

How to Cross the Atlantic Without Crossing It

Abstract

This paper focuses on a decades-long debate concerning the modal status of the progressive and defends the thesis that the debate, though in a certain sense localized, actually gives us reason to abandon an approach to explanation within linguistics and philosophy that is currently in ascendancy; it presents us with a crack in the foundation. In particular, I argue that while some progressives give rise to substantive modal interpretations—namely, those that pattern with ‘Mary is crossing the Atlantic,’ which is associated with an arrival across—others do not—namely, those that pattern with ‘Mary is swimming,’ which *isn’t* associated with an outcome. Once these patterns are in view, the principal difficulty in accounting for them is immediately apparent: if we assume that progressive contributes a substantive modal condition, we fail to account for half of the pattern and if we assume that it doesn’t, we fail to account for the other half. Since both parties to this debate assume that systematically available modal interpretations are to be explained in terms of modal meanings and their absence in terms of the absence of modal meanings, neither is in a position to account for these interpretations, explaining, in my view, the tendency to treat all progressives on the model of either ‘crossing’- or ‘swimming’-progressives. But though this approach to explanation is entrenched, it isn’t the only one. This paper is an attempt to motivate an alternative and, specifically, to conceptualize the relationship between interpretation and form in a way that makes space for the possibility that these modal *interpretations* are not to be explained in terms of modal *meanings*.

This paper focuses on a long-standing debate concerning the modal status of the progressive. The debate is notable for two reasons: the first being that it is deep, turning not on matters of detail—on how exactly to analyze the modal conditions contributed by the progressive—but on the substantive issue of whether or not the progressive has a modal meaning at all, and the second being that it has persisted for decades despite the fact that it hinges on a small set of entailment patterns (on the question of whether it follows from the fact that something happened that it was happening and on whether the reverse is true). I am going to argue that this debate has persisted not because the relevant linguistic facts are particularly hard to discern, but because they invite, perhaps even necessitate, a departure from the dominant approach to explanation in this arena; theorists on both sides of the debate have been unable to reconcile their approaches not because of what they disagree about but, ultimately, because of what they agree on.¹

Broadly speaking, this approach to explanation treats systematic aspects of interpretation as requiring an explanation in terms of linguistic form; in the context of the present debate, it manifests in the thought that the presence of modal interpretations is to be explained in terms of a modal element and the absence of modal interpretations in terms of the absence of a modal element. The difficulty with progressives, I will argue, is that some do not give rise to modal interpretations (namely, those patterning with ‘Mary is swimming’) while others do (namely, those patterning with ‘Mary is crossing the Atlantic,’ which is associated with Mary’s arrival across the Atlantic). It becomes difficult to account for both of these patterns if that requires attributing a modal meaning to the progressive. This is, in my view, why we find that the parties to this debate have either (unwittingly) assimilated progressives to the model of ‘swimming’-progressives or to the model of ‘crossing’-progressives.

I will argue for an alternative approach to explanation, one that allows us to explain the presence of modal interpretations without assuming the presence of a modal meaning. My engagement with the modal debate surrounding the progressive will be largely critical and my engagement throughout primarily conceptual, guided by the aim of making the case that it is a mistaken but firmly entrenched conception of explanation that is at work in (mis-)shaping the terms of this debate. The proposal that I will sketch is an attempt to expand our conceptual horizon—to challenge this entrenched view of explanation, and more particularly, this view of the relationship between interpretation and form, which has captured the imagination of philosophers and linguists alike. My modest aim is to present a challenge to the dominant approach to explanation, to press the need for the exploration of an alternative, and to make an alternative clear enough in outline that the details might be thought to be worth pursuing in this and other domains.

THE MODAL DEBATE: ORIGINS

The earliest motivation cited in support of modal accounts of the progressive comes from what has been termed ‘the imperfective paradox’ (Dowty 1977). The puzzle begins with the observation that certain verb phrases—those that characterize events as having ends or distinguished endpoints—appear to license different entailments across progressive and non-progressive environments as compared with verb phrases that do not characterize events as having ends. We see, for example, that (1) does not entail (2), though (3) does intuitively, even if not strictly, entail (4):

- (1) Mary was crossing the Atlantic.

¹ Representatives of the modal camp include, among others, (Dowty 1977), (Dowty 1979), (Landman 1992), (Portner 1998), (Higginbotham 2004), (Hallman 2009b), and (Mayerhofer 2014). Representatives of the non-modal camp include, among others, (Bennett and Partee 1972), (Bennett 1981), (Vlach 1981), (ter Meulen 1985), (Parsons 1989), (Szabó 2004), and (Szabó 2008).

- (2) Mary crossed the Atlantic.
- (3) Mary was swimming.
- (4) Mary swam.

Although (1) describes the progress of an event that is associated with a certain end, namely, Mary's arrival across the Atlantic, the progressive environment excludes the possibility that the in-progress passage is complete relative to the progressive's time of evaluation; if Mary is crossing, then she *isn't* across. Moreover, that event's being in progress neither entails that there was nor that there will be a complete cross-Atlantic passage by her; her flight may have had to make an emergency landing. The imperfective paradox or puzzle comes into view when one combines the observation that progressive sentences embedding such event phrases invariably characterize events that are and may remain incomplete with the assumption that their event predicates invariably characterize events that are complete (e.g., cross-Atlantic passages). The dominant response to this puzzle has been to say that the truth of (1) requires the *possible* completion of a cross-Atlantic passage, not the actualization of one, and to attribute this modal condition to the progressive.

One worry about this particular justification for modal theories of the progressive concerns the assumption that verb phrases like 'cross the Atlantic' in (1) invariably characterize events that are complete.² There *is* an insight here to be captured, but one has to take care in articulating it.³ The insight, in my view, is that event predicates like 'cross the Atlantic' in (1) should not be assimilated to event predicates like 'swim' in (3) since 'crossing'- but not 'swimming'-progressives are understood with reference to an end. That (1) is understood with reference to an end is apparent from the fact that we can infer that the event that it describes is not presently at an end, that Mary's activity is aimed at an end (in appropriate contexts), that the event in progress properly concludes when she arrives across the Atlantic, etc., observations that have no parallel in the case of (3). But while some non-modal responses to the imperfective puzzle have run afoul of this insight in claiming, for example, that the event predicates in (1) and (3) both characterize events that are process-like or continuous (where this may require the progressive, in the one case, to "shift" the type of the event predicate with which it combines),⁴ non-modal theories of the progressive can also, in principle, capture this insight.

The mistake on the part of modal theorists has been to assume that our understanding these predicates with reference to their ends in progressive contexts has to be spelled out in terms of their characterizing events that *realize* those ends (possibly or actually). One may, instead, take the view that the progressive represents a non-final stage of an event that is associated with an end and simply characterizes that stage as underway. On this approach, (1) no more forces the realization

² Some non-modal theorists have challenged the assumption that event predicates like 'cross the Atlantic' exclusively represent complete events (rather than, say, culminated and non-culminated events). See, for example, (Bennett 1981), (ter Meulen 1985), and (Parsons 1989).

³ For an early critical discussion of Dowty on this particular point, see (Declerck 1979). Declerck's response emphasizes the risks in assuming that event predicates like 'cross the Atlantic' and 'draw a triangle' are associated with ends irrespective of their linguistic context (cf. 'Mary drew a triangle *for a minute*' vs. 'Mary drew a triangle *in a minute*'). He takes Dowty to have missed, in particular, the role of the progressive in producing a characterization—of an event stage, let us say—that does not itself have an end, but this response itself misses the insight that I attempt to spell out more carefully.

⁴ See, for example, (Michaelis 2004) and (Michaelis 2006) for the claim that the progressive shifts the type of an event predicate like 'cross the Atlantic' (one that designates an end) to the type of 'swim' (one that does not) and then selects a stage of an event of the shifted type. This approach fails to account for the fact that (1) *is* understood with reference to an end. Michaelis assumes that the progressive selects a stage from an activity, which she describes as "preparatory" (Michaelis 2004: 38), but it is only preparatory in name; what we see when, for example, 'draw a triangle' is interpreted as an activity predicate, as in 'Mary drew triangles/a triangle for a minute,' is that there is an activity (triangle-drawing) that is sufficient unto itself (and no more preparatory, intrinsically, than swimming is).

of a cross-Atlantic passage (possible or actual) than saying ‘Mary began to cross the Atlantic’ does. That sentence tells us that there was a beginning of an event of a certain type—that beginning is understood reference to that event, presenting us with an aspect of it—but there is no remainder that we seek. Talking about this aspect of the event is, for example, fully compatible with the event’s only ever being partial, even under ideal conditions. (Sisyphus’s curse was ever to begin climbing a mountain that it wasn’t possible for him to climb.)

The conviction that only the realization of their respective ends could distinguish between an in-progress event of drawing a triangle and an in-progress event of drawing a circle (at least up to a certain point) encouraged the first modal theorist, David Dowty, to assume that events associated with ends have to be realized in full (1977: 46). Since they need not be realized under actual circumstances, it was a short-step to concluding that they must be realized under possible ones. However, a stage of a circle drawing event and a stage of a triangle drawing event need not be thought of, merely, as in-progress drawing events in the absence of the realization of their ends; they can be thought of as stages selected from events of distinct types and so as being distinct from each other in that respect (just as the beginning of a cross-Atlantic passage isn’t just a “beginning” or a swim, even if there is swimming, but a certain aspect of an event that is associated with an end). The imperfective paradox does not, then, favor a modal approach over a non-modal approach. The modal theorist has a way of accounting for the absence of an entailment from (1) to (2), one that preserves the insight that their event predicates are associated with ends, but so does the non-modal theorist.

Note further that from the fact that there is an actual event or event stage that develops, under ideal possible circumstances, into an event of a given type—say, a cross-Atlantic passage—it simply does not follow that it is itself a partially actualized cross-Atlantic passage.⁵ The modal theorist could attempt to derive this result by appeal to some further (modal) principle, but one worries that this is an *ad hoc* response to a problem that may itself be an artifact of poorly chosen theoretical assumptions.⁶ The more attractive option, in light of the foregoing considerations, would be to assume this directly, to see this as the contribution of the progressive, which is precisely the assumption that non-modal theorists have urged.

A different approach to motivating a modal account of the progressive is to consider cases that suggest that our judgments about progressives are sensitive to the possibility of an event’s completion. Suppose, for example, that in a fit of delusion Mary makes an attempt to swim across the Atlantic but drowns shortly afterward. In this case, particularly if we set aside what Mary’s perception of her efforts might have been, we appreciate the force of saying that she was not crossing the Atlantic but merely *attempting* to cross (we know that the headline would read *Woman Drowns in Attempt to Cross Atlantic*, not *Woman Drowns While Crossing Atlantic*). Moreover, we appreciate that if Mary is on a flight that is due across the Atlantic that happens to be redirected when one of the passengers requires emergency treatment, then Mary was, until that point, crossing the Atlantic. It

⁵ For a discussion of this problem as it arises in connection with a variety of expressions, see (Hacquard 2009).

⁶ Portner (1998: 775-776) makes tacit appeal to a further modal principle in accounting for an intuitive (not strict) entailment of this kind (specifically, for the entailment from ‘Mary is swimming’ to ‘Mary has swum’). For Portner (as for Dowty, generally speaking), from the truth of ‘Mary is swimming,’ it follows that there is a possible swim event that includes and extends beyond the actual event that is underway. Portner assumes that large enough sub-events of this possible event also count as swim events (an assumption that follows from the homogeneity of ‘swim’). He takes an entailment to ‘Mary has swum’ to follow on the assumption that a large enough portion of the actual event has taken place *given that its circumstances or developmental profile are an exact match for those of a possible swim sub-event*. However, Portner is relying on a quite suspect modal principle in generating this result; circumstantial match across a possible and actual event doesn’t have any clear bearing on whether the actual event is a swim if the identity of the possible part depends on the identity of the possible whole and the developmental course of that whole may diverge from that of the actual event.

doesn't make much difference how far the flight traveled; to the extent that it was on course, Mary was flying across the Atlantic, suggesting that the problem in the previous case is not that Mary didn't get far enough toward her goal. (We can imagine, in fact, that Sisyphus is as close as it is possible to get short of finding himself on top of his mountain, and yet we would nonetheless deny that he was surmounting it; we appreciate that that description fails to take into account a relevant fact, namely, the impossibility of his completing the task.) Modal theorists would claim that the difference between these cases is that in the first but not the second an arrival across isn't possible under suitably idealized circumstances. Modal theorists have claimed, on just such grounds, that the progressive introduces *modal completion requirements*, requiring in the case of (1) that an event (or stage of one) that is underway be completed as a cross-Atlantic passage across idealized possible circumstances, among which actual circumstances may or may not be counted.

THE MODAL DEBATE: A REVISIONARY TURN

The presence of modal completion requirements is a strong consideration in favor of modal accounts of the progressive (though not decisive, as I will be arguing). However, modal theories have had to confront a challenge stemming from our responses to certain cases in which even events that are highly unlikely to be actualized in full are. Suppose, for example, that instead of drowning some time after her departure, there is an intervention (divine or human) that allows Mary to arrive across the Atlantic. In that case, it is possible to say that Mary was crossing all the while. One can say this despite the fact that an arrival across was an impossibility without the intervention and despite the fact that it occurred *after* her early efforts were exhausted.⁷ It is important to note that intuitions in this case are mixed; some interpreters submit that she was crossing the Atlantic only after the intervention occurred. But though intuitions are mixed in the intervention case, both modal and non-modal theorists have privileged the judgment that Mary was, all the while, crossing the Atlantic and, more generally, have assumed that if an event happened then it was (all the while) happening. The attitude toward the judgment Mary was not crossing until the intervention has been that though it warrants explanation, that judgment should not be “built into” the meaning of the progressive.

The assumption that there is an entailment from (2) to (1) complicates the debate between the modal and non-modal theorist. This entailment—supposing it to be one—is easy for the non-modal theorist to account for; if ‘Mary crossed the Atlantic’ characterizes an event that unfolded, ‘Mary was crossing the Atlantic’ can be assumed to represent a stage in its development as being underway at any point in its development. It is more complicated for the modal theorist to account for since it now appears that substantive modal interpretations only sometimes attach to progressives and so the task of the modal theorist is to offer an explanation of the role of the actual world in an account of the meaning of the progressive that is genuinely unified (not *ad hoc* or bifurcated).

This challenge has been taken up by modal theorists, notably Fred Landman (1992) and Paul Portner (1998). Revisionary modal theories of the progressive—those that treat the progressive as introducing modal completion requirements that are not, invariably, substantive—represent the dominant approaches in the literature today. But these approaches have, as I will discuss, failed to provide satisfactory explanations for the judgment that Mary was not crossing prior to the intervention and have failed to offer a satisfactory account of the role of the actual world in our interpretation of (1) in the cases that present a challenge to modal theories (the intervention case, among others).

Landman's account of the progressive, the first revisionary modal account, is guided by the

⁷ This example (details aside) was first discussed in (Landman 1992).

idea that the progressive is sensitive to the continued development of an event, but only sensitive to its development in non-actual worlds if the event stops (as Mary might if she changes her mind about an arrival across) or is interrupted (as a flight might be by a passenger emergency). On this account, then, the actual world is assumed to have a certain priority in the determination of whether an event is in progress; if an event actually happens, then it was, throughout its development, happening. It is only once an event stops developing in the actual world, that we consider how it would—at the point at which it stops short—develop further in possible worlds. In such a case, Landman proposes that we consider the development of an event in the nearest possible world in which it develops further, allowing this process—the construction of ‘continuation branches’—to iterate and proposing that it comes to an end when possible worlds become too remote or unrealistic to consider. If an event does develop into a complete cross-Atlantic passage across possible worlds that represent its ideal continuation, the account predicts that it was happening throughout its development in the actual world. The judgment that Mary wasn’t crossing in the non-intervention case follows from the assumption that worlds in which she arrives across are too remote to consider and the judgment that she wasn’t crossing pre-intervention from the assumption that the event underway then is assumed to be a stage not of a partial cross-Atlantic passage but some other type of event (perhaps an attempted cross-Atlantic passage).

Portner’s account of the progressive takes Landman’s account as a critical point of departure. His aim is to respond to the difficult cases confronting modal theories with a more conservative modal semantics (one that eschews continuation branches and associated notions). On his approach, we can treat the progressive like any other modal, distinguishing between the facts that are relevant to the modality in question (the modal base) and the idealization that is appropriate, in this case, to the consideration of an event’s continued development (the ordering source). In keeping with the original modal theory of the progressive, Portner assumes that the progressive is sensitive to an event’s continued development under possible circumstances that allow for its uninterrupted continuation. When Mary does arrive across in the intervention case, interpreters may or may not choose to include among the facts that are held fixed in projecting possible continuations the fact that Mary actually crossed, explaining our mixed intuitions.

As I have noted, both Landman and Portner aim to explain the recalcitrant judgment in the intervention case. According to Landman, those rendering this judgment don’t regard the event that unfolds early on as a partial cross-Atlantic passage. If they did and also assumed that it developed into a complete cross-Atlantic passage, Landman’s account of the progressive would be undermined as it would predict the truth of (1) *throughout* the development of that event. But how plausible is it to see these interpreters as regarding those early stages as stages of some other type of event? Surely, it is more plausible to see them as agreeing with interpreters who assume there is a partial cross-Atlantic passage in the non-intervention case and to take them to be voicing a stalwart intuition: the cases are identical before the intervention and Mary is no more crossing in the second than she is in the first. Interpreters may have mixed judgments about whether Mary was crossing early on in the intervention case, but they agree that *Mary crossed the Atlantic* and that judgment, which characterizes an event as having unfolded over time, is sensitive to Mary’s departure and arrival not to the timing of the intervention. So, for example, if Mary is rowing and makes it three days before she is rescued and flown the remainder of the way across the Atlantic, one would judge that she crossed the Atlantic in three days (not in a matter of hours or however long the flight would have taken). We can conclude, then, that some interpreters judge that a cross-Atlantic passage developed from Mary’s departure to her arrival (rather than from the intervention to her arrival) and that they, along with interpreters in the non-intervention case, do not judge that a cross-Atlantic passage was in progress early on; the occurrence of an intervention, which takes place later, does not bear, for them, on the truth of (1) at earlier times. So, not only does Landman’s

account fail to explain the recalcitrant judgment, it is undermined by it.

Portner's account can explain our mixed intuitions without denying these developmental facts, but at the cost of being too flexible with respect to how they figure in our judgments about the progress of events. Portner would explain our mixed intuitions not by denying that there was a partial cross-Atlantic passage that culminated in an arrival across the Atlantic, but by claiming that one may or may not take the fact of Mary's arrival into account when projecting idealized possible continuations for the event underway early on; the recalcitrant judgment is to be explained, simply, by the fact that some interpreters do not take it into account. There are a number of difficulties with this explanation, however.⁸ The central one, for our purposes, is that the account leaves open whether or not the entire development of an event in the actual world is held fixed. Landman's account, though not flexible on this point, overgenerates; if the intervention is aborted (Mary decides she wants to cross unassisted, say), we do not judge that she was crossing all the while even if she would have arrived had she not refused further assistance. If, at that point, she were to drown, it would be observed that her later efforts were as desperate as her earlier ones (here, too, the headline would read, *Woman Drowns in Attempt to Cross Atlantic*). In such a case, Landman's account falsely predicts that (1) is true up to the time at which the intervention is aborted (since Mary would have arrived across if the rescue mission weren't thwarted at that point). Portner's account also overgenerates, but in a different way: it fails to predict that there *aren't* mixed intuitions in this case. We do not see the effect that we see in a case in which Mary doesn't ultimately cross (even if there was a time when she was crossing and would have crossed). If one were free to take into account the fact that Mary gets as far as she does in projecting idealized possible continuations for her event, then we should expect there to be mixed intuitions here as well, contrary to fact.

To summarize, our mixed intuitions in the intervention case tell a different story than modal theorists have realized. Cases in which Mary doesn't arrive but eventually would, under idealized possible circumstances, stand in contrast to cases in which she does in fact arrive, raising a question about the significance of the developmental course of an event after the time at which it is evaluated as being in progress. Interpreters who are stalwart in their view that Mary was no more crossing the Atlantic early on in the intervention case than in the non-intervention case assume that a cross Atlantic passage unfolded over time and yet still deny that one was earlier in progress, offering confirmation for the hypothesis that the progressive is insensitive to the developmental course of an event in the actual world following its time of evaluation (pace Landman and Portner). The possibilities for an event's continuation that matter are those that are projected on the basis of an event's development up to that point in time (as on the original modal approach). The "actualization effect" on our judgments about progress are, plausibly, to be explained in terms of the impact of an event's actualization on our judgments about what those possibilities take into view. If the progressive isn't sensitive to the fact that a cross-Atlantic passage unfolds in the actual world, this leaves the option of saying that her actual arrival promotes the assumption that the intervention, which secures it, was to occur along the projected development of an event. About this, we certainly might expect disagreement among interpreters, with some judging that the intervention simply happened to occur at a later time and others judging that it was to occur.⁹

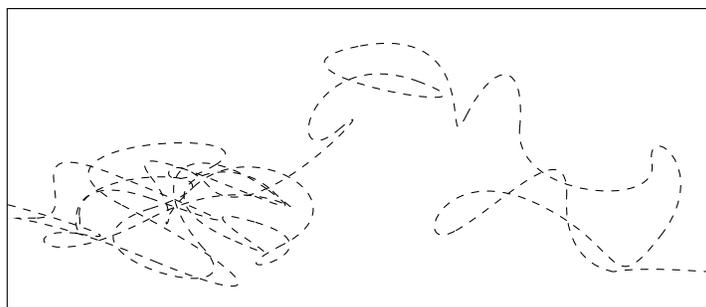
⁸ One difficulty is that it doesn't secure the result that if an event happened, it was happening.

⁹ It might be fruitful to explore this as an interaction between the interpretation of a progressives such as (1) and the operation of what is known as 'hindsight bias' in the experimental psychology literature (Fischhoff 1975), which manifests in the tendency for individuals with outcome information to judge that outcome to be more probable in hindsight than they would judge it to be with foresight alone—without any awareness of this fact. (For a recent review of the literature, see (Roese and Vohs 2012).) It is plausible to assume that a bias favoring actualized outcomes might register, in connection with (1), as a bias promoting developments that ensure the realization of Mary's arrival across projected possible circumstances so that those developments are incorporated into the trajectory that earlier stages of

Progressives like (1) invariably give rise to substantive modal interpretations; they are sensitive to the continuation of the events that they characterize as being underway and require their completion across idealized possible circumstances, circumstances that may or may not include those that subsequently manifest in the actual world (we can continue to assume, in keeping with tradition, that these idealized circumstances represent the uninterrupted continuation of these events). The intervention case supports this assumption, particularly clearly in the response of those who deny that Mary was crossing the Atlantic early on, but it introduces complexity that can (and has) led modal theorists away from this insight. For some interpreters, the case does not describe an event that just happens to unfold, but rather, an event that was to unfold through the grace of an intervention that was itself on course to occur.

It is possible, however, to find cases in which interpreters grant that an event happened and deny that it was happening all the while, which do not introduce this complexity. Consider, the following case, which closely resembles the intervention case, but for the absence of an intervention:

Over the course of an afternoon, a slow breeze blows a leaf from one side of a pool to its opposite side.



As the diagram suggests, the path traveled by the leaf over the course of the afternoon is seemingly unpredictable. It is natural to assume, in this case, that the leaf simply happens to arrive at the opposite end of the pool and what we find is that though interpreters judge (5) to be true of the event depicted, there is no time at which (6) is judged to be true:

(5) The leaf floated across the pool.

(6) The leaf was floating across the pool.

We have in this case, a clear counterexample to the claim that there is an entailment from an event's having happened to its happening.

That these sentences do embed an event predicate that is associated with an end (an arrival across) is clear from the fact that (5) does not describe the direction of the leaf's movement at any particular time (across, rather than down, say), which is the most natural candidate for a process-like construal of the predicate 'float across.' The loops, as well as the vertical, backtracking, and

an event are assumed to have. In this connection, it's interesting to consider that interpreters who judge that Mary was crossing the Atlantic early on seem to neglect the actual occurrence of the intervention. They struggle to answer and are even surprised by the following sort of question, "Assuming that Mary was crossing the entire time, what effect did the intervention have?" In contrast, those who judge these sentences to be false are prepared to answer questions concerning the significance of its occurrence and relate it to their intuitions about the truth of (1). That sentence is false early on, it is said, because the intervention came later.

diagonal paths, all conspire to foreground an interpretation on which we understand the leaf's movement as terminating in an arrival (cf., 'The boat floated under the bridge').¹⁰ This explains why it would seem odd to point to segments of the path and report, "The leaf floated across the pool here." On the relevant construal, that characterization applies properly to the completed whole, not to segments short of the whole.

That the case presents us with an event that develops over time is also evident on reflection, though a worry might be raised about whether the path taken by the leaf provides us with stages in the development of an endpoint-designating event. Sandro Zucchi (1999), for example, observes that a person's walk may eventually take him to a police station though it need not be the case that he was walking to a police station; his walking, according to Zucchi, may fail to constitute a stage of his walk to a police station being a part of it instead. If the progressive is sensitive to the staged continuation of an event and yet the scene depicted is not one in which an event develops over time, perhaps that accounts for the impression of an entailment failure (given the judgments in this case, the claim would have to be that *no* developmental stages are available for selection). But the appeal to event parts in an explanation of this sort is a red herring. Let us imagine some variations on the case in which (6) is taken to be true: it might be, for example, that the circuitous path taken by the leaf is the result of a children's game that involves blowing the leaf from one end of the pool to the other or it might be that there is a wind so much stronger than countervailing winds that the leaf's eventual arrival across the pool is assured. These are cases in which 'The leaf was floating across the pool' (or, perhaps better, 'The leaf was being blown across the pool') may be judged true at any candidate time you like. What has changed? Is it that we have gone from describing the parts of an event to describing its stages? It seems, rather, that we would have shifted in these alternative scenarios from thinking of a given outcome as accidental to thinking it as secure or robust. It is, in fact, difficult to know how to make sense of the suggestion that someone who uses (5) to capture the culmination of a certain type of event may deny that that event developed over the course of the afternoon? This, it seems to me, is precisely what is not assured in Zucchi's description, about which it might be said that one walked and ended up at or happened upon a police station rather than that one walked, over the course of an afternoon, say, to a police station.

The discussion so far has focused almost exclusively on 'crossing'-progressives, those that embed endpoint-designating event predicates. (I call these 'outcome-associated progressives' to mark the fact that they are understood with reference to those outcomes or ends.) This has been the tendency throughout the modal literature and perhaps understandably given that they do give rise to modal interpretations. However, when we step back and consider the modal patterns of these progressives alongside those of progressives like 'Mary was swimming,' it becomes clear that they exhibit a modal contrast; non-outcome-associated progressives such as 'Mary was swimming' do not give rise to the substantive modal interpretations of their outcome-associated counterparts. This is a striking contrast that has not yet been acknowledged by modal theorists (who argue that the progressive has a modal meaning so that progressives, generally, exhibit these modal interpretations) or non-modal theorists (who argue that the progressive has a non-modal meaning so that progressives, generally, fail to exhibit these modal interpretations). These theorists have aimed, correctly, in my view, to offer a unified account of progressive meaning but the result has been to assimilate 'swimming'-progressives to 'crossing'-progressives or the other way around.

Given the dialectic of this paper, the modal contrast between 'crossing'- and 'swimming'-progressives will be easiest to observe if we consider whether the latter are entailed by their non-progressive counterparts. If the modal condition that attaches to progressives like 'Mary was cross-

¹⁰ For further discussion, see (Higginbotham 1995) and (Higginbotham 2009).

ing the Atlantic’ attached to progressives like ‘Mary was swimming,’ it would be possible to report that though Mary swam, she was not swimming, and for the same reason that we can report that though Mary crossed the Atlantic, she was not (at some candidate time) crossing it.¹¹ These progressives would both equally impose the condition that their underlying event predicates apply to events that unfold across projected possible circumstances. Since both sorts of predicates describe events whose course of development need not be modally robust—nothing in the nature of being a predicate that represents a temporally extended event, whether associated with an outcome or not, tells otherwise—it should be possible for this condition to fail to be satisfied in the case of progressives like ‘Mary was swimming.’

As it happens, however, no failure of this kind is discernible. In this, I find myself in agreement with the consensus view on the matter, which is that there is an entailment from the perfective to the progressive in the non-outcome-associated case:

(7) Mary swam. \rightarrow Mary was swimming.

However, as I have argued, outcome-associated progressives pattern differently, revealing a modal asymmetry between outcome- and non-outcome-associated progressives:

(8) Mary crossed the Atlantic. \nrightarrow Mary was crossing the Atlantic.

What we see is that, from the fact that something happened, we can conclude that it was happening in the case of non-outcome-associated progressives but not in the case of outcome-associated progressives.

It is tempting to think, however, that the modal theorist can defend a modal analysis of the progressive while accommodating the *appearance* of a modal asymmetry. Two constraints should be kept in mind as we consider this possibility. The first is that we want, as always, to maintain a unified analysis of the progressive and the second is that we want to avoid trivializing the modal condition that clearly does attach to outcome-associated progressives. Once this is borne in mind, the cases naturally divide into two: either (i) the relevant modal condition is trivially satisfied in the case of progressives like ‘Mary is swimming’ and for reasons that are aspectual rather than modal since, again, their underlying predicates are not more modally robust than their outcome-associated counterparts (though we know that their aspectual profiles differ) or (ii) they do not satisfy the modal condition but we fail to take notice of this.

The first option is particularly unattractive. Even granting the assumption that ‘Mary is swimming’ is evaluated relative to an actual swim event (a non-trivial assumption given the fact that the progressive represents an event or event stage as holding at a time),¹² we need to assume the following in addition: that there is an event that develops in every projected possible circumstance of which that actual event is an earlier part or stage and that the whole is itself a swim event. Now, it is unclear why one should think an event is guaranteed to develop further in these projected possible circumstances, but even if this were granted, there seems to be no non-*ad hoc* reason to assume that the whole would constitute a swim in virtue of having an actual swim event as an earlier part. It is not, it should be noted, supported by assumptions about the cumulativity (roughly,

¹¹ Dowty’s analysis of the progressive (1977) and (1979) does not predict an entailment from ‘Mary swam’ to ‘Mary was swimming,’ as he acknowledges. His ‘inertial-worlds’-analysis requires that there be an interval that extends beyond the progressive’s time of evaluation and is such that ‘Mary swims’ is true at that interval in every inertial (or non-destructive) world. In light of this, the entailment from ‘Mary swam’ to ‘Mary was swimming’ fails for just the same reasons as the entailment from ‘Mary crossed the Atlantic’ to ‘Mary was crossing the Atlantic’ fails; that an event unfolded provides no assurance that it would, relative to candidate times in its development, unfold across inertial worlds.

¹² This sort of supplementary assumption makes the entailment intuitive rather than strict.

that swim events add up to a swim event) or homogeneity (roughly, that a swim event is divisible into swim events) of these sorts of predicates.

The second option is both simpler and more natural than the first, but it ultimately doesn't secure the result that there is no modal asymmetry. According to this option, the relevant modal condition can fail to be satisfied in the case of progressives like 'Mary was swimming' but this fact goes unnoticed because the events that they characterize as in progress are so short-lived; we don't readily imagine that a partial swim might fail to develop into a swim event across projected possible circumstances. The hypothesis certainly has some intuitive appeal, but it is important to see that it generates a mistaken prediction in the case of our judgments about progressives like 'Mary was crossing the Atlantic.' In particular, it predicts that one should judge a sentence such as 'The leaf was floating across the pool' to be true very close to the completion of an event of the relevant type. We can, after all, evaluate these progressives very close to the completion of the events described by their underlying predicates. And yet, we see that that sentence is judged to be false in the counterexample-supporting context that I earlier discussed. The conclusion to draw is that progressives like 'Mary was swimming' do not share the entailment-blocking modal interpretations of their outcome-associated counterparts.

Once these observations are brought together, it becomes clear that the terms of debate around the meaning of the progressive have shifted quite dramatically. Certainly, if progressives like (1) invariably give rise to substantive modal interpretations, then non-modal theorists have been wrong to deny that any do. But equally, if progressives like (3) do not give rise to those substantive modal interpretations, then modal theorists have been wrong to insist that all progressives do.

We face a new and difficult challenge in accounting for the meaning of progressives given these facts. We cannot assume that the progressive itself contributes a substantive modal condition or we would find these interpretations across the board. Nor can we simply assume that endpoint-designating event predicates contribute these modal interpretations since they do not give rise to these interpretations in non-progressive environments such as (2), for example, which describes a complete event, not possibly complete event. Moreover, we would want to avoid taking the approach of explaining these modal interpretations in terms of an interaction between the progressive and these event predicates where this would simply mask one's opting for one or the other of these alternatives (e.g., that the progressive contributes a modal condition when it combines with endpoint-designating event predicates and a non-modal condition when it combines with other types of event predicate). One also wants to avoid abandoning the aim of providing a uniform meaning for the progressive, for the ordinary explanatory reasons, but also in light of the fact that this decision would ramify across a system of interpretations that are linked to the progressive, including futurate progressives such as 'Mary is crossing the Atlantic tomorrow.' (In light of the fact that *its* truth requires that an entire cross-Atlantic passage take place under projected possible circumstances, should one now recognize a three-fold ambiguity?)

MODALITY WITHOUT MODALS

A guiding principle in linguistics and philosophy (particularly evident in the philosophy of language) concerns the relationship between interpretation and form; it is, in short, that systematic aspects of interpretation are to be explained in terms of linguistic form. In the context of the present debate, this regulative principle manifests in the view that modal interpretations, if present, are to be explained in terms of a modal meaning and, if absent, through the absence of a modal element.

This principle allows for a variety of assumptions about the nature of the relationship or interface between the linguistic system and other "systems of thought," some of which aim to minimize

the contribution of linguistic form at this interface.¹³ In recent years, for example, it has been proposed that modal elements such as ‘can’ and ‘must’ do not themselves encode modal conditions but, rather, should be thought of as recruiting resources from modal cognition (their role in recruiting these resources earns them their status as modals).¹⁴ In the present context, modal theories of the progressive might be reinterpreted as theories that see the progressive as recruiting the resources of modal systems of thought in directing them to project the possible continuations of an event and as contributing quantification, among other things, over those possibilities. In any case, this guiding principle manifests in the view that the systematic availability of modal interpretations is due to the presence of modals, whether those elements encode the modal conditions expressed in these modal interpretations or issue instructions to non-linguistic modal systems that play a role in their emergence. What it does not allow for is the possibility that systematically available modal *interpretations* are not to be explained in terms of modal *meanings*.

The challenge of accounting for the modal interpretations that attach to some, but only some progressives, invites us to reconsider this picture of explanation and to take seriously, in particular, the possibility that these modal interpretations are not anchored in a modal meaning. The leading options—anchoring them in the progressive or in endpoint-designating event predicates—do not, as I have argued, provide a clear path toward this traditional style of explanation. The problem has been that no alternative to this kind of explanation has been considered, accounting, in my view, for the long-standing debate surrounding the modal status of the progressive and for the pattern of generalizing to the worst case on both sides. In what follows, I would like to take some preliminary steps toward sketching an alternative.

The first question, around which to frame all others, is the question of what can, plausibly, be taken to be common across progressives like (1) and (3). Non-modal theorists have, in my view, offered candidate answers to this question and in keeping with the spirit of these approaches, I will assume that the progressive characterizes a stage of an event as holding at a time irrespective of the type of its underlying event predicate. As we noted at the outset, endpoint-designating event predicates do not shift in meaning in the progressive environment; they continue to designate ends. Moreover, we see that when the progressive combines with this type of predicate and represents a stage of this type of event as holding, it does not select the endpoint of the event and so does not characterize an event in progress that is associated with an end as being at an end. There appears, then, to be an exclusion to account for, namely, the exclusion of the endpoint from among the stages that can be represented as holding at a time. I propose that we account for this exclusion by marking a distinction, which seems rather intuitive, between a terminus and a developmental stage. With this distinction in place, we might propose, generally, that the progressive represents a stage of an event as holding at a time and that where it combines with a predicate that represents an event with a designated terminus, that terminus—not being a stage in the development of an event—will not be among the stages that are candidates for selection by the progressive. This is, in my view, as much as there is to be said, in broad outline, about the linguistic meaning of the progressive; its meaning is as minimal as non-modal theorists have been inclined to assume.

Of course, some progressives, those that embed endpoint-designating event predicates, are distinguished by the fact that they give rise to modal interpretations, requiring, to a first approximation, that those events culminate under suitably idealized possible circumstances. The matter at hand is to explain how progressives that represent something as holding at a time give rise to these modal interpretations just when what is underway is associated with an end. On my proposal, the

¹³ For some background on this framework and examples of work pursued within it see, (Chomsky 2000), (Pietroski 2008), (Pietroski 2010), (Pietroski 2014) and (Hinzen 2006).

¹⁴ Angelika Kratzer has advocated this view (Kratzer 2013).

only *linguistic* difference in the interaction between the progressive and event predicates that designate ends is the displacement of these ends from that part of an event that may be represented as holding. On modal approaches, displacement is assumed to follow from a future-oriented modal element—one that represents an event as culminating across *future* possible circumstances. In the present setting, however, this fact cannot be seen as following from the presence of a modal element since, by hypothesis, there isn't one.¹⁵ I propose that we, as it were, invert the dominant modal picture: rather than seeing the displacement of an end as a consequence of the presence of a modal element, see the displacement of an end as the (non-modal) linguistic basis for the emergence of our modal interpretations. These modal interpretations are, on my view, a particular sort of interface phenomenon: they are not recruited by a modal, but rather, reflect an understanding, a modal one as it happens, of an expression that displaces ends.

The proposal that I am offering applies to progressives, but need not be taken to be specific to them. They may be treated as an *instance* of a type of expression—one representing something as holding at time that is associated with an end but not at an end—of which there may be other instances. The strongest hypothesis that might be offered is that the modal interpretations that we see in connection with certain progressives emerge just where we see the displacement of ends:

DISPLACEMENT HYPOTHESIS: There is modal displacement just where there is endpoint displacement.

This hypothesis treats the progressive as presenting us with a specific way that an expression might be associated with an end (through the selection of a stage of an event predicate that itself designates an end) and a specific way that this end may be displaced (an end isn't a candidate for selection, failing to be a stage of an event). If we allow that other expressions might be associated with and displace ends through various mechanisms, the hypothesis may allow us to offer a constrained and still quite far-reaching explanation for the emergence of modal interpretations in connection with a variety of expressions that are related to the progressives that have been my focus, including progressive futurates ('Mary is crossing the Atlantic tomorrow') and simple futurates ('Mary crosses the Atlantic tomorrow'),¹⁶ as well as other (undertheorized) expressions ('Mary is in Paris for a week' and 'Mary is in Paris for a week tomorrow'),¹⁷ that appear to give rise to similar, if not identical, modal interpretations in the absence of *any* obvious modal meanings.¹⁸

¹⁵ Nor does it follow from a property known as the 'subinterval property' (often discussed in connection with verb phrases) (Bennett and Partee 1978). A predicate with this property is such that for any interval relative to which it holds, it also holds for any subinterval. If we treat the progressive as having this property, then for any interval relative to which it holds, it holds of any subinterval as well. 'Displacement' labels a different fact—in the progressive case, that there is a part of an event relative to which it cannot be said to be in progress (namely, its endpoint) and that does not follow from the assumption that the progressive has the subinterval property.

¹⁶ See (Copley 2009) for a modal account of progressives, progressive futurates, and simple futurates. This approach treats the modality of progressive and simple futurates as deriving from different sources (simple futurates are analyzed along the lines of generics such as 'Bears eat meat' and inherit the modal source that those expressions are assumed to bear) and treats futurate progressives as having a plan-oriented modality distinct from that of non-futurate progressives (which is assumed to be due to the (non-futurate) progressive's modal meaning).

¹⁷ See (Hallman 2009a) for a proposal that is motivated by imperfective-paradox style considerations and that treats the phrase 'be in Paris for a week' as having a "special reading" on which it represents a stay in Paris as lasting a week "in all worlds compatible with the projected future" (2009a: 35).

¹⁸ If the progressive is not a modal, then the most parsimonious assumption is that the "futurate" progressive is not either (and, further, that it is the self-same progressive); if futurate progressives don't bear modal meanings, then the most parsimonious assumption, in turn, is that simple futurates, which give rise to virtually identical modal interpretations and don't bear any any obvious modal element, aren't tethered to a modal; and if simple futurates are not, these undertheorized expressions, which appear to pattern with these non-futurate and futurate types of expression and likewise do

If as I have argued, these modal interpretations are not encoded by language, but emerge at the interface between linguistic and other systems of thought, how might we understand this sort of interface explanation? I suggested earlier that we see the modal interpretations that emerge in connection with (1) (and a variety of other expressions, possibly) as manifesting a modal understanding of what it is for something that has an end to not be at an end. As we reflect on this suggestion, it becomes apparent that the projection of an event's continuation up to the realization of its end is, in fact, a way of understanding that event as having an end not to be at an end. It is one way, our way, it appears; but not, for that reason, the only way. This style of explanation depends on the possibility that non-linguistic systems of thought can make substantive contributions to our understanding of linguistic expressions (without being directed or instructed to make these contributions); that there may be, as it were, questions of understanding that are not settled in advance by linguistic expressions and that may arise and be settled as a result of their deployment in other domains of thought (or in normatively guided applications of language¹⁹). This is a possibility that cannot be ruled out in advance and that we might see as being opened up, in fact, by the interaction between a linguistic system that generates expressions proprietary to it (e.g., intrinsically bounded expressions whose bounds are displaced) that come to be deployed in systems in which they are neither native nor antecedently conceptually related. The idea that linguistic form directs the use of these expressions in thought and determines that they have a modal interpretation is one approach—an essentialist approach—to accounting for the fact that they systematically yield modal interpretations, but not the only one and not the one that appears to be called for in the present case.

The proposal that I have offered, allows us to see the progressive as making a uniform contribution irrespective of the type of event predicate with which it combines while also allowing us to account for the modal interpretations that emerge when the progressive combines with endpoint-designating event predicates. In this way, we can avoid an unexplanatory redescription of the facts, avoid saying, for example, that the progressive contributes a modal condition when it combines with these predicates and a non-modal condition when it combines with others, which is no more than a thinly disguised ambiguity account. The proposal treats the displacement of ends, which it takes to be the only linguistic feature distinguishing these progressives, as a non-modal basis for the emergence of modal interpretations; they reflect the contribution of *modal* cognition, not *linguistic* cognition. The entailment patterns of our initial set of sentences are also explained on this approach, though not by appeal to linguistic meaning alone. Progressives that do not embed endpoint-designating event predicates represent stages of their events as holding with the consequence that if those events happened, they were happening and, intuitively, that if they were happening, they happened.²⁰ Progressives that do embed endpoint-designating event predicates also represent stages of their events as holding. However, since the displacement of those associated ends gives rise to substantive modal interpretations, interpreters do not judge that if these events were happening, they happened, and that if they happened, they were happening.

CONCLUSION

not, on their face, contribute a candidate modal element, do not harbor a hidden modal either.

¹⁹ This is theme in the *Philosophical Investigations* (Wittgenstein 1958) as well as in the work of other theorists following in this tradition, including Chomsky. For a recent exploration of these ideas in an explicitly philosophical setting, see (Baz 2012).

²⁰ Though here we may observe that if an initial stage of a swim event is underway, then there was *not* already a swim, and may offer similar qualifications in the case of events that are too short-lived to count as swim events rather than as stages of them.

The proposal that I have sketched depends on the possibility of explaining the presence of modality without modals. It provides familiar explanatory benefits. It allows us, for example, to avoid generalizing to the worst case, to avoid positing ambiguities (the leading account of the futurate progressive fails even assign a uniform meaning across futurate and non-futurate progressives), to capture core entailment patterns of progressive sentences, and to provide, in theory, an account that is general enough to explain the otherwise puzzling modal interpretations of a range of expressions and to do so in terms of a single basic expression type or configuration.

The proposal is also, in a certain sense, explanatorily ideal. It allows us to avoid postulating modals in each of these cases—assuming that we can—and so allows us to avoid treating their presence as an accidental feature of natural language or one that awaits explanation. It is striking, in light of this, that such approach hasn't been considered until now. I hope to have offered persuasive reasons to think that, in broad outline, the approach defended may constitute the only approach to meeting the challenge posed by these puzzling modal interpretations, with the added consolation that it may constitute an ideal one.

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