

Review of *Epistemic Modality**

Malte Willer

This is a long-anticipated collection of ten essays on epistemic modality by leading thinkers of the field, edited and introduced by Andy Egan and Brian Weatherson. Most of the papers published here give detailed accounts of the semantics and pragmatics of plain epistemically modalized sentences such as

- (1) Mary might be in Chicago,

and so I will focus on this aspect of the volume, summarizing the remaining papers in my concluding remarks.

The classical approach to modals from Kratzer treats them as existential or universal quantifiers over a contextually restricted set of possible worlds.¹ Different flavors of modality—circumstantial, deontic, epistemic, etc.—correspond to different choices of contextually provided restrictors, preserving a unity in the semantics of modals while accounting for the variety of their interpretations in context. Epistemic interpretations arise in case the modal is interpreted as a quantifier over a set of possible worlds projected from a contextually salient body of evidence. If the contextually salient body of evidence is Bob’s knowledge, for instance, the proposition expressed by (1) is articulated explicitly thus:

- (2) In light of what Bob knows, Mary might be in Chicago.

The classical approach to epistemic modals is thus *contextualist*: they are evaluated relative to a body of evidence that is determined by the context of utterance. The key question is whether contextualism is adequate and, if not, what its alternative should be.

Jonathan Schaffer’s contribution to this volume elaborates and defends a contextualist treatment of epistemic modals. Schaffer claims that the modal *might* in (1) features a restrictor argument at the level of logical form that specifies a perspective at issue and is assigned specific values by the semantics at every context. He thus adopts *meaning perspectivalism*: the proposition expressed by sentences involving epistemic modals are always specifying a perspective. This contrasts with Kent Bach’s *radical invariantism*, which denies that (1) expresses a perspective involving proposition, even if uttered in context, the reason being that context fails to fill in a perspective. Since a state of affairs can be epistemically possible relative to one perspective but not another, (1) is propositionally incomplete: its invariant semantic content is a propositional radical that lacks a constituent needed for being true

*Andy Egan and Brian Weatherson, eds., New York: Oxford University Press (2011). This critical notice is published in *Philosophical Review* 122(4): 641–647, 2013.

¹See [Kratzer 2012](#) for an up-to-date discussion of her view.

or false. Nonetheless, utterances of plain epistemically modalized sentences can be used to assert propositions and be interpreted as such. In those cases, the speaker's intentions determine a perspective with respect to which the relevant possibility is to be considered, that is, the required perspective is filled in pragmatically but not semantically. This feature, according to Bach, gives radical invariantism the conceptual as well empirical edge over contextualism.

Refereeing the dispute between Schaffer and Bach must be left to another day since both rest their cases on controversial assumptions that have received a lot of attention in the literature. Specifically, Schaffer relies on the notorious binding test for semantic arguments in supporting his contextualist position (though he also makes the already-mentioned point that contextualism affords a uniform yet sufficiently flexible semantics for *might* and *must*).² Bach's case for choosing radical invariantism over contextualism, in turn, rests on the contention that contextualism properly so called cannot leave room for speakers' intentions to play a role in determining the perspective that is relevant for evaluating epistemic modal claims. The reader will have to look elsewhere for a defense of this claim.³ But perhaps there is not much to choose here anyway since contextualism and radical invariantism struggle alike in accounting for a number of rather simple observations about the role of epistemic modals in discourse, which are carefully laid out by the editors in their introduction to the volume. To get a feel for the kind of problems that matter here, consider the following example (inspired by John MacFarlane's contribution to this volume):

- (3) Mary: I can't find Sally.
Alex: She might be in Boston.
Mary: No, she cannot be in Boston. I just saw her an hour ago.

The intuition is that Mary denies what Alex has asserted, namely, that Sally might be in Boston. But this is not the result we get if we interpret Alex and Mary as reporting on what might or cannot be the case given their individual perspectives, and regardless of whether this perspective is supplied semantically or pragmatically.⁴

MacFarlane argues that the role of epistemic modals in discourse promotes *relativism*. Relativists agree with contextualists that judgments of epistemic modality are true or false given some perspective. They insist, however, that the relevant perspective is not fixed contextually but may vary across different points of assessment. On the view MacFarlane elaborates, the proposition that Alex expresses in (3) is true when he is the judge but false when it is Mary, making it appropriate for her to reject what Alex said even though it was very well within his right to produce the utterance. This is implemented technically by assigning to epistemic modals truth-values relative to a context, an index of evaluation, and a point of assessment (state of information). Relativism about epistemic modals has quite some history

²See [Sennett 2008](#) for a fairly recent overview over the binding test controversy.

³See, e.g., [Bach 2005](#) and for the opposing view, [King and Stanley 2005](#).

⁴One may suggest that Alex's claim is also concerned with Mary's perspective but that move, as MacFarlane and others argue, faces several problems. One major concern: it seems to conflict with the observation that speakers reliably produce judgments of epistemic modality on the basis of their own perspective.

by now and a number of problems—for instance, it is unclear what is communicated by judgments of epistemic modality if their truth-values vary across different perspectives—but even if none of the problems of contextualism conclusively promote relativism, we still need an explanation of problematic data, and this is not a trivial affair.⁵

Kai von Fintel and Anthony Gillies offer a treatment of problematic cases such as (3) that is friendly to the key tenets of contextualism. They preserve the idea that judgments of epistemic modality are true or false depending on what is known by a contextually relevant group, but maintain that the facts of a conversation often underdetermine what counts as the relevant group. This requires that we rethink the discourse effects of epistemic modal claims as well as the pragmatics of assertion and assessment. On von Fintel and Gillies’s view, utterances that are contextually underspecified “put into play” the propositions corresponding to the various disambiguations. For a speaker to be in a position to *assert* an epistemic modal, at least one of the propositions put into play must be true. A hearer can *confirm* (*deny*) the assertion in case the strongest proposition that is put into play and that the hearer reasonably has an opinion about is such that the hearer thinks it is true (false). In (3), for instance, Alex’s assertion is legitimate since it puts into play the true proposition that Sally’s being in Boston is compatible with what he knows. But Mary’s reaction is legitimate as well since Alex’s utterance *also* puts into play the proposition that Sally’s being in Boston is compatible with what is known by Alex or Mary, and this is a proposition that Mary knows to be false.

The theory proposed by von Fintel and Gillies is attractive since it preserves a classical contextualist semantics for epistemic modals and lets a nonstandard pragmatics take care of the problematic data about *might*. But the proposal is hand tailored to apply to a limited number of cases, and as far as I could determine does not easily generalize to cover related phenomena. For instance, one may disagree not only with a straight assertion that so-and-so might be the case but also with a reported belief that so-and-so might be the case, but this remains a contextualist mystery. Consider the following variant of (3):

- (4) Mary: I can’t find Sally. Any clue where she might be?
Alex: I have no idea. Bob believes that she might be in Boston.
Mary: What he believes is wrong. I just saw her an hour ago.

It seems that Mary disagrees with Bob’s belief, but this is just as puzzling as the original disagreement in (3) if we interpret Alex and Mary as reporting on what might or cannot be the case given Bob’s and Mary’s individual perspectives. And von Fintel and Gillies’s proposal is not of much help here: Alex does not assert or even suggest that Sally might be in Boston, and so there is no proposition about Mary’s evidence put forward into the conversation that may be targeted by her denial.⁶

⁵Bach and Schaffer each discuss some of the empirical challenges to their theories, but I did not find their responses conclusive. See Egan et al. 2005, Egan 2007, and Stephenson 2007, 2008, among others, for relativist proposals, and von Fintel and Gillies 2008a as well as Wright 2007 for their critical assessment.

⁶Of course, contextualists may now appeal to various other strategies to explain away the

Two contributions to this volume explore alternatives to the view, common to all the essays discussed so far, that epistemic modal claims express propositions of some kind. Stephen Yablo offers a *dynamic* semantics for epistemic modals that gives the semantics of (1) in terms of its update effects on the common ground between discourse participants. The classical dynamic approach to *might* by Veltman (1985, 1996) analyzes (1) as a test on a context σ that checks whether Mary’s being in Chicago is consistent with the information carried by σ . If it is, the test is passed and returns the original state of information σ ; otherwise, it returns the null information state. Yablo observes that Veltman’s test conception fails to make sense of the observation that *might* sometimes has non-trivial effects on the discourse context. Drawing on a striking parallel between *might* and the role of permissions in discourse, his alternative proposal is that “Might ϕ ” expands the context (or “sphere of believability”) with certain ϕ -worlds. While I found this proposal very intuitive, it faces the major challenge of arriving at a compositional semantics for the language of modality. Consider for instance (5), which is arguably the negation of (1):

(5) Mary cannot be in Chicago.

At a minimum, (5) should rule out all possible worlds at which Mary is in Chicago, but it is unclear how we can derive this in Yablo’s system from the update effects of (1) together with a general semantics for negation. In Veltman’s update semantics, negation is treated as set subtraction: an update of σ with $\lceil \neg\phi \rceil$ eliminates the result of updating σ with ϕ . Clearly this treatment of negation does not live happily with a noneliminative treatment of *might*—to wit, (5) would incorrectly be predicted to eliminate *all* possible worlds from the context—but I fail to see what Yablo could offer instead.

Seth Yalcin argues for *nonfactualism* about epistemic modals and *expressivism* about epistemic modal discourse. His position is motivated by the question of what it is to believe that ϕ might be the case. Factualists hold that epistemic modal claims describe one’s own epistemic state (and perhaps those of others) and thus seem to be committed to treating a belief that ϕ might be the case as a second-order state of mind (i.e. a state of belief *inter alia* about one’s own state of mind). But this, according to Yalcin, cannot be right, since one may believe that ϕ might be the case without being capable of such second-order states of mind. On his view, believing that ϕ might be the case is to stand in a certain doxastic relation to the proposition expressed by ϕ : one is sensitive to the question whether ϕ and one’s belief worlds leave open possibilities wherein the proposition that ϕ is true. This intuition underlies Yalcin’s semantics and pragmatics for epistemic modals.

Yalcin gives nonfactualist truth-conditions to epistemic modals: they are assigned truth-values relative to a separate, nonfactualist parameter (that is, a state of information). This is, in effect, just what relativists do, but Yalcin maintains that he is not a relativist since settling on a semantics for *might* and *must* does not fully settle what epistemic modal claims communicate (their informational content). On

problem in (4), but the fact that such strategies are needed even after adopting a very flexible pragmatics strikes me as quite worrying. Lennertz (2012) discusses a case similar to the one I present here as well as various ways of addressing it in a contextualism-friendly manner, some of which are suggested by von Fintel and Gillies (2011).

his proposal such claims are used to express a certain state of mind and are made with the objective of coordination on a certain global property of one's state of mind, that is, the property of leaving a certain possibility open. This expressivism about epistemic modal discourse has a distinctive dynamic flavor and I find myself in agreement with much that Yalcin says. It remains an open question, however, how exactly the discourse effect of an epistemic modal claim is to be recovered from its semantic content. Moreover, if the informational content of an epistemic modal claim is at its heart dynamic, there is, as far as I can see, no need for a separate truth-conditional semantics, be it relativist or not. The compositional semantics can be dynamic as well, replacing the notion of truth at a point of evaluation with update effects on a conversational context or state of information.⁷

The volume contains four other interesting pieces that I can only briefly summarize here due to lack of space. Eric Swanson's contribution articulates four important desiderata that one must not neglect when theorizing about the language of subjective uncertainty, and he further argues that, taken together, these desiderata suggest that neither truth-conditional approaches nor traditional force modifier accounts will be adequate.⁸ Frank Jackson argues against the tempting view that the space of epistemic possibilities exceeds the space of metaphysical possibilities. David Chalmers's detailed discussion of various ways of constructing epistemic possibilities (or what he calls "scenarios") usefully complements his earlier work on epistemic two-dimensionalism. Finally, Robert Stalnaker discusses two approaches to conditionals—the conditional assertion account and the conditional proposition account—and argues that the views are not as distinct as it is often thought.

There is much to be learned from every paper in this collection. The volume may be daunting to those not familiar with the existing literature but the editors provide a useful introduction to the issues addressed.⁹ The clarity and level of sophistication of the contributions is impressive: whenever there is room for disagreement or puzzlement, it is due to the high complexity of the issue under consideration. In short, the papers collected here are mandatory readings for everyone working on epistemic modality

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⁷An attempt at doing this is spelled out by [Willer \(2013\)](#).

⁸In this context, Swanson also addresses epistemic modals but does not give a detailed semantic proposal. See [Swanson forthcoming](#) for his views on that matter.

⁹See also [von Fintel and Gillies 2008b](#) for a helpful guide to some of the topics covered by this volume.

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