (Rothstein and Landman 2010). For an interesting account against treating these phrases as measuring time (e.g., the interval throughout which a state holds), see (Larson 2003).

³¹ Hallman (2015) claims that they aren't available because the present is non-durative (there is, in his framework, a type-mismatch).

³² I assume that stative predicates, generally, can combine with these outcome-designating 'for'-phrases (not that only *locative* statives can). This is not to say, however, that these phrases are usable in every case (Chomsky 2000). So, for example, while I grant that 'Max is asleep for three days' is not readily understood as having an outcome-associated meaning, I take it that this reflects some degree of conceptual strain in regarding a state of being asleep as having a designated end (though it should be noted that even here, if the scene is set correctly, these interpretations do surface). As I discuss below, this 'plannability' constraint should not be thought to emerge from an element of meaning over and above endpoint-designating meanings.

interpreted phrases give rise to ‘completion’ interpretations. ‘Mary was in Paris for a week’ and ‘Mary was in Paris for a week, but she left after a day on account of the bombings’ embed superficially indistinguishable stative phrases but they are associated, respectively, with a durative and an endpoint-designating meaning. Neither sort of meaning yields a modal interpretation like that; to think otherwise is to conflate the duration entailments of durative phrases and the modal interpretations to which endpoint-designating phrases give rise.

(iii) On Ends and Plans

The analysis presented above encodes the notion of a designated endpoint via the predicate END. The idea that the predicate is intended to capture is intuitive enough, but its introduction still raises important questions about its theoretical status. How, for example, does this sort of predicate relate to other known properties of language? What, in particular, is its connection to telicity? The accomplishment predicates we earlier discussed (e.g., ‘Mary *crossed the Atlantic*’) with their inherent endpoints or *telo*i provide us with one manifestation of telicity and achievement predicates (e.g., ‘They *reached the summit*’), differing insofar as they only overtly characterize an endpoint or outcome, with another.

My view is that these expressions call for a unified theoretical treatment and that we should regard our endpoint-designating stative phrases as bonafide telic expressions. This will, however, require some adjustment to our current theories of telicity and the semantic and/or syntactic assumptions within which they are framed. One immediate difficulty is that telicity is typically discussed in connection with eventive predicates (as in the examples above), not stative predicates, which are often explicitly *defined* as atelic.³³ A related difficulty is that the notion of a *telos* is understood in quite narrow terms in the event domain. In particular, it is assumed that the *telos* of

³³ See (Filip 1999) and (Rothstein 2004) for two canonical sources.

an event is a subpart of it. But while this assumption is appropriate in the case of ‘Mary crossed the Atlantic,’ it is not in the case of ‘Mary is in Paris for a week.’ States do not have internal complexity. Their *telo*i cannot be given by distinguished subparts.

There are a variety of ways in which one might attempt to generalize the notion of telicity with a view to capturing the deep connections between the expressions. For the sake of concreteness, I will discuss how one might begin to approach this task in a way that seems to me to be theoretically attractive and that allows for a clear presentation of the key issues.

My discussion will be geared toward syntactically-oriented approaches to telicity and will depart from James Higginbotham’s (1995) idea that (a)telicity is syntactically represented and that telic structures are interpreted through principles of composition that centrally concern ‘telic pairs’ (ordered pairs of events of the form (e, e') where the second gives the *telos* of the first).³⁴ Of particular interest is Higginbotham’s view that telic pairs can be introduced by prepositional phrases. So, for example, the “accomplishment interpretation” of ‘I flew my spaceship to the moon’ is due, according to him, to the preposition ‘to’ rather than the verb ‘fly.’ It is ‘to’ that gives rise to an interpretation on which there is directed motion with ‘fly’ simply characterizing what sort of motion that is. That preposition introduces, in his parlance, a telic pair, the first event position of which is identified with that of ‘fly’ (as represented in (36)):

(35) I flew my spaceship to the moon.

(36) fly(I, my spaceship, e) & to(the moon, (e, e'))

But just as the prepositional phrase ‘to the moon’ is interpreted as introducing an end (one associated with an event that receives further characterization), so too, on my proposal a prepositional phrase like ‘for a week’ can be interpreted as introducing an end (one associated with a state that

³⁴ This idea is developed further in ‘Accomplishments’ in (Higginbotham 2009).

receives further characterization). In both cases we see the signs of directedness to an end, though the presumption is that it manifests in directed motion in the one case and, perhaps, a plan in the other.³⁵ There is, then, an impressive analogy between these cases. But how can Higginbotham's proposal be extended to a stative predicate like 'be in Paris for a week' given that it does *not* characterize a complex event?

This is precisely where we need to exercise caution. The danger is in pursuing the analogy with the event domain so closely that we miss the phenomenon we are trying to account for entirely. We do not, for example, want to pursue it so closely that a stative predicate that is associated with a telos should be thought to carry a commitment to a "complex state" (failing a commitment to a complex event). The idea of a complex state doesn't make sense as long as states are understood to characterize entities that do not exhibit change, a fact that may go some way toward explaining why states have been defined as atelic.

What we would expect if we assumed that a stative predicate could be associated with a telos is, perhaps, what we see before us: a characterization of a state as having a given end, where having an end is not itself understood in a way that presupposes internal complexity. The notion that the telos of an entity might be constituted by a part of it (a subevent or, as we will see below, a result state) makes good sense within the event domain since event predicates are understood to characterize dynamic entities—things that change or develop over time. *Their* teloi naturally represent a distinguished portion of their development. But since states do not develop over time, their association with teloi cannot be understood in terms of any characterization of their *development*. Both stative and eventive predicates may, then, be associated with teloi even if their differences with regard to the possibility of internal complexity make for differences with regard to whether those ends are interpreted as subparts or not. That may be regarded as a difference in

³⁵ I will discuss the source of this presumption below.

how telicity manifests across these distinct domains.

Certain substantive assumptions about telic structures make it difficult, however, to accommodate this insight. On Gillian Ramchand's (2008) reworking of Higginbotham's idea, for example, an accomplishment predicate is even more structurally complex—consisting of a process, as well as an initiation and result component. The initiating phase of the process and its result phase are categorized as states (partly to facilitate the extension of the proposal to stative predicates) with the process phase representing the “heart of the dynamic verbal event” (Ramchand 2008: 41). The glue holding these component parts together is causation (i.e., the initiation phase causally leads to the process phase which causally leads to the result phase).³⁶ But, within this system, it is difficult to see how the telic structure of a stative predicate like ‘be in Paris for a week’ might be represented. It is not a dynamic verbal predicate; it fails to characterize something that changes over time. So, it cannot have a structure that involves a process component. Nor can it be understood as a product of a combinatoric system that represents component parts as leading one to another.

It is to be hoped that telic structures can be understood in terms general enough to accommodate both stative and eventive predicates, but also general enough to accommodate variation in how we conceptualize this end-directedness. We have, for example, the distinct impression that some ends are planned or scheduled as in (37) and (38) or that others are natural as in (39) and (40) (all of which, I assume, share a telic structure):

(37) Mary is in Paris for a week.

(38) The Yankees play the Red Sox tomorrow.

(39) The baby crawled in six months.³⁷

³⁶ Interestingly, Higginbotham himself treats causation as a consequence of the semantics of accomplishments (in large part to avoid certain challenges raised by Fodor and Lepore against lexical decomposition. Moreover, it should be noted that Higginbotham does not think that the notion of causation has application in every case, even those involving telicity (see his remarks concerning ‘The horse is stabled’) (Higginbotham 2009: 123-4), an observation that seems to me to be well worth bearing in mind.

³⁷ I assume that this has an achievement interpretation and that it contrasts with ‘Mary smoked in six minutes,’ a

(40) The tulips are in bloom for the season.

I take this to be friendly to Higginbotham’s view that telic pairs are primitive, but that there are, nonetheless, some “paradigms” for conceptualizing end-directedness “such as motion terminating at a place; intentional activity whose agent aims at some specific end, etc.” (2009: 120). These ‘paradigms’ do not reflect aspects of meaning that are built into these pairs—the significance of their having a primitive status—but reflect certain conceptually natural groupings. I suggest that we treat ‘planned’ or ‘scheduled’ outcomes as another of these paradigms rather than as expression-specific contributions (due, for example, to “furate meaning”).

Stative phrases such as ‘be in Paris for a week’ appear to be associated with *teloi* and, so far, only stipulation and overextended analogies prevent us from classifying them in this way.³⁸ The consequences of this classification for the analysis I have presented (itself a kind of argument for the classification) are twofold: the predicate END indicates that our stative phrases receive a telic interpretation (and may be taken to stand in place of a suitably general representation) and (ii) the impression that certain ends are planned or are developmentally natural (among other paradigms) is to be explained by appeal to this meaning and whatever lexical and contextual material is at hand (without being assumed to be built into the meaning of a certain expression type).³⁹

(iv) A Presupposition and a Universal Constraint

A pressing question confronts us at this point. Even if it is assumed that ‘be in Paris for a week’ receives a telic interpretation, still, why does this interpretation seem to come for free in the present

sentence of the same form, insofar as it is natural to assume that a process culminates in the relevant outcome in the one case but not the other.

³⁸ This discussion is not meant as a substitute for the implementation of these ideas (and the work is non-trivial). It is meant to provide justification for it, partly by providing a conceptual clearing within which questions of implementation might be raised intelligibly.

³⁹ It may be the case, as I suggest in my conclusion, we can think of these paradigms as reflecting aspects of the use of telic expressions in a broader cognitive setting in the same way that we can think of our modal interpretations as reflecting aspects of the use of expressions with displaced ends in a broader cognitive setting.

but not in the past (where, as we have seen, supplementation is required)? This is a very puzzling contrast since it's not clear how a difference in tense could make for a difference of this kind.

The key to understanding this contrast and others related to it lies in the assumption that these stative phrases presuppose that their states are not at an end. If you like, they presuppose the “displacement” of their ends relative to the time at which these states are said to hold. This requires, in the case of ‘be in Paris for a week,’ for example, that relative to a time t at which a state of being in Paris holds, $t \neq t'$, where t' is that state's distinguished endpoint.⁴⁰ But though I assume that this presupposition must be satisfied in both present and past tense environments, this is not yet to assume that this presupposition is satisfied in the same way in these environments.

In fact, we have good reason to assume that this presupposition is automatically satisfied in present but not past tense contexts. There is, after all, a well-known universal constraint—sometimes referred to as ‘The Bounded Event Constraint’ (Smith 2008), although somewhat misleadingly since it applies to states as well as events—that bars the inclusion of bounded states and events in the present including those that have intrinsic bounds (i.e., those that are telic).⁴¹ Since we have supposed that our stative phrases are intrinsically bounded, this constraint naturally extends to them, predicting the displacement of these ends in the present as well.⁴² Moreover, since this constraint does not extend to past tense contexts, it is unsurprising to see contextual supplementation there. The impression, then, that the outcome-associated interpretation of ‘Mary is in Paris for a week’ comes for free is simply due to the fact that this presupposition is independently

⁴⁰ This condition calls for a more general formulation than what is here presented. Not all ends are specified temporally and, so, the displacement presupposition will not generally take the form of a condition like $t \neq t'$ (though it serves in this case). We do not, however, need to further specify that that $t \leq t'$ since that follows from the fact that t' is designated as the end of the state that holds at t .

⁴¹ For discussion of apparent exceptions, including performatives, see (Smith 2003).

⁴² Kamp and Reyle (cited in (Smith 2003)) articulate a constraint like this when describing present tense sentences: “A sentence which describes something as going on at a time – in the sense of not having come to an end when that time is up – cannot represent something as an event. For the event would have to be entirely included within the location time and thus would not extend beyond it” (1993: 536-7). (See also (Giorgi and Pianesi 1997).) Clearly, if present tense sentences describe eventualities (a broad category that includes states) that are not at an end, present tense sentences like ‘Mary is in Paris for a week’ will not represent a state as being at an end.

secured in the present, though not the past. Notice, too, that these assumptions straightforwardly explain the fact that this supplementation signals the exclusion of ends (it is designed to *satisfy* the displacement presupposition) and the fact that ends are excluded in the present tense (the displacement presupposition is *satisfied* in the present).

The presupposition that I have attributed to our stative phrases has been independently observed in connection with simple futurates, despite being described in quite different terms. Bridget Copley (2009) notes that futurate progressives (e.g., ‘Mary is flying to Paris tomorrow’) and simple futurates (e.g., ‘Mary flies to Paris tomorrow’) differ in that the latter exhibit a presupposition that the former do not. Copley glosses this difference in terms of plans, which are analyzed in terms of other, more basic modal concepts on her approach. She claims, in particular, that the following questions differ in that (41b) though not (41a) presupposes that there is a plan that provides for Joe to go skydiving at some future time (it queries whether that time is tomorrow):

- (41) a. Is Joe going skydiving tomorrow?
b. Does Joe go skydiving tomorrow?

Similarly, the following negated sentences differ in that (42b) but not (42a) presupposes that there is a plan that provides for Joe to go skydiving at some future time (it denies that that time is tomorrow):

- (42) a. Joe isn’t going skydiving tomorrow.
b. Joe doesn’t go skydiving tomorrow.

And finally, in a context in which a speaker is informing someone of his or her plans (43b) (but not (43a)) seems inappropriate as it wrongly takes for granted that there is a plan to get married at some future time:

- (43) a. Guess what? We're getting married in June.
b. #Guess what? We get married in June.

Copley's conclusion is that simple futurates like these presuppose that there is a plan for a given event to happen at some time and that the restriction to future times can be made to follow from her analysis of planned eventualities (intuitively: you cannot plan what has already happened).⁴³

But we confront serious difficulties here. As we've seen already, the notion of a planned eventuality, which has figured centrally in semantic analyses of futurates (including Copley's own), should be seen as arising, in part, from a telic structure that is common to futurate and non-futurate expressions. This presupposition needs to be explained in terms of that structure, not in terms of idiosyncratic features of futurate meaning or in terms of plans (which is *one* interpretive paradigm). Moreover, the modal puzzles earlier considered give us good reason to avoid an appeal to modal meanings as part of an explanation of the patterns of our key expressions (whether as part of an analysis of plans or not) and, indeed, the assumption that our stative phrases bear this modal presupposition only generates a further modal puzzle if we attempt to explain our modal patterns in terms of its satisfaction. The presupposition suggested by Copley requires that relative to a given time and world an event of a given type occurs across certain (metaphysically) possible circumstances at some (future) time, but that requirement is *not* satisfied or in any way addressed by the supplementation that we see in past tense contexts, which is manifestly connected to the emergence of modal interpretations.

I propose that we think of the presupposition that we detect across these diagnostics as requiring the displacement of ends. On this approach, the following questions both concern states that have ends and presuppose that these states are not yet at an end:

- (44) Is Mary at lunch for an hour?

⁴³ See footnote 19 of (Copley 2009: 39).

(45) Does Joe skydive tomorrow?

(44) takes for granted that there is an end that is deferred relative to the present, but not that it is given by the end of the hour. Similarly, (45) takes for granted that some end is deferred relative to the present, but not that it is tomorrow (or even that it is a skydive if we assume that the predicate ‘skydive’ applies to that end).

3.2 An Interface Explanation

The assumption that this presupposition attaches to our key expressions and may be satisfied by a universal constraint in the present and by contextual supplementation in the past allows us to offer a constrained explanation for a variety of phenomena. Among other things, we can explain why ‘Mary is in Paris for a week’ automatically receives a telic interpretation though its past tense counterpart does not. But our ultimate goal is, of course, to explain why the former automatically gives rise to a modal interpretation though its counterpart does so only conditionally. Given that these modal interpretations only manifest when the presupposition of our stative phrases is satisfied and given that we must explain these modal interpretations without appeal to modal meanings, we need to find a way to understand how they might be triggered by the displacement of ends (i.e., by the satisfaction of this presupposition).

The proposal that I will offer is situated within a linguistic framework within which meanings are conceptualized as instructions of a certain sort. In particular, it assumes that meanings are instructions for building mental representations that can be used by our conceptual-intentional systems.⁴⁴ So, just as one might think about natural language expressions as bearing phonological-instructions (intuitively “sound-instructions”) that can be used by perceptual/articulatory systems one might (as many linguists but perhaps too few philosophers do) think of natural language

⁴⁴ For some discussion of this sort of framework and for other examples of work pursued within it, see (Chomsky 2000), (Pietroski 2008), (Pietroski 2010), and (Pietroski 2014).

expressions as bearing meaning-instructions (intuitively “concept-assembly” instructions) that are suitable for use at a different interface—one dedicated to thought, not to its externalization (for example).

This framework bears on my proposal to the extent that it is guided by the idea that our modal interpretations call for an “interface explanation,” that is, an explanation that appeals to an interaction between natural language meanings and cognitive systems that can be engaged by them, systems that enable us to think with the representations whose construction they direct and, as in the case I have in mind, to think thoughts that emerge from these representations in the course of their use by these systems. As the interpretations that I am attempting to account for are modal interpretations, my assumption will be that it is *modal* cognition that is engaged so that something of *its* structure is revealed by them.

Thinking of meanings in this way gives us a point of departure for understanding the emergence of our modal interpretations. The question becomes, “How might our modal interpretations reflect aspects of the use of certain representations—those that exhibit displacement—within the modal domain of thought?” The answer is, in my view, quite simple once the assumptions we have made are in place: projecting the continuation of a state up to the time designated as its end reflects an understanding of that state as one that has an end but is not at an end—a modal understanding, in particular. On some reflection it is plain that this is, indeed, *a way* of understanding such a representation that is in conformity with what it represents. To understand a state as continuing to hold up to its designated end, given the considerations relevant to its possible continuation, *is* a way of recognizing (or one might say thinking) that the time at which it holds is not the time at which it is at an end (after all, it continues to hold up to such a point in any circumstance that presents itself as a candidate possibility). So, these possibilities, the ones we think of when we think with these phrases, reflect a resolution of a certain issue that arises, namely, how to think of

the displacement of their ends within the modal domain of thought; that is not something that is settled by these linguistic representations themselves. For this reason, these modal interpretations shed light on both the linguistic properties of our stative phrases but also the extra-linguistic setting within which they are deployed.

I suspect, however, that these phrases provide a systematic and vivid instance of what is, in fact, a standing possibility given that linguistic meanings interface with systems of thought. For *any* linguistic representation that is deployed in thought the issue of how it is to be understood *within a particular domain or cognitive setting* may arise and its resolution reflected in our interpretations. This possibility is in no way foreclosed by the fact our stative phrases, to take the example at hand, have linguistic meanings or direct the construction of linguistic representations but is even suggested by the very notion of a representation.

A similar phenomenon is, I think, commonplace in our ordinary transactions with words, arising even where least expected. Avner Baz (2012), for example, draws our attention to a fact missed by generations of readers of Geach (1965) who have assumed that the following argument is sound given what its premises and conclusion mean—where this presupposes a strict separation between what its premises and conclusion say and what one's basis or point is in stating them:

I know Smith's Vermeer is a forgery.

I am no art expert.

If I know that Smith's Vermeer is a forgery, and I am no art expert, then Smith's Vermeer is a very clumsy forgery.

Therefore, Smith's Vermeer is a very clumsy forgery.

Baz's observation here is simply that the argument is not sound if, for example, I know that Smith's Vermeer is a forgery because I had it forged. If the argument is understood, these claims must be understood as having a particular point; it's my being my being able to tell that it's a forgery that is

at issue and it's my being able to make this out, as a non-expert, that makes it a very clumsy one. Whatever the meaning of 'knows' is, it alone does not settle the question of what understanding is called for in this particular context. If my suspicion is correct, a similar possibility emerges at the interface between the linguistic system and our conceptual-intentional systems and perhaps at some remove from these more ordinary transactions with words.

3.3 Extending the Account

As I mentioned, one of the aims in developing this account is to offer an explanation of our modal interpretations that can generalize to the case of simple futurates and non-culminating accomplishments, among other expressions that give rise to patterns like the ones we have seen. Given the role played by the displacement of ends, the task of extending it to these other cases centrally involves locating an end and a mechanism that effects its displacement.

This might seem like a trivial task—just a matter of looking for and then recognizing something familiar. But this task is not trivial. It involves looking at aspects of language that have become familiar, partly through our attempts at analysis and our apparent successes at analysis, and seeing them differently by asking different questions (e.g., “Is this state associated with an end?”).

It also involves recognizing that these expressions may, though they share this core property, appear quite different both due to idiosyncratic differences in their meanings, of course, but also due to differences in their implementation of this core property. So, for example, we saw that phrases like ‘be in Paris for a week’ presuppose that their states are not at an end whenever they are said to hold and that this presupposition is automatically met in present tense contexts, though not in past tense contexts. Moreover, we saw that this gives rise to a pretty striking pattern—one that can leave the impression that these modal interpretations sometimes vanish into thin air. But

consider, for example, what their modal pattern would be like if the displacement of their ends were asserted rather than presupposed by them. In that case, they would be expected to give rise to modal interpretations in the past just as they do in the present.

In fact, this is, in my view, the pattern that we find with certain progressive sentences (those that give rise to modal interpretations⁴⁵):

(46) Mary is crossing the Atlantic.

(47) Mary was crossing the Atlantic.

Both of these sentences exhibit displacement (e.g., Mary cannot be across the Atlantic if she is crossing the Atlantic) and both give rise to modal interpretations of the sort discussed in this paper without any supplementation (e.g., both require for their truth that Mary arrive across the Atlantic across projected possible circumstances). But, despite the fact that these progressives invite the sort of approach defended here, their modal patterns are not the same as those of the expressions under investigation in this paper. As a result, their deep connections might easily be overlooked, due to what are essentially, by the lights of my account, *superficial* differences.

While it is important to bear these risks in mind, there are considerations that present us with a fairly clear picture of how the displacement account might be extended to our other two cases. Take the case of simple futurates, to start with. One thing to note about simple futurates such as ‘Mary flies to Paris tomorrow,’ for example, is that they, like our other expressions, have a stative semantics.⁴⁶ Given that ‘Mary flies to Paris tomorrow’ does not describe a flight to Paris as *underway* though its truth requires that one occur tomorrow under projected possible circumstances, we might propose that ‘fly to Paris tomorrow’ applies wholly to an end that is associated with an

⁴⁵ See my ‘How to Cross the Atlantic Without Crossing It’ (Atkins 2015b) for a defense of the view that some, but only some progressives give rise to the sort of modal interpretations in evidence in this paper.

⁴⁶ That turns out to be an interesting observation where they are concerned because ‘fly to Paris’ is a predicate that looks like it applies to *events* (things that unfold over time) not to *states* (things that hold at times).

uncharacterized state. So, ‘Mary flies to Paris tomorrow’ would be understood as representing a state whose end consists in a flight to Paris tomorrow by Mary. Given these assumptions, its modal interpretation would be explained by appeal to the very same interface conditions that obtain in connection with our stative phrases and the conditional availability of this interpretation in unsupplemented past tense contexts would be explained by the assumption that simple futurates bear a presupposition along the lines attributed to those phrases. The contradictory interpretation that ‘Mary flew to Paris tomorrow’ receives in unsupplemented contexts could also be explained quite simply and intuitively by assuming that it contributes an *event* predicate (just like ‘Mary flew to Paris’) that applies to a past event, but one that is also supposed to happen tomorrow.

Similar considerations can be advanced in the case of non-culminating accomplishments. The central observation is that they appear to bear a connection to predicates of events (though perhaps a connection that is not as direct as it would seem). This is a matter of interest since predicates of events can be and in the case of non-culminating accomplishments are, by definition, associated with ends. This guides us toward a particular line of questioning: How do the ends of these non-culminating accomplishments come to be displaced? Do these expressions also have a stative semantics? And might this semantic dimension serve to distinguish the non-culminating accomplishments that give rise to modal interpretations from what appear, by the lights of the displacement approach, to be their culminating counterparts—superficially identical sentences that describe their events as complete or as having culminated in their associated ends. Given their patterning with our other expressions in out-of-the-blue contexts, we have reason to expect these expressions to presuppose that their ends are displaced. If so, it would be natural to assume, that this presupposition is automatically met when they are interpreted as present tense claims—as has been true of our other expressions.

4 New Horizons: Imperfective Meaning

I have argued that the modal patterns of our stative phrases can be explained without positing modal meanings and that this explanation can, in principle, extend to the case of simple futurates and non-culminating accomplishments. I have also argued that these modal patterns are not illuminated, but rather, obscured by the assumption that modal meanings are responsible for them. There are, however, good reasons to think that these expressions are to be related to an even broader class, namely, imperfective expressions.

The category of imperfective meaning covers a whole constellation of modal interpretations that have been thought to be linked to (at the very least) a system of modal meanings and, more recently, in the wake of attempts to offer unified accounts of these modal interpretations, to a core modal meaning.⁴⁷ A connection with the imperfective might be thought to be especially promising insofar as the interpretations linked to this system—like those under discussion in this paper—represent states of affairs that might be characterized as “incomplete.”⁴⁸ These considerations raise interesting questions about the relevance of the approach defended in this paper to this broader class of expressions.

I think it reasonable to assume that there is, in fact, a connection between the interpretations discussed in this paper and those that have been linked to imperfective meaning. After all, there is clear evidence, in languages in which imperfective meaning is overtly realized, that it is associated

⁴⁷ See, for example, (Cipria and Roberts 2000), (Deo 2009b) and (Deo 2009a).

⁴⁸ It might be said that our key expressions are related to this system and that this suggests an alternative solution to our puzzles. Perhaps these expressions are like others connected with this system that require the presence of a contextually provided temporal anchor in past tense contexts. So, for example, in Italian, the imperfect sentence ‘Mangiavo una mela’ (‘I eat_{IMPF} an apple’) is odd out of the blue but perfectly intelligible if said in response to a question like ‘What were you doing yesterday?’ (Giorgi and Pianesi 1997). There are a number of assumptions that might be questioned here, but the central issue is this: the evidence (which includes the supplementation that we see in the past, e.g., ‘but she left after a day on account of the bombings’) suggests that our expressions require that the ends associated with states be displaced, not that those states be anchored to contextually provided times. That is not, though, to deny that providing a punctual temporal anchor (in the sense of (Giorgi and Pianesi 1997)) offers a way of effecting displacement—an assumption that may partly explain the felicity of embedded futurates such as ‘Mary said the Yankees play the Red Sox tomorrow’ (Copley 2009) as well as the availability of modal interpretations in similar contexts (e.g., ‘Yesterday, she was in Paris for a week; today it’s a month. She keeps changing her mind’).

with a variety of interpretations including some of the ones discussed in this paper. Here is a shortlist of the interpretations that one finds:

- (48) Mary is crossing the Atlantic. (progressive)
- (49) Mary is crossing the Atlantic tomorrow. (futurate progressive)
- (50) Mary flies to Paris tomorrow. (simple futurate)
- (51) Mary lives in Paris. (continuous)
- (52) Mary flies to Paris. (habitual/generic)

Moreover, it seems to me that it would be attractive to most theorists to link the other interpretations discussed to this system. For example, 'Mary is in Paris for a week,' like the other expressions listed, has a stative semantics and has an unproblematic present tense form. It also gives rise to an interpretation on which Mary's being in Paris is only a part of a broader state of affairs so that it may, in that sense, be understood to be incomplete (or 'imperfect'), much like 'Mary is crossing the Atlantic,' for example. And, of course, it gives rise to a modal interpretation of a sort that has, for better or worse, been attributed to each of the sentences on this list.

The connection between imperfective meaning and the interpretations of interest in this paper appears, though, to raise a radical possibility. The conclusions drawn from the study of these interpretations suggest that the imperfective system is not a modal system (alternatively, the imperfective does not have a modal component of meaning at its semantic core).

While this is, as far as the received wisdom goes, a radical idea, there appear to me to be various considerations that support it. In addition to my defence of the claim that some modal interpretations linked to this system are not due to modal meanings, it seems dubious to me, as it has to others, that all of the forms on our shortlist *do* give rise to modal interpretations. Take

a progressive sentence like ‘Mary is walking’ as an example. This sentence appears not to be interpreted as meaning that a part of a walk is underway that would, in all projected possible circumstances, culminate in the completion of a walk. These assumptions have no clear application to this kind of example and only the conviction that the progressive has a modal meaning sustains the impression that they do.⁴⁹ Similarly, one might doubt that the “continuous” interpretation of ‘Mary lives in Paris’ warrants the assumption that it, too, has modal significance. It appears, on its face, to speak only of a state of affairs that holds in the present (whatever other conclusions we may be tempted to draw about how lasting or continuous a state of affairs that is). And even in the case of habitual/generic sentences, where we might be tempted to posit a modal meaning (to account for the sense that these claims convey information about essences, dispositions, and perhaps other modal categories), powerful considerations have been presented that suggest that the *linguistic* contribution of sentences like these is much more minimal.⁵⁰

One of the benefits of the approach taken here is that we are not forced to capture the modal significance of some of these expressions in terms of a modal component of meaning. Far from compromising efforts to identify a common semantic core across these expressions, this approach is essential for capturing what they have in common *if not all of these expressions do indeed have modal interpretations and if even those that do give rise to modal interpretations fail to have modal meanings*. The approach also isolates and exploits a number of linguistic parameters that might prove useful in accounting not only for the linguistic meanings of these expressions but also, in part, for their interactions with extra-linguistic cognition.⁵¹

⁴⁹ For more discussion of this point and its bearing on linguistic analyses of the progressive, see ‘How to Cross the Atlantic Without Crossing It’ (Atkins 2015b) and ‘On the Limits of Linguistic Meaning’ (Atkins 2015d). For general criticism of modal accounts of the progressive, see also (Vlach 1981), (ter Meulen 1985), (Parsons 1989), (Szabó 2004) and (Szabó 2008).

⁵⁰ See (Leslie 2008) for a case against treating bare plural generics (e.g., ‘Tigers have stripes’) as having a modal (or even quantificational) meaning.

⁵¹ Among the questions that we are invited to ask are: Are these expressions associated with ends? How do they come to be? Is the displacement of these ends asserted or presupposed? What role do future temporal adverbials (when present) play in connection with them?

Conclusion

The modal interpretations investigated in this paper cannot be set aside as a special case. Among other reasons, we see these interpretations cross-linguistically and they bear systematic connections to a variety of other natural language interpretations. But neither can they be explained in the way that we have wanted to explain other core aspects of interpretation, in particular, by reading those aspects of interpretation into linguistic meanings. The attempt to do this in the case of our modal interpretations leads to puzzlement, not clarity.

I have proposed that our modally interpreted stative phrases, e.g., ‘be in Paris for a week,’ represent states that are associated with ends (*teloi*) and presuppose that their ends are displaced relative to the time at which those states are said to hold. That is their specifically linguistic contribution. Their modal interpretations emerge as a result of the satisfaction of that presupposition—the default in the present, but not in the past, where displacement may be effected via contextual supplementation. These emergent interpretations reflect the substantive contribution of modal cognition, not modal language. So, to review our central example, ‘Mary is in Paris for a week’ says only that Mary is in Paris and that her being in Paris has a certain end (it is taken for granted that the end is not now) and the projection of the continuation of that state up to its end reflects a modal understanding of that state’s having an end but not being at an end.

We have here an alternative conception of our capacity to understand language and of the forms of explanation available to us to elucidate it. The central issues can be framed quite simply and generally: if we think of certain representations (or features or what have you) as being proprietary to the faculty of language, e.g., something’s having an intrinsic bound and the displacement of such a bound, this raises a question about how these representations are understood by other cognitive systems. We should, however, be careful not to indulge two unproductive reactions to this question, which seem to me to represent two strains of essentialist thinking: (i) these representa-

tions are unintelligible outside of the linguistic system and (ii) these representations themselves provide for their intelligibility outside of this domain (settling all questions of understanding). It seems rather to be the case, as I have argued, that our understanding of these representations reflects aspects of their employment in other cognitive settings. It may be that intrinsic boundedness is understood in relation to other concepts that lie outside of the faculty of language (we think in terms of plans, directed motion, developmentally natural outcomes, etc.) and the displacement of such a bound via the projection of possible continuations.

References

- Atkins, A. 2015a. Back to the Futurate. Ms.
- Atkins, A. 2015b. How to Cross the Atlantic Without Crossing It.
- Atkins, A. 2015c. Modality Without Modals. Ms.
- Atkins, A. 2015d. On the Limits of Linguistic Meaning. Ms.
- Bar-el, Leora, Davis, Henry, and Matthewson, Lisa. 2005. On Non-Culminating Accomplishments. *Proceedings of the North Eastern Linguistics Society* 35.
- Baz, Avner. 2012. *When Words Are Called For: A Defense of Ordinary Language Philosophy*. Harvard University Press.
- Bennett, Michael and Partee, Barbara H. 1978. *Toward the Logic of Tense and Aspect in English*. Indiana University Linguistics Club.
- Bhatt, Rajesh. 2006. *Interface Explorations: Covert Modality in Non-Finite Contexts*. Walter de Gruyter.
- Chomsky, N. 2000. *New Horizons in the Study of Language and Mind*. Cambridge, MA: Cambridge University Press.
- Cipria, Alicia and Roberts, Craige. 2000. Spanish Imperfecto and Pretérito: Truth Conditions and Aktionsart Effects in a Situation Semantics. *Natural Language Semantics* 8: 297–347.
- Copley, Bridget. 2009. *The Semantics of the Future*. Routledge.

- Deo, A. 2009a. Imperfective Readings: Partitions as Quantificational Domains. *Proceedings of SALT* 109–123.
- Deo, A. 2009b. Unifying the Imperfective and the Progressive: Partitions as Quantificational Domains. *Linguistics and Philosophy* 32(5): 475–521.
- Dowty, David R. 1977. Toward a Semantic Analysis of Verb Aspect and the English ‘Imperfective’ Progressive. *Linguistics and Philosophy* 1: 45–77.
- Dowty, David R. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and Montague’s PTQ*, vol. 7. D. Reidel Publishing Company.
- Filip, Hana. 1999. *Aspect, Eventuality Types and Nominal Reference*. New York: Routledge.
- Geach, P. 1965. Assertion. *Philosophical Review* 74(4): 449–465.
- Giorgi, Alessandra and Pianesi, Fabio. 1997. *Tense and Aspect: From Semantics to Morphosyntax*. Oxford University Press.
- Hallman, Peter. 2009a. Instants and Intervals in the Event/State Distinction. Ms.
- Hallman, Peter. 2009b. Proportions in Time: Interactions of Quantification and Aspect. *Natural Language Semantics* 17: 29–61.
- Hallman, Peter. 2015. The Temporal Nature of the State/Event Distinction. GLOW 38 Semantics Workshop.
- Higginbotham, James. 1995. *Sense and Syntax*. Clarendon Press.
- Higginbotham, J. 2004. The English Progressive. In *The Syntax of Time*, Jacqueline Guéron and Alexander Lecarme, (eds.), 329–359. MIT Press.
- Higginbotham, James. 2009. *Tense, Aspect, and Indexicality*. Oxford University Press.
- Jeshion, Robin. 2015. Names Not Predicates. In *On Reference*, Andrea Bianchi, (ed.). Oxford University Press.
- Kamp, Hans and Reyle, Uwe. 1993. *From Discourse to Logic*. Kluwer Academic Publishers.
- Landman, Fred. 1992. The Progressive. *The Journal of Semantics* 1: 120–124.
- Larson, Richard. 2003. Time and Event Measure. *Philosophical Perspectives* 17(1): 247–258.
- Leslie, Sarah-Jane. 2008. Generics: Cognition and Acquisition. *Philosophical Review* 117(1).
- Liebman, Daniel. 2011. Simple Generics. *Noûs* 45(3): 409–442.

- ter Meulen, A. G. B. 1985. Progressives Without Possible Worlds. *Chicago Linguistic Society* 21: 259–280.
- Neale, Stephen. 2007. On Location. In *Situating Semantics: Essays on the Philosophy of John Perry*, Michael O'Rourke and Corey Washington, (eds.), 251–393. MIT Press.
- Parsons, Terence. 1989. The Progressive in English: Events, States and Processes. *Linguistics and Philosophy* 12: 213–241.
- Pietroski, P. 2008. Minimalist Meaning, Internalist Interpretation. *Biolinguistics* .
- Pietroski, P. 2010. Concepts, Meaning, and Truth: First Nature, Second Nature, and Hard Work. *Mind & Language* 25: 247–278.
- Pietroski, P. 2014. Conjoining Meanings: Semantics Without Truth Values. Forthcoming with Oxford University Press.
- Portner, Paul. 1998. The Progressive in Modal Semantics. *Language* 74: 760–787.
- Radford, Andrew. 2004. *Minimalist Syntax*. Cambridge University Press.
- Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon: A First-Phase Syntax*. Cambridge University Press.
- Riddle, Elizabeth. 1975. A New Look at Sequence of Tenses. Presented at winter meeting of Linguistic Society of America.
- Rothstein, Susan. 2004. *Structuring Events*. Explorations in Semantics. Blackwell.
- Rothstein, Susan and Landman, Fred. 2010. Incremental Homogeneity in the Semantics of Aspectual 'For'-phrases. In *Lexical Semantics, Syntax, and Event Structure*, Doron Edit Hovav, Malka Rappaport and Ivy Sichel, (eds.), Oxford Studies in Theoretical Linguistics. Oxford University Press.
- Smith, Carlota S. 2003. *Modes of Discourse*. Cambridge University Press.
- Smith, Carlota S. 2008. Time Without Tense. In *Time and Modality*, Jacqueline Guéron and Jacqueline Lecarme, (eds.). Springer.
- Stanley, Jason. 2000. Context and Logical Form. *Linguistics and Philosophy* 23: 391–434.
- Stanley, Jason. 2002. Making It Articulated. *Mind & Language* 17(1): 149–168.
- Szabó, Zoltán. 2004. On the Progressive and the Perfective. *Noûs* 38: 29–59.
- Szabó, Zoltán. 2008. Things in Progress. *Philosophical Perspectives* 22: 499–525.

Vlach, Frank. 1981. The Semantics of the Progressive. In *Syntax and Semantics: Tense and Aspect*, vol. 14, Philip Tedeschi and Annie Zaenen, (eds.), 271–292. New York: Academic Press.