

Modality Without Modals

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1 Introduction

This paper focuses on the solution to two problems with traditional semantic treatments of the progressive. Both are problems of unification that we confront when we attempt to generalize canonical approaches to progressive meaning across importantly distinct progressive classes. These traditional approaches fail both to illuminate the semantic condition that is shared by these classes and to clarify the sources of their rather striking semantic differences.

The traditional divide in the progressive literature concerns whether the progressive has an extensional or intensional semantics. Those in the former camp¹ claim, roughly, that an event of a certain type is in progress at a given time just in case a part of an event of that type holds at that time. Those in the latter camp² further require, again to put it roughly, that that part that holds in the actual world eventuate in a complete event of that type across suitably related possible circumstances.

The first problem with these accounts and with this debate, which has passed unnoticed until recently,³ is that while some progressive sentences³ give rise to certain modal interpretations,

¹ See, for example, Bennett and Partee (1978), ter Meulen (1985), and Parsons (1990).

² See, for example, Dowty (1979), Landman (1992), and Higginbotham (2009).

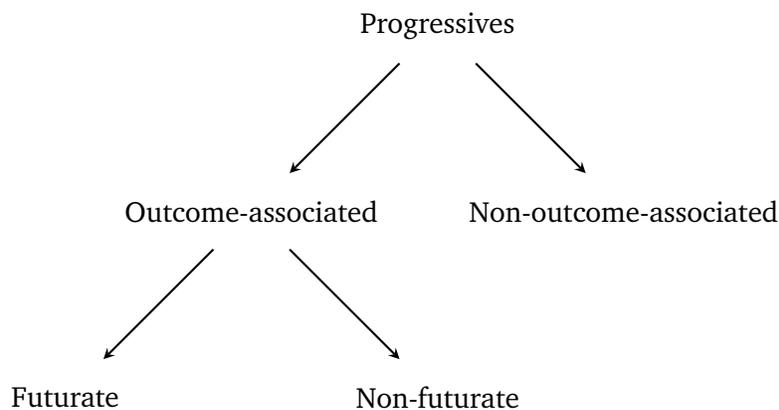
³ See my 'Modality, Cognition, Semantic Explanation' (2014b) for an account.

others do *not*. In particular, I will argue that a progressive sentence like ‘Mary is swimming’ is not associated with the sort of modal interpretation that manifestly attaches to a sentence like ‘Mary is crossing the Atlantic.’ The first sort of progressive claim appears to support the case of the non-modal theorist while the second appears to support the case of the modal theorist. This suggests that the presupposition of this longstanding debate—that progressive sentences lend themselves either to the one or to the other type of analysis—is mistaken. The first problem of unification, then, is to account for how it is that the progressive has a uniform meaning across these sorts of claims, while still accounting for the fact that the one has a modal interpretation that the other lacks.

The second problem relates to the connection between non-futurate, or regular, progressives, and futurate progressives. These progressives contrast in interesting ways. Consider, for example, the difference between the claims ‘Mary is crossing the Atlantic’ and ‘Mary is crossing the Atlantic tomorrow.’ The first is naturally interpreted as a non-futurate progressive and on that construal indicates (at the very least) that a cross-Atlantic passage by Mary is underway. The second is interpreted as a futurate progressive and does not relate information about a cross-Atlantic passage that is underway, but, as the label ‘futate’ would suggest, information about a projected or planned cross-Atlantic passage. There are also interesting similarities between futurate progressives and sentences like ‘Mary is crossing the Atlantic,’ which do not extend to sentences like ‘Mary is swimming.’ For one, futurate progressives give rise to modal interpretations⁴ just as, in my view, progressives like ‘Mary is crossing the Atlantic’ do. The second problem of unification, then, is to account for how it is that the progressive has a uniform meaning across non-futurate and futurate progressives while still accounting for fact that the latter have a future orientation that the former lack (in addition to accounting for various other differences to be discussed).

⁴ See Dowty (1979) and Copley (2009), for example.

I will argue that we can solve both problems of unification with a simple common strategy. The solution requires that we relate the differences that we see across these progressive varieties to the different sorts of event predicates that embed across them. It is the association or non-association of an outcome (or telic endpoint⁵) that distinguishes between progressives like ‘Mary is crossing the Atlantic’ and ‘Mary is swimming.’ Whereas the latter embeds a predicate of events that is not associated with an outcome, the former embeds a predicate of events that *is* associated with one (i.e., Mary’s arrival across the Atlantic). It is also the association of such an outcome that explains the various dimensions of similarity between futurate progressives like ‘Mary is crossing the Atlantic tomorrow’ and non-futurate progressives like ‘Mary is crossing the Atlantic.’ The differences between those claims are equally due to these outcomes and, in particular, to whether the overt descriptive material encoded by a predicate like ‘cross the Atlantic’ applies to an entire outcome-associated event (in which case we get a non-futurate progressive) or to its outcome alone (in which case we get a futurate progressive). These distinctions give us the following classification of progressive sentences:



Of course, if outcome-association plays the role I suggest in distinguishing between these three classes of progressives, it must also be implicated in explaining their distinct modal profiles. I will

⁵ I will be using ‘outcome’ instead of ‘telic endpoint’ throughout the paper so as to remain neutral on the nature of the ends in question.

argue that this is, indeed, the case. On my view, it is a restriction on the progressive's selection of *outcomes* from the parts of an event that it may represent as holding that triggers the modal interpretations that we see in connection with progressive claims like 'Mary is crossing the Atlantic' and 'Mary is crossing the Atlantic tomorrow' and which explains the absence of these modal interpretations in the case of progressives like 'Mary is swimming.'

As I have argued elsewhere,⁶ this way of explaining these modal interpretations—this linking of modal interpretations to outcomes that are, in a certain sense, expelled from the environment in which these modal interpretations appear—cannot be recast in terms of modal meanings that generate these interpretations or in terms of an interaction of natural language meanings alone. Despite being triggered by outcome-associated predicates in the progressive environment, these interpretations must be regarded as reflecting the modal structure of cognition, not the modal structure of language. What we are seeing, in these cases are expressions of modality, but *without* modals.

With these aims in view, the plan of my paper is as follows. In section 2, I briefly discuss the first problem of unification and propose an account of the progressive that allows us to solve it. The core project of this paper is, however, the futurate progressive, so the remaining sections focus on how its apparent idiosyncracies might be illuminated by such an account. In section 3, I discuss the second problem of unification and show how the analysis developed in response to the first provides a foundation for a solution to the second, though it requires that we revisit our assumptions about the meanings of the predicates that combine with the futurate progressive. In section 4, I defend the view that futurate progressives embed what I call 'outcome-oriented' predicates (i.e., predicates whose associated outcomes alone are characterized by the overt descriptive material that they encode) and that this provides the sole dimension of contrast between regular

⁶ See my 'Modality, Cognition, Semantic Explanation' (2014b).

and futurate progressives. In section 5, I conclude by noting some of the questions and further avenues for research raised by the semantic approach defended in this paper, including its possible extension to other expressions (such as simple futurates like ‘Mary *crosses* the Atlantic tomorrow’), to certain systems of meaning (such as the imperfective), and its implications for our understanding of the interactions between tense, aspect, and modal systems.

2 The Progressive

Traditionally, analyses of the progressives are split between those that attribute a modal semantics to the progressive and those (extensional analyses) that attribute a non-modal semantics to the progressive. The purpose of this section is to show that the parties to this longstanding debate have overlooked something of critical importance to it: the distinct semantic contributions of the various event predicates that combine with the progressive and their influence on the modal profile of the progressive claims in which they figure.

As we will see, some of these combinations do result in modal interpretations, but some of them do not. In light of this, our aim should be to identify the semantic conditions that are common across these progressives, to identify those semantic differences that can be attributed to their underlying predicates, and to consider whether there are any residual aspects of interpretation that cannot be reduced to these interacting elements (and I will suggest that there are such residual aspects of interpretation).

2.1 Extensional Analyses

The common intuition animating extensional analyses of the progressive is that the progressive represents a (proper) part of an event as holding at a time. In fairness to this style of analysis, that does seem like an appropriately modest assumption concerning the meaning of a sentence like

‘Mary is swimming.’ On this approach, what that sentence would mean, roughly, is that a (proper) part of a swim event by Mary is realized at present. To describe an event as in progress is, then, just to exploit the fact that its parts may hold at times relative to which the whole cannot be said to hold.

Aside from having the virtue of elegance, extensional analyses receive *prima facie* support from a class of entailments from claims describing completed events to claims describing those events as in progress. The following provides us with an instance of the relevant entailment pattern:

(1) Mary swam. → Mary was swimming.

This entailment can be explained very straightforwardly by assuming that ‘Mary swam’ describes an event comprised of the sort of event parts that may themselves be described as holding by the progressive.

Of course, an analysis that implements this basic intuition leaves open some questions that might be resolved in various ways. For example, one might wonder whether to describe an event as in progress is to describe that event as incomplete—and not merely to describe a proper part of the event as holding at a time. A related question concerns whether a progressive claim like ‘Mary is swimming’ commits one to the existence of an entire swim event in addition to a part of such an event.

It would seem that the answer to both of these questions is negative. There is no evidence to suggest that there is a restriction on the progressive’s representing the final part of a swim event as holding at a time. In fact, the following progressive claim can be used even if the swim event that it describes as in progress in the present moment comes to an abrupt stop:

(2) Mary is swimming.

Nor is it the case that we are committed to the existence of an entire swim event, to continue with

the present example. It is not as though we are forced to interpret the claim in (2) as describing the terminal part of a *fully* actualized swim (rather than merely as a part of such an extended event). There is no barrier to interpreting (2) as describing the onset, say, of such an event without any commitment to its full realization (and the same goes for waltzes, walks, and other such events that might be described as in progress).

2.2 Modal Analyses

Extensional analyses work smoothly in the case of claims like ‘Mary is swimming,’ which embed event predicates (e.g., ‘swim’) that are not grammatically associated with outcomes (intuitively, these can be thought of as distinguished endpoints, goals, or *teloi*). However, they fail—without supplementation—to explain the more complex patterns of claims like ‘Mary is crossing the Atlantic,’ which embed predicates of events (e.g., ‘cross the Atlantic’) that *are* grammatically associated with outcomes. I will call the former sort of progressive a ‘non-outcome-associated progressive’ and the latter an ‘outcome-associated progressive.’

One way to see that extensional analyses are not adequate to the task of accounting for the complex interpretations of outcome-associated progressives is to consider certain truth value shifts in our judgments about these sentences that seem pegged to differences in the modal status of the outcomes with which they are associated. So, for example, the following sentence could be judged false in one context in which Mary’s arrival across the Atlantic is assumed to be impossible (other things equal) but judged true in a context in which her arrival is assured (other things being equal), even if we stipulate that she gets exactly as far across the Atlantic in each case:

(3) Mary is crossing the Atlantic.

We might, for example, imagine that Mary is swimming in the first context but captaining a ship in the second, though she makes it only part of the way across in each. An account on which this

claim only commits us to a part of cross-Atlantic passage by Mary misses the contrast between our judgments in such cases completely. What we want in connection with contrasts like this one is the sort of analysis that the modal theorist defends—one that allows us to recognize that the modal status of an arrival across the Atlantic by Mary somehow constrains the truth of (3).

Moreover, to the extent that the entailment from a sentence like ‘Mary swam’ to ‘Mary was swimming’ provides support for an extensional analysis of the progressive, the failure of this entailment in the case of outcome-associated claims like ‘Mary ate a third of the chocolates’ provides evidence *against* its application to outcome-associated progressives:

(4) Mary ate a third of the chocolates. \rightarrow Mary was eating a third of the chocolates.⁷

We can easily imagine a scenario in which Mary aims to eat as many chocolates as she can and succeeds in eating one third of the available chocolates, but in which it is not the case (at any candidate time) that Mary was eating a third of the chocolates. So, we cannot *simply* assume that the progressive represents a part of the event described by ‘eat a third of the chocolates’ as holding at some time in the course of that event’s development. Some further explanation is required. Again, the presence of a substantive modal condition would seem to be appropriate to blocking the entailment in question (it *was* possible for Mary to eat a third of the chocolates or fewer or even more, other things equal, one might press) and the modal theorist is in a position to explain why we should expect just such a condition to be in effect.

Interestingly, consideration of outcome-associated progressives also suggests different answers to the two questions posed earlier, namely, whether there is a restriction on the parts of an event that may be represented as holding by the progressive and whether a progressive claim commits us to the existence of an entire event of the sort represented by its underlying predicate. Whereas these questions received negative answers in connection with a non-outcome-associated progressive like

⁷ This is based on an example from Hallman (2009b), which he uses to motivate a very restricted version of this claim.

‘Mary is swimming,’ they require positive answers in connection with an outcome-associated progressive like ‘Mary is crossing the Atlantic.’ After all, that sentence cannot be used to describe what Mary is doing once she is across the Atlantic (that is, once its associated outcome is realized) and although (5) shows that it does not commit us to an actual cross-Atlantic passage, its truth does require that that part of a cross-Atlantic passage that holds eventuate in an arrival across the Atlantic by Mary across a range of relevant possible circumstances:

(5) Mary was crossing the Atlantic when she drowned.

We have, then, a commitment to the *possible* completion of the event represented by that underlying event predicate.

By way of summary, progressive claims like ‘Mary is swimming’ and ‘Mary is crossing the Atlantic’ exhibit striking differences and appear to motivate quite different semantic treatments. The first problem of unification confronts us here with some force since it raises the question, “What do these sorts of claims have in common and how are we to explain their differences?”

2.3 The Displacement Analysis

The problem with existing analyses of the progressive—both modal and non-modal—is that they generalize to the worst case. They do this either by applying a semantic analysis that is viable for non-outcome-associated progressives like ‘Mary was swimming’ to outcome-associated progressives like ‘Mary was crossing the Atlantic,’ where it leaves much that wants for explanation, or by applying a semantic analysis that is viable for outcome-associated progressives to non-outcome-associated progressives, where this results in the attribution of inappropriate modal and temporal conditions to the latter. In what follows, I will develop an analysis that isolates a semantic condition that *can* be generalized across these progressives and explains their differences—as far as possible—in terms of the meanings of their underlying event predicates.

2.3.1 The Semantics of the Progressive

On my view, what outcome-associated and non-outcome-associated claims have in common is, essentially, the part-whole semantics that I sketched earlier. In this sense, extensional analyses have gotten something importantly right, despite the fact that such analyses alone cannot explain the complex interpretations of claims like ‘Mary was crossing the Atlantic.’ Recall that on that sort of analysis, the progressive simply represents a (proper) part of the event represented by its underlying predicate as holding at a given time with no commitment to the actualization of the whole of which it is a part. So, ‘Mary is crossing the Atlantic’ represents a *swim part* rather than a *part of a swim*, if you like, as holding in the present. In accordance with the (too often neglected) observation that the progressive has a stative semantics,⁸ I will assume that the proper parts that it represents as holding are states. Moreover, if we assume that events are temporally extended while states are not, the semantic condition associated with the progressive need not specifically require that those parts represented by the progressive be proper, giving us the following:

PROG(ϕ) is true if and only if a state of the event represented by ϕ holds.

One might, of course, choose to understand states as primitive or to reduce states, say, to momentary parts of events (see Hallman (2009a) for one such analysis) and, relatedly, one might make various assumptions about what it is for events to be represented as having states⁹ (such that the progressive can be taken to indicate that states *of* events hold at various times) though I remain neutral on these issues here.

Something must also be said about the fact that the progressive cannot represent the outcome portion of an outcome-associated event as holding, which is an important facet of the contrast between outcome-associated and non-outcome-associated progressives and which is, on my view,

⁸ See Bennett and Partee (1978), Vlach (1981), and more recently Hallman (2009a) for models and discussion.

⁹ See Parsons (1990) for some discussion.

linked to the modal interpretations of the former. Somewhat delicate considerations come into play here. To begin with, the exclusion of associated outcomes in present tense claims appears to be a general phenomenon.¹⁰ This gives us some reason to think that the restriction against the progressive's selection of outcomes should be represented in a more general way than as a restriction that is built into the meaning of the progressive. Although I have at times been sympathetic to that sort of view, I think there is actually some reason to assume that the progressive itself effects this restriction (though this is not to deny that there may be environments, such as the present tense, which also effect this restriction).¹¹

In light of this, I would like to pose two options. The first is to assume that the progressive is itself an atelic or non-outcome-associated expression (which is a more informative claim than the claim that the progressive does not represent the outcome portions of outcome-associated events as holding). The second is to assume that the restriction on the selection of an outcome falls out from the fact that the progressive is a *stative* expression—after all, it is traditionally assumed that statives are atelic.¹² Since I have doubts concerning whether that traditional assumption about statives is correct,¹³ I will assume that the restriction on the progressive's selection of outcomes is something that reflects an aspect of the progressive's meaning, namely that it is itself a non-outcome-associated expression.¹⁴ I leave it open for other theorists to take the alternative to that

¹⁰ Consider, for example, a sentence like 'Mary is in jail for five years' which we might well regard as being associated with an outcome (i.e., the completion of a five year jail sentence) but which cannot be used if this outcome is realized in the present.

¹¹ In particular, I have found myself relying on just such an assumption about progressive meaning as part of an explanation of why it is that a progressive sentence like 'Mary was crossing the Atlantic' patterns with sentences like 'Mary was in jail for five years, but she got early parole' and 'Mary worked at 5pm, but the schedule was changed' in giving rise to certain modal interpretations (in contrast to 'Mary was in jail for five years' and 'Mary worked at 5pm') and also to explain why that sort of progressive *contrasts* with those sentences insofar as it does not require the "supplementary" phrases that appear alongside those claims.

¹² For some review, see the first chapter of Rothstein (2004).

¹³ The doubts arise in connection with a claim like 'Mary is in jail for five years.' It seems to me that one way of understanding this claim is as indicating that there is a state, *Mary's being in jail for five years* (as distinct from a state like *Mary's being in jail*), which could be said to hold throughout a certain interval of time, but which appears to be associated with an endpoint, namely, the completion of the five-year sentence.

¹⁴ Cf. Cipria and Roberts (2000) where it is claimed that the imperfecto is an atelic expression.

option if they do not share my doubts about whether statives can be assumed to be atelic, an option that I think is otherwise extremely theoretically attractive.

2.3.2 The Displacement Hypothesis

This analysis leaves us with the difficult task of explaining the modal interpretations that attach to outcome-associated progressives. But we are not without clues as to their origin. Those progressives that embed outcome-associated predicates and only those progressives give rise to those modal interpretations. We have also seen that the outcomes of outcome-associated predicates may never be represented as holding by the progressive—a condition that has no analogue in the case of non-outcome-associated progressives. Interestingly, however, the modal¹⁵ interpretations that attach to outcome-associated progressives are absent and the restriction on their outcomes lifted in certain non-progressive contexts. So, the following claims both describe the actualization of the sorts of events that their event predicates represent (outcome and all) and do not exhibit the modal contrast exhibited by their progressive counterparts:

(6) Mary swam.

(7) Mary crossed the Atlantic.

The absence of these two features in this non-progressive context suggests that the restriction on outcomes and the emergence of modal interpretations are linked.

I suggest that we think of the expulsion of outcomes from the progressive environment and the emergence of modal interpretations as two species of *displacement*—a term for the fact that natural languages provide a means to represent what is distal and to do so along a variety of dimensions including the modal, temporal, and spatial. Just as the outcome associated with a predicate like

¹⁵ Any modal conditions that have to be satisfied for the relevant events to be described as actualized are irrelevant to this point since we are considering whether there is a modal contrast of the sort that we see in the case of their progressive counterparts.

‘cross the Atlantic’ is modally displaced in the context of a claim like ‘Mary is crossing the Atlantic’ (i.e., it need only be realized across a range of possible circumstances, not in the actual world) so too we can say that that outcome is displaced in the progressive environment in that it is never what is in progress as long as the event with which it is associated is said to be in progress. What I propose is that the modal interpretations that we see in connection with outcome-associated progressives emerge exactly in those environments in which an outcome that is associated with an event is displaced.

DISPLACEMENT HYPOTHESIS:

There is modal displacement just where there is outcome displacement.

On this proposal, when an outcome-associated predicate combines with the progressive a (non-final) part of it is represented as holding at a given time but the connection between that part that holds and the outcome associated with that event comes to be mediated by a substantive modal condition. That part that holds must eventuate in that outcome across a range of relevant possible circumstances.

2.3.3 Some Consequences of the Displacement Analysis

The displacement analysis has two notable consequences, both of which I discuss in detail elsewhere, but which are worth mentioning here since they help to frame the discussion of futurate progressives to follow and since we will have occasion to revisit these consequences once an account of futurate meaning is at hand.

First, although the displacement hypothesis does not itself anchor the modal interpretations of outcome-associated progressives in any particular linguistic element (not in the progressive and not in outcome-associated predicates, for example) or in any extra-linguistic cognitive element, the

content of the displacement hypothesis cannot be fully captured by any candidate natural language meaning or any interaction between such meanings.¹⁶ These interpretations must be assumed to reflect the modal structure of cognition, not the modal structure of language.

It is not difficult to see that this is the case and so I will briefly review the relevant considerations here. To begin with, we already have reason to think that a modal semantics should not be attributed to the progressive itself. The attribution of a uniform modal semantics would result in an overgeneration of modal interpretations. Moreover, the attribution of a non-uniform meaning to the progressive—one that discriminates between outcome-associated and non-outcome-associated event predicates in such a way that the former have a modal and temporal profile that is entirely absent in connection with the latter—is on its face an *ad hoc* maneuver. Even if it could be regarded as an option, the argument of this paper is meant to reinforce the contention that we can do much better.

Outcome-associated predicates also fail to provide anchors for these modal interpretations. To begin with, they cannot *simply* be attributed to outcome-associated predicates since outcome-associated predicates do not issue in those interpretations in certain non-progressive or ‘perfective’ environments (e.g., ‘Mary crossed the Atlantic’). The most natural option would be to assume the presence of a covert perfective operator (as some, though certainly not all, theorists do) and to suppose that it is responsible for suppressing the modal import of these expressions in such an environment. A key problem for this strategy though is that the perfective does not suppress the modal import of the modal expressions with which it combines even though it does appear to be implicated in the licensing of actuality¹⁷ entailments.¹⁸ So, we cannot appeal to its meaning to explain why progressives like ‘Mary is crossing the Atlantic’ give rise to modal interpretations

¹⁶ I argue for this in my ‘Modality, Cognition, Semantic Explanation’ (2014b).

¹⁷ These are entailments from a claim like ‘John was able to eat three apples this afternoon’ to ‘John ate three apples this afternoon.’ It remains somewhat controversial to describe this inference as an entailment in English, though that is not the case in other languages such as French and Hindi.

¹⁸ For a defense of this claim, see Hacquard (2009).

that are absent in (what we are supposing to be) their perfective counterparts. Finally, we should resist the temptation of simply reading the content of the displacement hypothesis into the meanings of outcome-associated predicates. The displacement hypothesis, which tells us that outcome-associated predicates either occur in displacement environments, in which case they give rise to modal interpretations, or occur in non-displacement environments, in which case they do not, is a theoretical hypothesis that we want to *explain* in terms of candidate natural language meanings and whatever other resources might be called for. Reproducing the disjunctive content of this hypothesis at the level of the meanings of outcome-associated predicates does not explain the hypothesis—it simply restates it in a way that obscures the fact that it calls for explanation.

The natural conclusion to draw in light of these difficulties is that the specific modal interpretations that we find in displacement environments reflect the semantic contribution of modal cognition, not modal language. If the displacement hypothesis is correct, these interpretations reveal that modal cognition systematically interprets outcome displacement as modal displacement.

Since I will go on to argue that the regular and futurate progressive have an identical semantics and that the displacement hypothesis also extends to the modal interpretations of futurate progressives, their modal interpretations should also be seen as reflecting the modal structure of cognition. However, since their differences, on my view, come down to differences at the level of their event predicates, we will have an opportunity to examine whether the event predicates in futurate progressive contexts also fail to exhibit these modal interpretations outside of displacement environments and, so, whether they too corroborate the assumption that our modal interpretations do not inhere in the event predicates that combine with the progressive.

Second, the displacement hypothesis is a hypothesis about when we should expect to find the substantive modal interpretations that attach to outcome-associated progressives (and, eventually, when we should expect to find the substantive modal interpretations that attach to futurate

progressives as well). It predicts that we should expect to find substantive modal interpretations whenever an outcome-associated event is claimed to be in progress. After all, the outcomes of outcome-associated predicates are invariably displaced in the progressive environment (they can never be said to hold when the events with which they are associated are described as in progress) and the displacement hypothesis links the substantive modal interpretations of outcome-associated progressives exclusively to the *displacement* of outcomes. Intuitively, then, there is only one switch for modal interpretations (i.e., displacement) and that switch is always on in the progressive environment.

This yields a key prediction, namely, the absence of an entailment from claims like ‘Mary crossed the Atlantic’ to claims like ‘Mary was crossing the Atlantic.’ The reason is that progressive claims like these are invariably associated with substantive modal interpretations¹⁹ and, in general, the conditions on truth they introduce will not be satisfied by claims that describe those events as fully actualized. (In this connection, consider, as I observed just a moment ago, that claims like ‘Mary crossed the Atlantic’ are *not* associated with the modal interpretations of their progressive counterparts.) Again, as I have argued elsewhere in detail,²⁰ this is a good result however much it runs counter to orthodoxy. The analysis of futurate progressives that I offer below (and, in particular, my analysis of the event predicates that they embed) delivers a host of examples to support this key prediction and sheds light on why it can be difficult to isolate clear counterexamples to this supposed entailment pattern. As we shall see, the analysis suggests that a class of cases that provide the clearest counterexamples to that generalization—but have been rejected as candidate counterexamples—are in fact legitimate.

¹⁹ On my view, substantive modal interpretations do not depend on the non-actualization of events that are described as in progress as on Landman’s (1992) account, for example.

²⁰ See my ‘How to Cross the Atlantic Without Crossing It’ (2014a).

3 The Futurate Progressive

There are three basic positions that one might take on how the progressive is related to what I will continue to call the ‘futate’ progressive. One might take the view that the progressive and futurate progressive have unrelated meanings and only superficially resemble each other; one might take the view that they have similar, though not identical meanings; and, finally, one might take the view that they have identical meanings. In what follows, I want to briefly consider some of the reasons for and against these views and, for the latter two positions particularly, I discuss some of the ways that these positions might be filled out.

3.1 Ambiguity

There are a variety of difficulties and complexities that loom over attempts to analyze the progressive as having a uniform meaning across distinct progressive classes. One can be forgiven, in light of this, for wondering whether it would *really* be so bad to assume that the progressive is ambiguous across these classes.²¹ Still, I think it would be premature to accept that conclusion. Even in advance of having solutions to these challenges, close attention suggests that the challenges are actually systematically connected and this gives us reason to remain hopeful that minimal but well-placed adjustments might resolve them all.

Let us take a look at the sorts of differences between regular and futurate progressives that might incline one towards pessimism. One major difference between these progressives concerns the characterization of events that are described as in progress. Take the following claims, for example:

(8) Mary is crossing the Atlantic now.

²¹ This possibility was first suggested to me by John Burgess (p.c.) during an examination in which I highlighted some of these difficulties.

(9) Mary is crossing the Atlantic tomorrow.

Whereas (8) tells us that a cross-Atlantic passage is underway (perhaps Mary is somewhere in the middle of the Atlantic), (9) tells us nothing of the kind (perhaps Mary is on her couch a safe distance away from the Atlantic). Only the former, then, commits us to a (non-final) part of an event that is characterized via the descriptive content of the event predicate ‘cross the Atlantic.’ A similar contrast is evident in connection with the characterization of the relevant outcome in each case. Whereas the outcome that is associated with (8) consists in something like Mary’s having gotten across the Atlantic, the outcome that is associated with (9) consists in a cross-Atlantic passage by Mary. Only in the latter case, then, does the descriptive content of the predicate ‘cross the Atlantic’ apply entirely to the outcome or planned eventuality (to frame the point in language that avoids a commitment to outcome-association) that would appear to be associated with the sentence.

Here is another striking difference. A basic intuition about the modal interpretations that attach to futurate progressives is that they have a future orientation. Although these modal interpretations are standardly assumed to express inertial modality just like modal interpretations of regular progressives are assumed to do (i.e., a modality that is attuned to the development of events across uninterrupted possible circumstances),²² the modal interpretations of *futurate* progressives are thought to concern events that are scheduled, planned, or, more generally, projected to occur. And, indeed, the sense that these futurates (at least often) concern what is planned or scheduled comes through quite strongly, as illustrated by the following examples:

(10) The train is arriving at 5pm.

(11) The Yankees are playing the Red Sox tomorrow.

The train’s actually arriving at 5pm is neither necessary nor sufficient for the truth of (10). What

²² See, for example, Copley (2009).

matters is that the train's *projected* arrival at 5pm be secure and, naturally enough, a reliable schedule is the sort of thing that underwrites such a projection, assuring us that, other things being equal, the train arrives at 5pm. Similarly, the Major Leagues' scheduling of a Yankees-Red Sox game is the sort of thing that supports the judgment that (11) is true. This is what assures us that the game would happen, other things being equal. The occurrence or non-occurrence of the game makes no difference as long as that assurance is in place. The modal interpretations that attach to regular progressives do not give the strong impression that they concern planned eventualities. So, for example, although the following claim does concern an event for which planning would typically be required, we do not get the impression that it describes an event that is "on the agenda." Rather, it simply describes a certain sort of event as being underway (though one that is assumed to have a particular trajectory):

(12) Mary is knitting a sweater.

What matters modally in this case is whether Mary ends up completing a sweater across all of the possible circumstances in which her activity continues without interruption. So, what we want to be able to explain is how it is that the modal interpretations of futurates come to be so acutely focused on the "projected" future.

There is one last difference between regular and futurate progressives worth noting. In contrast to regular progressives, only some of which give rise to modal interpretations, *all* futurate progressives give rise to modal interpretations. This is a very striking fact since it appears that one and the same predicate, 'run' for example, characterizes an actual event part in the context of a regular progressive claim but possible events in the context of a futurate progressive claim:

(13) Mary is running (now).

(14) Mary is running (tomorrow).

How is it that a non-outcome-associated predicate like ‘run’ can come to characterize projected running events in all of the possible circumstances relevant to the evaluation of (14)? What explains this radical transformation?

3.2 Similarity

One sort of approach to accounting for these differences between regular and futurate progressives involves adjusting our assumptions about the nature of the event predicates that combine with the progressive to yield futurate interpretations. It might be assumed, for example, that event predicates in the context of futurate progressive claims represent their events as having preparatory or planning stages (stages that precede those that constitute what we may think of as the realization stages of the event) and that these stages are specifically selected by the progressive in the context of these claims.²³ So, for example, a predicate like ‘run’ might represent a running event as being preceded by preparatory stages that remain lexically unspecified, but which may, intuitively, stand in for the scheduling of some such event for the future.

Since the futurate progressive would impose a special requirement on the event predicate with which it combines, it gives us a meaning for the futurate progressive that is at most similar to the meaning of the regular progressive. When combined with an appropriate modal semantics for the progressive, though, the approach does seem to address some of the contrasts between regular and futurate progressives that were noted in section 3.1. It helps us to understand (though see my comments below) why it is that a futurate progressive claim like ‘Mary is crossing the Atlantic tomorrow’ does not commit us to the partial realization of a cross-Atlantic passage since only the preparatory stages of such an event are selected by the progressive in that context. It

²³ One finds this suggestion in Portner (1998), for example. It is also tentatively suggested (though only with telic predicates in mind) by Cipria and Roberts in their analysis of what they call ‘intention-in-the-past’ interpretations of the Spanish imperfecto, which appear to resemble futurate progressives (2000). On their view, these interpretations exploit the preparatory stages of events in contrast to the *progressivo* (which can only represent the realization stages of an event as holding).

also helps us to understand the strong future orientation of the modal interpretations that attach to futurate progressives since these progressives would require that all of the realization stages of their underlyingly represented events be realized after the progressive's time of evaluation. Finally, since the futurate progressive is assumed to have a modal semantics, it can explain why all futurate progressives have modal interpretations.

This account has drawbacks, however. The most serious is that it forces us to assume that the regular and futurate progressive are semantically distinct. What they have in common, on the present approach, is a particular sort of partitive relation. But they differ insofar as the regular progressive has a non-modal semantics and the futurate progressive a modal semantics—a difference that prevents us from offering a fully uniform explanation of the modal interpretations that attach to outcome-associated progressives and futurate progressives and of their absence in the case of non-outcome-associated progressives. Moreover, the account explains the future orientation of futurate progressives in a rather stipulative way. Not only must we assume that the futurate progressive requires that its underlying predicate have preparatory event parts²⁴ but we must assume that it cannot represent any of the non-preparatory parts of the relevant event as holding. This alerts us to one of the striking contrasts between the present proposal and the displacement analysis. In particular, the present proposal makes no use of outcome-association in explaining the exclusion of (non-preparatory) event parts in the futurate progressive case. It fails, then, to offer an explanation for the exclusion of non-preparatory event parts in that environment, which parallels the exclusion of outcomes in the regular progressive case and it simply fails to explain the apparent parallel in the status of the projected outcomes or “planned events” associated with futurate progressive claims and the projected outcomes associated with regular progressive claims.

Moreover, as promising as the general strategy is, a number of issues are also raised by the

²⁴ Since I do not assume that there is a futurate progressive that imposes requirements that are different from the regular progressive, the presence of preparatory stages is not something that is stipulated (or could be) on my account.

assumption that event predicates can represent their events as having preparatory stages. According to it, recall, a predicate like ‘run’ picks out or describes an event with preparatory stages as well as ordinary or realization stages in futurate progressive contexts. There is, though, a tension (if not an incoherence) in the combination of the claim that these preparatory stages are stages of an event that is described as a run event and the claim that they do not realize a run event (so that the progressive ‘Mary is running tomorrow’ does not indicate that a run event is already underway). We might express this tension in the following way. By what right do these preparatory stages count as stages of an event that is so described if they do not constitute (the realization stages of) such an event? And if they do constitute (the realization stages of) such an event, how can we avoid the conclusion that ‘Mary is running tomorrow’ indicates that a run is already underway?

Here is another way at getting at this difficulty. Consider the difference between saying that the content of ‘run’ applies to an event with preparatory and non-preparatory stages and saying that its content applies strictly to the non-preparatory stages of an event. The present proposal, like the first of these options, gets us into difficulty because it is unclear how we can avoid the conclusion, which we do want to avoid, that preparatory stages are constitutive of an event that is described in a given way (in the way that we might think of certain preparations for dinner as constitutive of an event of *making dinner*). The second of these options seems to meet our needs better since it allows us to avoid the assumption that preparatory stages are stages of an event that is described as a run event. We are to assume that while a predicate like ‘run’ (in futurate progressive contexts) is associated with preparatory stages, its content does not apply to those preparatory stages. Note, moreover, that this fits nicely with the observation that when we articulate what the planned eventuality is that is connected with a claim like ‘Mary is running tomorrow’ we can use the very predicate that appears to be embedded by the progressive to characterize it (as in “Mary is planning to *run* tomorrow”). The content of that predicate applies to that “planned” event.

More can be said in favor of this revamped proposal. In particular, as alluded to above, I think more can be said about the event structure of predicates that appear in futurate progressives and, in particular, about how their event structure relates to other familiar event structures, and about why these event structures are present in the futurate progressive environment, all of which will help assuage concerns about how it is that preparatory stages and ordinary event stages come to be glued together.²⁵ As I develop my account, I will have occasion to return to this proposal and to motivate answers to questions like these.

3.3 Identity

In this section, I pursue the idea that the regular and futurate progressive have an identical semantics. As I will show, the displacement analysis extends to futurate progressives in an extremely natural way. This means that we can exploit the same mechanisms that we used to explain the modal interpretations of outcome-associated progressives in explaining the modal interpretations of futurate progressives, which provides a systematic explanation that was missing in the other approaches considered.

Like the event based approach discussed above, this approach requires an adjustment to our assumptions about the event structure of the predicates that combine with the progressive in the context of futurate progressive claims. As I will argue, though, predicates with the required structure can be identified both within and without the progressive environment (so they should not be seen as meeting “special” requirements that are imposed by the *futurate* progressive). Moreover, the assumption that predicates with this event structure are present in the context of futurate progressive claims finds a principled motivation in the interaction between future-oriented temporal

²⁵ These sorts of concerns evidently led Bridget Copley to pursue an alternative conception of the connection between plans and futurate progressives. Her assessment of the proposal is that it is “an interesting one, but it raises the question of why exactly a plan [i.e., preparatory stages] can count as an early stage for an event. To understand this, more must be known about how plans are involved in the meanings of futurates and how they might be assimilated to more general semantic concepts” (2009).

adverbs like ‘tomorrow’ and event predicates that figure in futurate progressive environments.

The present task, then, is to construct an analysis of futurate progressive interpretations that parallels that of the displacement analysis as it applies to outcome-associated progressives. For that reason, it will be worth reviewing what the analysis says about the latter. To begin with, the analysis tells us that the progressive itself only contributes the meaning that a state (or momentary part) of the event predicate with which it combines holds at a given time. So, to take ‘Mary is crossing the Atlantic’ as an example, what that sentence means, according to the analysis, is that a momentary part of a cross-Atlantic passage is realized by Mary in the present. Now, the analysis also tells us that an outcome that is associated with a predicate *never* holds when the event with which it is associated is said to be in progress (i.e., that outcome is invariably displaced in the progressive environment). So, for example, it is never the case that Mary is crossing the Atlantic when she is across the Atlantic. In precisely that case, when outcomes are displaced, the analysis predicts that an outcome-associated progressive will receive a modal interpretation. Modal cognition, if you like, “interprets” outcome displacement as modal displacement. Since the connection between the part of the event that holds when it is said to be in progress and its outcome is mediated by a modal condition, the displaced outcome ultimately plays a role in constraining our judgments about the truth of that progressive sentence.

This basic proposal *heavily* constrains the options for accounting for futurate progressive interpretations, which as we have seen, differ from regular progressives in striking ways. A successful extension of the analysis to the case of futurate progressives would not only be interesting but it would speak in favor of the original proposal as it applies to the case of regular progressives.

Let us consider how the analysis is to extend to the sentence ‘Mary is crossing the Atlantic tomorrow.’ What that sentence would have to mean is that a momentary part of a given type of event (i.e., whatever turns out to be represented by ‘cross the Atlantic’ in this particular context)

holds in the present. As that sentence gives rise to a modal interpretation it must, by the lights of the displacement analysis, involve the displacement of an outcome that is associated with that event predicate. And, finally, that outcome must constrain the truth of that progressive claim via a modal condition. Since the event that intuitively provides the outcome relative to which ‘Mary is crossing the Atlantic tomorrow’ is evaluated is a crossing of the Atlantic by Mary (which is also the event to which ‘tomorrow’ applies), the analysis tells us that the event predicate in question must be associated with an outcome with that characterization.

At this point, a natural hypothesis emerges. It is that the descriptive content of the predicate ‘cross the Atlantic,’ in the context of that claim, applies to the outcome portion of an outcome-associated event leaving the pre-outcome portion of that event uncharacterized. This hypothesis offers us a way of explaining a number of futurate quirks that need explaining. For one, it allows us to explain why ‘Mary is crossing the Atlantic tomorrow’ does not commit us to a partially realized cross-Atlantic passage in contrast to its regular progressive counterpart. The reason is simply that the portion of the event that it represents as holding in the present is not characterized via the descriptive content of the predicate ‘cross the Atlantic.’ It also offers us a way of explaining the connection between those candidate parts of an event that may be represented as holding and any outcome with which they may be associated. What we are in a position to say is that any such part that is said to hold may be related to an outcome as a pre-outcome portion of an event that is associated with it. That much is delivered by the event structure of the predicate in that case. Moreover, this analysis sheds light on the open texture of our characterizations of the *event* that leads up to an outcome—the suggestion variously of a plan or a schedule or a preparatory activity that leads to some main event. After all, since this pre-outcome event is not overtly characterized but is represented as leading to a certain prospective outcome across a variety of possible circumstances, in the context of a progressive claim, it is no wonder that there are a variety of contentful

characterizations that could be seen as applying to it and that emphasize its role in preparing the way for that outcome.

4 A Unified Semantics for the Progressive

As we have seen, the displacement analysis extends very naturally to the case of futurate progressives. What the analysis suggests is that futurate progressives are progressives that embed outcome-associated event predicates (like ‘cross the Atlantic’ in regular progressive contexts) where the overt descriptive content encoded by those predicates applies exclusively to their outcomes (unlike ‘cross the Atlantic’ in regular progressive contexts). Call these predicates ‘*outcome-oriented* predicates’ to signal this link between their descriptive content and their outcomes.

The hope for a unified semantics for the progressive, across all of our distinct progressive classes, depends on whether we can convince ourselves that there are predicates with this event structure and that these predicates do, in fact, figure in futurate progressive claims.

4.1 Outcome-oriented Predicates

In what follows, I defend the claim that futurate progressives *are* simply progressives that embed outcome-oriented predicates of events. The displacement of these outcomes in the progressive environment, combined with the strict application of their descriptive content to these outcomes, leads to modal interpretations that concern the possible—though still only projected—realization of outcomes meeting those descriptions.

This is not, however, to defend the claim that these predicates occur exclusively within the context of progressive claims. In fact, I will defend the view that outcome-oriented predicates also occur outside of the progressive environment. After all, outcome-oriented predicates are intended to explain the differences between these progressive varieties and so have to be present in futurate

progressives, but they are not therefore expected to be present in all and *only* futurate progressives. That would strongly suggest that the progressive makes a distinct contribution within futurate progressive contexts and would, to that extent, undermine the claim that it has a unified semantics.

As I will argue, examples of outcome-oriented predicates occurring outside of the progressive environment have been right under our noses. It becomes clear, for example, that they are plentiful in the literature on aspect—where they are traditionally known as ‘achievements’—once the distinctions necessary to recognize them are in place.

The following sentences provide us with typical examples from this literature:

(15) The train arrived at the station.

(16) The plane landed.

(17) They reached the summit.

In each of these sentences, an outcome that is characterized by an embedded event predicate was realized (e.g., an arrival, a landing, etc.). This feature is common between these sentences and those like them that embed outcome-associated predicates such as ‘cross the Atlantic’:

(18) Mary crossed the Atlantic.

Like the others, (18) entails that the outcome associated with it was realized. Moreover, as with outcome-associated predicates, the outcomes that are encoded by achievement predicates are associated with preceding events. For this reason, we can use an ‘in’-adverbial to describe the temporal extent of the events represented in each (and not merely to describe a period within which the event described is *contained*):

(19) They reached the summit in six hours.

(20) Mary crossed the Atlantic in three days.

Again, the ‘in’-adverbial that modifies the outcome-associated predicate in (20) and is understood to measure the temporal distance between the onset and outcome of that event can equally be understood to modify the achievement predicate in (19) and to measure the distance between the onset and outcome of the event that it represents. The difference between these predicates concerns the *descriptions* that apply to these extended events. Whereas the entire event represented by the outcome-associated predicate in (20) is characterized via the descriptive material of that predicate, only the outcome represented by (19) is characterized via the descriptive material of its predicate.

Achievement predicates provide us with clear instances of outcome-oriented predicates as well as a model for understanding the outcome-oriented interpretations of predicates like ‘cross the Atlantic’ and ‘swim.’ Unlike the latter, achievement predicates are, by default, interpreted as outcome-oriented predicates so that unless this interpretation is overridden, they are associated with this event structure. In virtue of having this event structure, their combination with the progressive results in futurate interpretations:

(21) The train is arriving at the station tomorrow.

(22) The plane is landing this afternoon.

(23) They are reaching the summit momentarily.

As we will see, the same can be said of predicates like ‘cross the Atlantic’ and ‘swim,’ though the predicative material encoded by these predicates has shifted to the outcome portion of the outcome-associated events that they represent on their outcome-oriented interpretations.

Before we consider those instances, I should explain how it is that my analysis of the structure of achievement predicates represents something of a departure from orthodoxy. In the aspect literature, it is standard for these predicates to be analyzed as representing an instantaneous (or nearly

instantaneous) realization of an outcome. A predicate like ‘arrive at the station,’ for example, would be assumed to represent a punctual arrival at the station. On this view, achievement predicates—at least as they occur outside of the progressive environment—do *not* represent an outcome as one that is associated with a preceding event.²⁶

Interestingly, however, some theorists have assumed that, *within* the progressive environment, achievements do have the outcome-oriented event structure that I attribute to them. This sort of proposal has been advanced to account for the fact that achievement predicates *can* combine with the progressive—a fact that would remain mysterious if these predicates did represent instantaneous events within that environment. According to one proposal, for example, the progressive “shifts” the meaning of achievement predicates so they come to represent temporally extended events that include preparatory stages that may be said to be in progress.

Over the following two sections, I will defend my analysis of achievements and, more generally, my view of the role of the outcome-oriented predicates in explaining the contrasts between regular and futurate progressives by (i) responding to the sorts of challenges for my account that can make this standard alternative seem appealing and (ii) by examining the interactions between future-oriented temporal adverbs and those predicates that appear in futurate progressive environments. This should assure us that the acceptance of outcome-oriented predicates in both progressive and non-progressive environments presents us with a much more attractive theoretical option than the endorsement of these predicates within the progressive environment alone.

4.1.1 The Challenge from Temporal Modification

The main challenge to the assumption that achievements represent *temporally extended* outcome-associated events comes from interpretive differences that result from the temporal modification of

²⁶ See Rothstein (2004: pg. 22) who claims that achievements outside of the progressive environment have “no internal structure.”

these predicates and predicates like ‘cross the Atlantic.’²⁷

There are a variety of diagnostics involving temporal modifiers that have been taken to reveal the similarities as well as the differences between these predicates. That both sorts of predicates encode outcomes is, for example, suggested by the fact that one can ask how long the events represented by (24) and (25) took, though one cannot ask this of the eventualities represented by (26) and (27), a sign that only the former represent events with defined onsets and outcomes:

(24) How long did it take John to read *War and Peace*?

(25) How long did it take John to recognize Mary.

(26) #How long did it take John to be short.

(27) #How long did it take John to push carts.

Notice, however, that whereas (24) is interpreted as asking how much time the reading of *War and Peace* took, (25) is interpreted as asking how much time it took for a certain act of recognition to come about. So, whereas (28) does not immediately strike one as offering a paraphrase of (24), (29) does immediately strike one as offering a paraphrase of (25):

(28) How long did it take before John read *War and Peace*?

(29) How long did it take before John recognized Mary?

Since the temporal extent of the event characterized via the predicate ‘read *War and Peace*’ can be queried and since the same cannot be said of the event that is characterized via the predicate ‘recognize Mary,’ the latter is assumed not to represent an event with temporal extent. The only intelligible construal of the ‘How long?’ question in the case of (25), then, is one on which it

²⁷ The examples are taken from Susan Rothstein’s (2004) very clear and compressed presentation of the relevant differences and the diagnostics that reveal them.

queries the temporal extent *between* some contextually given time and the event represented by the predicate (explaining the paraphrasing of (25) in (29)).

This conclusion is also taken to be supported by the fact that aspectual verbs like ‘start,’ ‘finish’ and ‘stop’ interact differently with these predicates. Whereas these aspectual verbs combine with a predicate like ‘read *War and Peace*,’ they do not readily combine with an achievement predicate like ‘recognize Mary’²⁸:

(30) John started/stopped/finished reading *War and Peace*.

(31) #John started/stopped/finished recognizing Mary.

Since these aspectual verbs divide up internally complex events, the failure of their combination with achievement predicates is taken to suggest that they do not represent events with internal complexity. Of course, if achievements represent events that are instantaneous, it would follow that these events lack this complexity.

There are also temporal modifiers that appear to provide instantaneous time frames that exactly align with the events represented by ‘arrive,’ though they do not exactly align with the events represented by ‘paint a picture.’ Modification with a punctual ‘at’-phrase, for example, yields different interpretive effects across the following sentences:

(32) The guest arrived at midnight.

(33) Mary painted a picture at midnight.²⁹

Whereas the ‘at’-phrase in (32) locates the event characterized via the predicate ‘arrive’ at midnight, it does not have this effect in connection with the event characterized via the predicate ‘paint a

²⁸ Let us set aside habitual interpretations and interpretations of the event predicate on which it describes a drawn out or slow motion recognizing since that quite clearly involves a shift of interpretation.

²⁹ Rothstein claims that this sentence is uninterpretable and suggests that it stands in contrast to a sentence like ‘John ran at 9pm,’ which can be interpreted as meaning that that event began at midnight, but I think that (32) can also be associated with this sort of interpretation.

picture.’ Rather, that event is interpreted as beginning at midnight. So, it would appear that ‘at’-phrases that pick out instants locate the events represented by predicates at those instants if those events are themselves punctual or instantaneous. If that is right, this diagnostic supports the assumption that ‘arrive’ represents an instantaneous event while ‘paint a picture’ does not.

Finally, although it might appear that achievement predicates are associated with preparatory events, a variety of diagnostics are taken to show that this is not the case. In contrast to predicates like ‘paint a picture,’ which are required to have preparatory or pre-outcome stages as a matter of meaning, predicates like ‘arrive’ only seem to have preparatory events as a result of “defeasible, contextual inference” we are told (Rothstein 2004: pg. 41). Consider, to begin with, that (34) and (35) are acceptable when modified by ‘in a flash,’ which simply locates the event characterized by these predicates within a short (and apparently undifferentiated) block of time:

(34) The genie arrived in a flash.

(35) The genie painted a picture in a flash.

Matters are different, however, if these sentences are modified by an additional ‘in’-phrase:

(36) The genie arrived in a few minutes in a flash.³⁰

(37) #The genie painted a picture in a few minutes in a flash.

The sentence in (37) is thought to be contradictory, unlike (36), because the modifier ‘in a few minutes’ is interpreted as measuring the temporal extent of the event represented by ‘paint a picture’ (preparatory stages and all) despite the fact that the implication of ‘in a flash’ is that *there are no preparatory stages* for ‘in a few minutes’ to modify outside of that short block of time. As a result the sentence is interpreted as indicating that something took both a short amount of time to

³⁰ To get the relevant interpretation, it may be helpful to imagine the genie doing something in order to make an appearance.

happen and a longer amount of time to happen. The contrast between (36) and (37) is taken to suggest that (36) does *not* represent an event with preparatory stages. Rather, (36) is interpreted as meaning that the genie's instantaneous arrival occurred within a short block of time that is itself located within a larger period of time during which the genie prepared to arrive—or so *context* suggests.

4.1.2 Responding to the Challenge

The battery of diagnostics just considered is taken to show—and not unreasonably—that achievement predicates represent instantaneous events. This threatens to undermine the project of providing an analysis of the progressive on which the differences between non-futurate and futurate progressive varieties are due, in part, to semantic differences at the level of the predicates with which the progressive combines.

How, then, are we to make the case that the differences seen across these diagnostics are linked to the differences between outcome-oriented predicates (like 'arrive') and simple outcome-associated predicates (like 'paint a picture')? Notice, as a start, that the fundamental assumption of the foregoing discussion is that temporal modifiers that modify predicates like 'arrive' target the events represented by those predicates *in just the same way* that they target the events represented by predicates like 'paint a picture.' Differences in the patterning of these predicates with respect to temporal modification are, for that reason, taken to reveal differences in the structure of the events that they represent. So, for example, from the fact that aspectual verbs like 'start' and 'finish' combine with a predicate like 'paint a picture' but not with a predicate like 'arrive,' we are supposed to infer that the event *represented* by the latter does not have duration while the event *represented* by the former does.

That is not, however, an assumption that we are forced to adopt. The patterns exhibited by

achievement predicates across our diagnostics are indeed different from the patterns exhibited by predicates like ‘paint a picture,’ but these patterns can be explained by an alternative assumption. That is, we can assume that temporal modifiers are sensitive to those parts of an event that are *characterized* via the descriptive content of a predicate. The differences in the patterning of our predicates with respect to temporal modification are due, on this assumption, to the fact that the descriptive material encoded by these predicates gets divvied up in different ways—applying to the entire event represented by a simple outcome-associated predicate like ‘paint a picture’ and to the outcome of the event represented by an outcome-oriented/achievement predicate like ‘arrive.’

If we review the diagnostics just considered (taking them in reverse order), we will see that this assumption allows us to explain the contrasts in the patterning of our predicates as well as to explain some features that go unaccounted for on the alternative approach. Consider, for example, the contrast in the acceptability of the following sentences:

(38) The genie arrived in a few minutes in a flash.

(39) #The genie painted a picture in a few minutes in a flash.

Far from suggesting that ‘arrive’ represents an instantaneous event while ‘paint a picture’ represents a non-instantaneous event, this contrast actually suggests that temporal modifiers *can* discriminate between these predicates on the grounds that the descriptive content that they encode gets mapped in different ways to the events that they represent. Let us continue to assume that ‘in a few minutes’ in (39) is interpreted as indicating the temporal extent of the event represented by the predicate ‘paint a picture.’ In that case, we should conclude that (39) appears to be a contradiction because the event of painting a picture cannot have taken place in a few minutes and in a flash (though we should now wonder why ‘in a flash’ cannot target the outcome of the event represented by that predicate—a point to which we return below). But, contrary to the approach we initially

considered, we should adopt the exact same assumption with respect to the default interpretation of ‘in a few minutes’ in (38). What we should say, given present assumptions, is that (38) does not suggest a contradiction because ‘in a few minutes’ targets the entire event represented by ‘arrive,’ including the preparatory portion that leads to its associated outcome, while ‘in a flash’ targets the outcome to which its descriptive content applies (e.g., the genie’s instantaneous arrival). Clearly, there is no contradiction in describing an entire event as taking a certain amount of time while also describing a proper part of that event as taking a smaller amount of time.

These assumptions comport well with the interpretations that ‘in’-adverbials seem to receive in combination with achievement predicates. As I briefly mentioned last section, an ‘in’-adverbial like ‘in a few minutes’ appears to be interpreted as providing the temporal extent of a represented event both when combined with an achievement predicate like ‘arrive’ and when combined with a predicate like ‘paint a picture.’ This is an insufficiently appreciated point. One often encounters the assumption that these adverbial phrases only have a ‘containment’ interpretation when combined with these predicates—an interpretation on which they merely locate the occurrence of an event *within* a period of time. However, if ‘in’-adverbials give rise to the same default interpretations across these predicates, there needs to be a *temporally extended* event whose extent is measured by such phrases—a possibility that cannot be accommodated if one thinks that achievement predicates represent instantaneous events.

My approach, in contrast to the alternative, also provides an explanation for why it is that the punctual ‘in a flash’ targets the outcome represented by the predicate ‘arrive,’ though not the outcome represented by the predicate ‘paint a picture.’ That it cannot do so in the latter case is clear from the fact that (39) does not have an intelligible interpretation, which it would on such a reading. Again, appeal to the differences in the way that the descriptive content of these predicates applies to the events they represent gives us a plausible answer. Whereas the descriptive material

of ‘arrive’ applies to the outcome it represents, the descriptive material of ‘paint a picture’ applies to the whole event that it represents. This renders the outcome represented by the first available for modification (so that the arrival may be said to occur in a flash), though not the *outcome* represented by the latter.

This explanation is further corroborated by the differences in the patterning of these predicates with a punctual ‘at’-phrase such as ‘at midnight.’ Consider again the diagnostic that was presented in the last section:

(40) The guest arrived at midnight.

(41) Mary painted a picture at midnight.

Whereas (40) is interpreted as locating the outcome of an extended event (i.e. an arrival) at midnight and cannot be interpreted as indicating that some process that culminated in that outcome was initiated at midnight, the reverse is true for (41). It cannot be interpreted as locating the outcome of an extended event (i.e. the completion of a painting) at midnight, though it can be interpreted as indicating that some process that culminated in that outcome was initiated at midnight. These facts can be explained by assumptions that we have already been led to make, namely, that the application of the descriptive content of ‘arrive’ to the outcome represented by it renders that outcome available as a target for temporal modification whereas the application of the descriptive content of ‘paint a picture’ to the entire event represented by it—not to its outcome alone—renders that outcome unavailable as a specific target for modification (just as we saw in the case of the punctual phrase ‘in a flash’). The *sensitivity* of punctual ‘at’-phrases to those parts of an event that are characterized is suggested by the interesting fact that only the characterized portions of the events represented by ‘arrive’ and ‘paint a picture’ can be located in relation to the time indicated by ‘at midnight,’ as shown by the fact that (40) cannot be interpreted as meaning

that some process is initiated at midnight that ends in a given outcome though (41) is interpreted in this way.

Aspectual verbs such as ‘start’ and ‘finish’ also seem to target the characterized portions of events. Recall that these verbs can modify a predicate like ‘paint a picture’ (as in ‘Mary finished painting a picture’) though they cannot modify a predicate like ‘arrive.’ While this was earlier taken to support the claim that achievement predicates do not represent events as having internal complexity, we are now in a position to entertain a different possibility. In particular, we are in a position to assume that the *described* portion of the event that ‘arrive’ represents does not have internal complexity though the event described by ‘paint a picture’ does.

Note, though, that when an aspectual verb combines with a predicate like ‘paint a picture,’ it makes certain forms of temporal modification available that are not otherwise available. So, for example, ‘Mary finished painting a picture at midnight’ appears to have the interpretation that is denied to ‘Mary painted a picture at midnight.’ But that should not cast doubt on my earlier claim that ‘at midnight’ cannot isolate the outcome that ‘paint a picture’ represents. Rather, we should look to the fact that ‘finish’ itself contributes a content that provides for the appropriate segmentation of the event into its terminal or final phase—a phase that can then be located at a particular time by a further temporal modifier.

Finally, we arrive the last of our diagnostics. Consider again the following questions:

(42) How long did it take John to read *War and Peace*?

(43) How long did it take John to recognize Mary?

We had earlier assumed that since (43) cannot be interpreted as querying the temporal extent of an instantaneous event, it naturally comes to be interpreted as querying the amount of time between some contextually relevant time and the realization of that event. But it is worth pausing now to

consider whether we are in a position to predict that (43) is paraphrasable as the question ‘How long did it take *before* John recognized Mary?’ *if* we grant that assumption. It seems, actually, that we are not. After all, a “How long”-question appears to presuppose that the event it queries is temporally extended but this presupposition is not in general satisfied either through the semantics of these event predicates *or* through pragmatic mechanisms³¹.

The assumption that ‘arrive’ has an outcome-oriented structure can help us out of this muddle. Since ‘read *War and Peace*’ represents a temporally extended and outcome-associated event and since the descriptive content of that predicate applies to the whole of that event, the length of that event (the distance between its onset and outcome) is what is queried by the ‘How long’-question. Since ‘arrive’ also represents a temporally extended and outcome-associated event, the distance between its onset and outcome can also be measured and queried by that sort of question. But there is a difference. Only the outcome of that event is characterized and it is instantaneous. So that question cannot be interpreted as asking how long *it* took. Instead, the question has to be interpreted as asking about the time between the onset of the event represented by that predicate and that characterized portion (in the same way that ‘in’-adverbials—‘in a flash’ excepted—target the characterized portions of outcome-oriented predicates but still have to measure the distance between those outcomes and the onsets of the events with which those outcomes are associated).

4.1.3 Shifted Interpretations

The preceding discussion provides us with reason to think that achievement predicates like ‘arrive’ have outcome-oriented event structures. In what follows, I want to develop the position that other predicates, although not interpreted as having these structures by default, can come to be interpreted as outcome-oriented predicates. This is a key claim for me given that my argument

³¹ ‘The genie arrived in a few minutes in a flash’ does not appear, at first sight, to have a contradictory interpretation. So, it cannot be argued that the default (though still defeasible) presumption is that achievement predicates represent events that are preceded by preparatory activities.

requires that the predicates that combine with the progressive to yield futurate progressives have this structure.

This may strike one initially as a surprising claim. After all, some of the predicates that figure in futurate progressive claims superficially appear to receive non-outcome-associated interpretations or even simple outcome-associated interpretations outside of this environment. But these predicates are indeed transformed when they appear in the context of futurate progressive claims. Take for example, predicates like ‘run’ and ‘run a race,’ which appear in the context of the following futurate progressives:

(44) Mary is running tomorrow.

(45) Mary is running a race tomorrow.

The predicate ‘run’ is normally interpreted as a non-outcome-associated predicate but in the context of (44) comes to be interpreted as a predicate that has an outcome and whose descriptive content is shifted or oriented to that outcome. In this case, it is a running (that occurs tomorrow) that serves as the outcome of the event in progress. Similarly, the predicate ‘run a race,’ is normally interpreted as a simple outcome-associated predicate but in the context of (45) it comes to be interpreted as a predicate whose descriptive content applies not to the whole of an outcome-associated event but to its outcome alone. In this case, it is the the running of a race (tomorrow) serves as the relevant outcome of the event in progress.

What we want to understand, then, is how it is that these predicates can come to have such shifted interpretations both in the context of progressive and non-progressive claims. It will be helpful to start by considering how predicates like ‘run’ and ‘run a mile’ might come by these interpretations in non-progressive contexts. Consider the following claims in which these predicates are modified by ‘in’-adverbials:

(46) Mary ran in five minutes.

(47) Mary ran a race in five hours.

Note that these sentences have an interpretation on which they supply the time elapsed between the onset of an event and the realization of its associated outcome (characterized via the descriptive content of ‘run’ and ‘run a race,’ respectively). Here we have, again, predicates with outcome-oriented structures. It should be noted that, although available, these interpretations can be quite strained. This is not absolutely general, however, as the following sentence shows:

(48) The baby crawled in six months.³²

(48) tells us that the baby’s crawling was the outcome of some preceding event, which took six months. In this case, it is not at all difficult to conceptualize a developmental period that lasted six months and led to that outcome. In fact, this interpretation leaps to mind. It is, by contrast, difficult to conceptualize an event that lasted five minutes and led to a run by Mary, which is roughly what (46) requires (though it helps to imagine, for example, that Mary requires that much time to overcome her strong desire not to run).

The ‘in’-adverbial that combines with these sentences plays no small role in bringing about the possibility of these shifted interpretations. It appears that *its* interpretation as a phrase that measures the distance between the onset and outcome of the event represented by the predicate it modifies requires a predicate like ‘run’ to be interpreted as an outcome-associated (not non-outcome-associated) predicate. In both (44) and (45), modification by an ‘in’-adverbial opens up the possibility of mapping the descriptive content encoded by those predicates onto the outcome portions of the events they represent. This stands in stark contrast to the interpretations that the following pairs of sentences invite:

³² This example is due to James Martin.

(49) Mary ran.

(50) Mary ran a race.

Taken together, this suggests that in thinking about how it is that predicates like ‘run’ and ‘run a race’ come to be associated with outcome-oriented structures in the context of futurate progressive claims, it will pay to closely consider the role of temporal adverbs in this process.

Interestingly, when the progressive combines with predicates like ‘run’ and ‘run a race’ these predicates need to occur with a future-oriented temporal adverb in order to receive futurate interpretations, while predicates like ‘arrive,’ which naturally have an outcome-oriented event structure, do not:

(51) Mary is running tomorrow.

(52) Mary is running a race tomorrow.

(53) The train is arriving (tomorrow).

But how exactly are future-oriented temporal adverbs implicated in shifting the interpretation of predicates like ‘run’ and ‘run a race’?

I propose that these future-oriented adverbs create a temporal anchor for characterized outcomes within the progressive environment (much like an ‘in’-adverbial creates an anchor for outcomes outside of the progressive environment). When the progressive combines with an event predicate it indicates that a part of the event represented by that predicate is realized at a given time (though never its outcome). But that part of the event that is realized at the time at which the event is said to be in progress cannot be modified by a future-oriented temporal adverb. If ‘Mary is running tomorrow’ is true, clearly, it cannot be interpreted as meaning that a part of a certain type of event is underway in the present and it occurs tomorrow. So, we have the progressive, on the

one hand, which indicates that a part of an event represented by its embedded predicate is realized at a given time and a future-oriented modifier, on the other, which modifies that predicate and indicates that some part of the event it represents happens in the future (relative to that time). Now, since a future-oriented adverb like ‘tomorrow’ targets the *characterized* portion of an event and since a future temporal adverb cannot target that part of an event that the progressive represents as holding at a given time (and that may be *any* part up to but not including its associated outcome) future temporal adverbs have to be understood as modifying outcome-oriented predicates in the progressive environment. So, we have, as a result of the interaction between the progressive and future-oriented temporal adverbials, a recipe for interpreting the event predicates that appear in that context as having outcome-oriented event structures.

This also helps to shed light on why it is that predicates like ‘run’ and ‘run a race’ have to be accompanied by future-oriented temporal adverbs if they are to contribute to futurate progressive interpretations, while predicates like ‘arrive’ do not. When a predicate of events like ‘arrive’ combines with the progressive, the descriptive content of that predicate already applies to its outcome. It has the sort of future orientation that predicates like ‘run’ and ‘run a race’ are shifted into having. So, the modification of this predicate with something like ‘tomorrow’ only makes specific when its outcome is slated to occur.

4.1.4 Some Consequences of the Extended Displacement Analysis

There are some loose ends to tie up before closing. In particular, I would like to note two consequences of the extended displacement analysis, which exactly parallel the consequences of the original analysis discussed in section 2.3.3. In my view, an appreciation of them deepens conviction that displacement is the key to accounting for the progressive in all of its variety.

I want to begin by revisiting the question of the source of the modal interpretations that

attach to outcome-associated progressives. Recall that in my earlier discussion of this question, I defended a certain negative thesis, namely, that these modal interpretations cannot be explained exclusively in terms of the meanings of the natural language expressions that are implicated in their emergence. One of the possibilities that I considered but ultimately rejected was that these interpretations have their source in the meanings of outcome-associated predicates. This question might be raised anew in connection with the outcome-oriented predicates of events that occur in the context of futurate progressives. After all, regular and futurate progressive sentences differ with respect to the predicates of events that they embed. So we might ask, “Do those predicates that appear in futurate progressives also fail to give rise to modal interpretations outside of a displacement environment?”

What we see conforms exactly to the predictions of the displacement hypothesis. Outcome-oriented predicates fail to exhibit the modal interpretations connected to their counterparts in progressive contexts when they represent complete events, that is to say, events with non-displaced outcomes. So, for example, (54) is interpreted as indicating that a train did actually arrive at the station at noon (whatever conditions are required for that—modal or otherwise) and not, in addition, that it would have done so (again, whatever conditions are required for it to do so—modal or otherwise) across a range of inertial possible circumstances:

(54) The train arrived at the station at noon.

The same is true for a shifted predicate like ‘cross the room in a minute’ in the context of the following non-progressive claim (where we might imagine that Mary takes that action after a minute of deliberation concerning whether to do so):

(55) Mary crossed the room in a minute.

The truth of (55) does not require that that outcome was bound to occur, just that it actually did. In

this respect, these predicates pattern just like their (simple) outcome-associated and non-outcome-associated counterparts.

The second question concerns the relevance of outcome-oriented predicates like ‘arrive’ to debates surrounding the modal status of progressive sentences and their relevance to the question of whether there is an entailment from sentences describing completed events to sentences describing those events as in progress. As I noted earlier, the displacement analysis predicts that there is not an entailment of this sort in the case of claims that embed (simple) outcome-associated predicates like ‘cross the Atlantic.’ This can seem unintuitive and it can be difficult to construct natural cases that show this entailment pattern to be invalid. And though I do think that there are such counterexamples, explaining *why* they can be difficult to isolate is a matter of theoretical, not just rhetorical, interest. By the same token, if there were a class of sentences that yielded more clear counterexamples to this entailment pattern, it would be a matter of theoretical interest to explain why and to explain what makes them better suited to this purpose.

We are now in a position to see that there is a class of predicates, which clearly shows that this entailment pattern is invalid, namely, those predicates that are embedded by futurate progressives, notably achievement predicates like ‘arrive.’ So, for example, it is easy to imagine a scenario in which ‘The train arrived at the station’ is true, but in which its progressive counterpart, ‘The train was arriving at the station’ is not (perhaps because the train tracks were in such bad condition that it was not expected to make it to the station and only very narrowly did). Similarly, we can readily call to mind a situation in which ‘Mary won the match’ is true, but ‘Mary was winning the match’ is not simply because there was no moment when this outcome was bound to occur in the sense relevant to progressive interpretation. In fact, the failure of this entailment is so plain that, as far as I know, only one theorist has had the courage to claim that an entailment *does* hold for sentences

that embed predicates of this sort³³ (and even he later recanted³⁴).

Still, the surprising fact is that this class of predicates is not regarded as providing a fund of data for adjudicating debates about the modal status of progressive sentences. This is because it is assumed that predicates like ‘arrive’ represent instantaneous events in the context of claims like ‘The train arrived at the station’ but temporally extended events in the context of claims like ‘The train was arriving at the station,’ so that there are not appropriate event structures in place to support an entailment from the former to the latter. On this way of understanding the relevant event structures, the absence of this entailment reveals nothing of interest about the modal status of (certain) progressive claims.

If my view about these predicates is correct, however, they do provide us with clear counterexamples to this entailment pattern and, therefore, offer support for the displacement analysis and its view of the modal status of outcome-associated progressives. The reason that it is easier to generate counterexamples with predicates like ‘arrive’ than with predicates like ‘cross the Atlantic,’ I propose, is that unlike the former, the latter characterize the entire course of the events that they represent—including their developmental period. This can make it difficult to construct natural cases in which an event that falls under such a characterization unfolds though it does so in an accidental or non-modally robust way, particularly in those cases in which that characterization imposes incremental constraints on the development of an event (as with a predicate like ‘cross the Atlantic,’ in contrast to a predicate like ‘eat a third of the chocolates’).

³³ See Szabó (2004).

³⁴ See Szabó (2008).

5 Conclusion and Future Directions

This paper has focused on the solution to two problems of unification that stem from traditional ways of thinking about the semantics of the progressive. The first problem is one that has, until recently, been overlooked. It is to provide a semantics for the progressive that can generalize across progressive claims like ‘Mary is swimming’ and ‘Mary is crossing the Atlantic.’ This turns out to be a difficult problem because these progressives give rise to interpretations with very different temporal and modal properties. The second problem is to provide a semantics for the progressive that can be generalized even further—to cover futurate progressives like ‘Mary is crossing the Atlantic tomorrow,’ which exhibit other temporal and modal peculiarities.

Despite these differences, however, it is possible to provide an illuminating semantics for the progressive that generalizes across these progressive classes. The key strategy involves attributing a simple meaning to the progressive and relating these semantic complexities to the event predicates with which the progressive combines. On my view, the progressive tells us only that a state of a given type of event holds at a time. But though it contributes this meaning alone, it interacts in different ways with its embedded event predicates. According to the account I have developed, ‘Mary is swimming’ differs from ‘Mary is crossing the Atlantic’ insofar as the latter embeds an event predicate that is associated with an outcome and the former does not and ‘Mary is crossing the Atlantic tomorrow’ differs from both insofar as it embeds an event predicate that is associated with an outcome to which its descriptive content exclusively applies. When outcome-associated predicates combine with the progressive, their outcomes are displaced and modal cognition interprets that displacement as modal displacement. Moreover, the differences in the modal interpretations that attach to futurate and non-futurate progressives can also be explained in terms of whether the descriptive content of embedded outcome-associated predicates applies exclusively to those outcomes (in which case we get futurate modal interpretations) or not (in which case we get non-futurate

modal interpretations). That is what explains why we see the modal interpretations that we do in just those cases in which we do.

The successful extension of the analysis that I developed as a solution to the first problem of unification to the second problem of unification is of interest for a few reasons that are worth mentioning here. First, it offers very strong evidence in favor of my original analysis insofar as that analysis heavily constrained the space of solutions that counted as admissible for the second unification problem. Second, as I have already mentioned, my explanation for the modal interpretations that attach to predicates with displaced outcomes should be seen as revealing aspects of the modal structure of cognition, not the modal structure of language. So, the successful extension of my analysis to the case of futurate progressives can be seen as furthering our understanding of the interface between natural language and modal cognition. Finally, the extension of my analysis to the case of futurate progressives also suggests the possibility of further extensions.

Perhaps the most obvious candidate for a displacement style analysis is the simple futurate, which appears to have much in common with futurate progressives. Consider the following examples:

(56) The Yankees are playing the Red Sox tomorrow. (futate progressive)

(57) The Yankees play the Red Sox tomorrow. (simple futurate)

In both cases, what we find is a modal condition requiring the possible realization of a certain planned eventuality (i.e., a Yankee-Red Sox game occurring tomorrow) across a range of possible circumstances. Consistent with this, it is clear that the actual occurrence of a Red-Sox game tomorrow is neither necessary nor sufficient for the truth of these claims.

There is no question that we should aim for a systematic explanation for these common modal interpretations. Despite this one finds in the literature on futurates, the view that the modal

interpretation of (56) is due to the modal meaning of the futurate progressive and that the modal interpretation of (57) is due to the semantics of genericity.³⁵ This last suggestion is especially puzzling. (57) concerns a particular planned eventuality and, for this reason, would appear to be strikingly unlike a generic claim. An extension of the displacement analysis to the case of simple futurates holds out the promise not only of a more revealing analysis of simple futurates but also a more systematic explanation of futurate interpretation.

Another obvious frontier is the imperfective system. The possible connection between the progressive (both in its regular and futurate guise), simple futurates, and the imperfective has been noted by a number of authors.³⁶ And although there have been attempts at a unified *modal* analysis of the imperfective, the displacement analysis offers us a different way of thinking about what imperfective interpretations might have in common (e.g., displacement), a way of thinking about what they do not have in common (e.g., we might ask and provide different answers for questions like, “How do various imperfective forms come to be associated with outcomes, if they are?” “How do their outcomes come to be displaced, if they do?”) and a way of avoiding a commitment to modal meanings where they are unwanted—which is especially valuable given not all of the range of interpretations associated with the imperfective are modal (i.e., some regular progressives do not have modal interpretations).

We have seen the displacement analysis work for us in similar ways throughout this paper. Beyond these particular applications, however, the analysis invites us to consider the possibility that there are deep and systematic explanations for aspects of interpretation that are not ultimately anchored in natural language expressions and that attention to the limits of language can lead us to ask more fruitful questions about what the contributions of language are.

³⁵ This claim is defended at length in Copley (2009).

³⁶ See for example, Higginbotham (2009), Ippolito (2004), Copley (2009), Dowty (1979), and Cipria and Roberts (2000).

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