

Something ‘Might’ Might Mean

(Excerpted)

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What do we *do* with expressions of epistemic possibility? What are we trying to accomplish when we sincerely say, for example:

- (1) It might be raining.
- (2) He might have forgotten.
- (3) You might be dreaming.
- (4) The world might have popped into existence five minutes ago.

I answer that the central function of such sentences is to *raise possibilities*, and I think this near truism should guide our analysis of them. But the near truism is nowhere close to being trivial, for two reasons.

Philosophers, linguists, computer scientists, economists, and others have found that a particular hypothesis about assertion helps us make fruitful predictions about communication, action, and coordination. This hypothesis is that the central function of assertion is not to raise possibilities but, in a sense I’ll explain later, to rule them out (STALNAKER 1974, 1978). From this hypothesis and our near truism it follows that epistemic ‘might’ statements are not assertions. This surprising result is the first reason why the near truism is not trivial. But though it is surprising, I think the conclusion that epistemic ‘might’ statements are not assertions is welcome. For as I argue, epistemic ‘might’ statements have effects and norms that are quite unlike those characteristic of assertion. In brief, a speaker who assertively utters ‘It might be that ϕ ’ does not thereby commit herself to any claim about how the world is. Rather, she makes a hedged recommendation that her addressees not inadvertently rule out the possibility that ϕ . If this is right, then—independently

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of any particular analysis of assertion—we can see that to reasonably count epistemic ‘might’ statements as assertions we would have to count recommendations and similar speech acts as assertions as well.

Second, the near truism threatens to undermine the practice of using probability spaces to model belief states. This is because it’s hard to see how probability spaces could represent the difference between a believer who overlooks a possibility and a believer who sees that possibility. But the route to the very predictions that make the ‘ruling out’ hypothesis about assertion so compelling depends, at least at our current stage of understanding, on the probability space model of belief states. So it looks as though some of the effects of epistemic ‘might’ statements call into question the very framework we would like to use in describing them.

We cannot understand what epistemic ‘might’ statements do, in a conversation, without understanding what happens when it occurs to a single believer that it might be that ϕ . I focus on this problem in the first section of this paper. There I develop a formalism that lets us describe believers who overlook some possibilities, without having to abandon the crucial probability space model of belief states. I then describe some of the effects and norms of assertion, to make the contrasts between assertions and epistemic ‘might’ statements easier to see. Section 3 describes some of the effects and norms of epistemic ‘might’ statements, arguing that they are not assertions, and in section 4 I discuss some other recent approaches to epistemic ‘might’ statements.

1. ‘Might ϕ ’ for Individuals

Someone who thinks it might be that ϕ gives at least some small amount of credence to the proposition that ϕ . That credence will often be very small, since one can believe that ϕ while also believing that it might be that $\neg\phi$. (For example, right now I believe my car is parked on Main Street; I also believe I might be wrong.) But this modest credence is integral to thinking that it might be that ϕ , for it is absurd to say

- (5) # Maxine is absolutely certain that the door is locked, and she allows that it might be unlocked.

One use of ‘might’ statements is *prima facie* problematic for this principle. For example, we can imagine someone who is certain that there are moral truths saying,

in order to help structure a conversation, that it might be that there are no moral truths. For now, however, we are focusing on what happens when a single believer sees a new possibility. This pseudo-concessive use has to be understood in conversational terms, and so I discuss it in section 3.

Another quite different kind of change is also associated with it occurring to a single believer that it might be that ϕ . This sort of change occurs when the believer has been *overlooking* the possibility that ϕ , and comes to *see* that possibility. Here is an example of what I mean by “overlooking” and coming to “see” a possibility. The example also brings out the problems with using probability spaces to represent the difference between overlooking and seeing possibilities.

I crack eggs with one hand, and have done so for some time. I only recently thought about *how* I crack eggs, and in thinking about it I realized that I always hold the large end of the egg in the palm of my hand, with the small end in my fingers. But once I realized this, I also realized that I believe this is the *right* way to hold an egg that you’ll crack with one hand. After all, it’s easier to lift the small end with your fingers than it would be to lift the large end. As ordinary speakers, we might be a little reluctant to say that, even before I thought about it, I believed that that is the right way to hold an egg that you’ll crack with one hand. But those who favor probabilistic representations of belief states will say that in this case I simply assigned high credence to the proposition that ϕ —as my actual behavior regularly indicated—without realizing that I assigned high credence to that proposition.

When I thought about how I crack eggs, and realized that I always hold them in a particular way, I had a very modest “Aha!” feeling. It was modest for all sorts of reasons, of course. But one was this: *there was no change* in my level of credence in the proposition that the right way to hold an egg you’ll crack with one hand is with the large end in your palm. However modest it was, I did have an “Aha!” feeling, and that feeling is a symptom of what I mean by ‘coming to see a possibility one has been overlooking.’ I made no conscious distinction between different ways of holding eggs, and when I realized that my behavior nevertheless does make such a distinction, I saw a possibility I had been overlooking.

There is a significant intuitive difference between the state I was in when I overlooked the possibility that I always hold eggs in a certain way, and the state in which I saw this possibility. What I want to emphasize here is that we must be able to *model* the difference, at least, in order to describe what happens when it occurs to someone that it might be that ϕ . For as the egg cracking example shows, I can

come to see a possibility without changes in my credence with respect to that possibility. And epistemic ‘might’ statements often cause us to see possibilities we were overlooking: “Careful, she might capture your pawn *en passant*”; “You might offend him by trying to help”; “I’m sure they haven’t forgotten—they might be trying to surprise you.”

How should we analyze the differences between overlooked and seen possibilities? Suppose we start with a probability function defined over a set of possible worlds. The value of the function, for a particular possible world as argument, represents the degree to which the believer believes that world is actual. If we limit ourselves to first-order credences, this approach will have nothing helpful to say about what it is to overlook and see possibilities. For if we say that to overlook a possibility is to assign it low credence, then we will wrongly conflate overlooking the possibility that ϕ with believing it to be false that ϕ . And we will also wrongly rule out of court a believer’s overlooking *both* the possibility that ϕ and the possibility that $\neg\phi$. If we say that to overlook a possibility is to assign it middling credence, on the other hand, then we will wrongly conflate overlooking a possibility with being genuinely undecided about whether that possibility is actual.

Neither is overlooking a possibility like lacking “resiliency” or “robustness” in one’s first-order credence. Resiliency and robustness are measures of the degree to which a believer’s credence in a proposition is stable in the light of new evidence.¹ But whether or not a believer sees some possibility, she may have little idea what credence to assign to it—and hence be in a doxastic state that is not resilient with respect to that possibility.

Finally, it will not do to model just the *transition* from overlooking to seeing a possibility—for example, by saying that the transition is a merely temporary swing toward middling credence, or that it is a temporary dip in the resiliency of one’s credence. What we want is a distinction between *distinct states*: the state a believer is in when she overlooks a possibility, and the state she is in when sees that possibility.

Higher-order beliefs give the Bayesian a marginally more promising strategy. Perhaps to overlook the possibility that ϕ is to be relatively unopinionated about one’s credence in the proposition that ϕ , and to see the possibility that ϕ is to be relatively opinionated about one’s credence in that proposition. This proposal derives what plausibility it has from the idea that I went from assigning high credence to

1. See JEFFREY 1983, §12.7, SKYRMS 1977 and 1980a, LEWIS 1980, and the postscript to LEWIS 1976.

the proposition that the right way to crack an egg is *this* way, and low credence to the proposition that I assigned high credence to that proposition, to assigning high credence to both propositions. I thereby *realized* that I (in some sense) *thought all along* that the right way to crack an egg is with the large end in your palm. This approach would also let us distinguish between overlooking the possibility that ϕ and either believing it to be false that ϕ , or being genuinely ambivalent about the possibility that ϕ . And it would let us hold that a believer can overlook both the possibility that ϕ and the possibility that $\neg\phi$, since clearly one can be relatively unopinionated about one's degrees of belief in both the proposition that ϕ and the proposition that $\neg\phi$.

But the existence of higher-order beliefs also makes certain familiar problems with probabilistic representations of belief states particularly acute. It is *prima facie* much harder to say what would make it the case that I believe to degree 0.8 that I believe to degree 0.9 that it rained in Seattle yesterday than it is to answer the already hard questions about what fixes first-order levels of credence. And answering this question is even harder if we think, as many do, that we are in some sense idealizing when we say that believers like us have point-valued degrees of first-order belief. If it is only in an idealized sense that I believe to degree 0.9 that it rained in Seattle yesterday, then what could the *content* of my second-order beliefs about my credence in that proposition possibly be?²

At any rate, here I simply want to leave this proposal as an open possibility—one way in which we might try to analyze the change a believer undergoes when she moves from overlooking to seeing a possibility. I suggest that we *model* this change in a much less committal way, leaving open certain questions about what its proper analysis might be—that is, leaving open certain questions about precisely what it means to 'see' and 'overlook' possibilities. The representation that I recommend is tractable, it lets us use probability spaces to model belief states, and it lets us represent the difference between states in which a believer overlooks a possibility and states in which she sees that possibility without committing us to any particular analysis of this distinction. I am thus introducing a formalism that is interpreted, but just barely, and hoping that the right analysis of the distinction I represent with that formalism is compatible with the broadly Bayesian tools that help us theorize about the effects speech acts have on belief states and conversational context. I

2. These problems notwithstanding, Bayesians clearly need *some* story about higher-order beliefs. For some work in that vein, see MELLOR 1980a, SKYRMS 1980b, GAIFMAN 1986, and SAHLIN 1994.

don't think this hope is naïve. We can mine insights with Bayesian tools even if they misrepresent our cognitive lives in certain respects. But I do need a way to respond to the worry that the representation I use to describe the effects of 'might' statements simply cannot represent some of their effects. This framework provides such a response.

I want to avoid misleading uses of 'belief' and 'believes,' since the words are laden with the influence of ordinary usage. So instead I use 'commitment' as a technical term for our high credence attitude, whether the credence in question is with respect to a seen possibility or an overlooked one. 'Commitment' also has misleading connotations, of course. But here is a use that may help focus our intuitions: "I didn't realize it, but yes, my endorsing that theory does mean that I am committed to the claim that ϕ ."

I model a single believer using two different probability spaces. One is defined over both those possibilities she overlooks and those she sees, measuring her credences with respect to all those possibilities. This space measures not only her high credences, but also her credences that fall short of commitment to a possibility or commitment to its complement. For convenience I call this her **fine credal space**. The other probability space is defined only over those possibilities she sees, measuring a smaller set of credences. This space again characterizes both her high credences and her 'middling' credences, but does not characterize her credences with respect to any possibilities she overlooks. For convenience, again, I call this her **coarse credal space**. I let the measure functions of the two spaces agree on all the sets that are measured by both spaces. Intuitively, the fine credal space is like an overlay on a map, adding detail to the coarse credal space without conflicting with any aspects of its representation.

Probability spaces are triples $\langle W, \mathcal{F}, \mu \rangle$ such that:

1. \mathcal{F} is an algebra over W ;
2. μ is a function from $\mathcal{F} \rightarrow [0, 1]$;
3. $\mu(W) = 1$;
4. If M and N are disjoint elements of \mathcal{F} , then $\mu(M \cup N) = \mu(M) + \mu(N)$.

\mathcal{F} is an **algebra** over a set W just in case $W \in \mathcal{F}$, \mathcal{F} is a set of subsets of W , and \mathcal{F} is closed under complementation and union. In my applications W is a

set of worlds, so \mathcal{F} is just a set of sets of worlds—that is, a set of propositions. It's crucial to note that μ measures the members of \mathcal{F} —not (just) the members of W . In the limit, \mathcal{F} may be $\{\emptyset, W\}$, or it may be the power set of W . Indeed, it's sometimes presupposed that \mathcal{F} must be the power set of W . But, again, we can have a perfectly good probability space even if \mathcal{F} is a proper subset of the power set of W . For example, there may be members of W —possible worlds—whose singletons are not members of \mathcal{F} .³

Given a world w , I call the world that differs from w only in u 's truth value the **u -variant** of w . I use obvious subscripts to distinguish between fine credal spaces and coarse credal spaces—' $\langle W, \mathcal{F}_f, \mu_f \rangle$ ' represents a fine space, and ' $\langle W, \mathcal{F}_c, \mu_c \rangle$ ' represents a coarse space. \mathcal{F}_f is the power set of W , and \mathcal{F}_c contains all the subsets of W *except* those that for some unseen possibility u include a possible world w but not w 's u -variant, if the u -variant of w is a possible world. For example, let W be the set of worlds $\{w_0, \dots, w_7\}$:

	s	t	u
w_0	F	F	F
w_1	F	F	T
w_2	F	T	F
w_3	F	T	T
w_4	T	F	F
w_5	T	F	T
w_6	T	T	F
w_7	T	T	T

Consider a believer who sees the possibility represented by s , and sees the possibility represented by t , but overlooks the possibility represented by u . Again, \mathcal{F}_f will be the power set of W . And \mathcal{F}_c will include exactly the subsets S of W that, for each world in S , also contain its u -variant for any unseen possibility u . That is, \mathcal{F}_c is the closure under complementation and union of the sets corresponding to the boxes in the table below:

3. For more details, see HALPERN 2003, 14–16 and 27–32.

	<i>s</i>	<i>t</i>	<i>u</i>
w_0	F	F	F
w_1	F	F	T
w_2	F	T	F
w_3	F	T	T
w_4	T	F	F
w_5	T	F	T
w_6	T	T	F
w_7	T	T	T

Let's run through a couple of examples. w_0 is the u -variant of w_1 , and vice versa. $\{w_0\} \notin \mathcal{F}_c$ because the u -variant of each world in $\{w_0\}$ is not in $\{w_0\}$. Similarly for $\{w_1\}$, $\{w_1, w_2\}$, and so on. But $\{w_0, w_1\} \in \mathcal{F}_c$ because $\{w_0, w_1\}$ includes all its members' u -variants: w_1 for w_0 , and w_0 for w_1 . Similarly, $\{w_0, w_1, w_2, w_3\} \in \mathcal{F}_c$, $\{w_0, w_1, w_4, w_5\} \in \mathcal{F}_c$, $\{w_2, w_3, w_4, w_5, w_6, w_7\} \in \mathcal{F}_c$, and so on.

The intuitive justification for this treatment is that for an overlooked possibility u , the believer's credences with respect to possibilities she sees do not distinguish between u -variant worlds. So her coarse credal space should leave unmeasured any sets that include a world without its u -variant.

Suppose now that t entails u . This means that w_2 and w_6 are impossible worlds, so $W = \{w_0, w_1, w_3, w_4, w_5, w_7\}$. If our believer overlooks just the possibility represented by u , \mathcal{F}_c will include exactly the subsets of W that include appropriate u -variants (e.g., $\{w_0, w_1\}$, $\{w_3\}$, $\{w_0, w_1, w_3\}$, etc.; but not $\{w_0\}$, $\{w_1\}$, $\{w_4\}$, etc.).

	<i>s</i>	<i>t</i>	<i>u</i>
w_0	F	F	F
w_1	F	F	T
w_3	F	T	T
w_4	T	F	F
w_5	T	F	T
w_7	T	T	T

So this framework allows us to model believers who overlook (certain) entailments of possibilities they see.⁴ For my purposes this feature of the framework is crucial, because I may see the possibility that my partner castles, for example, while overlooking the possibility that my partner castles or moves *en passant*. The framework might also help us reconcile the folk conception of belief with the kinds of logical omniscience demanded by probabilistic models of belief states. For example, we might accept that we are logically omniscient as far as our fine-grained commitments are concerned, although we often do not *see* the implications of those fine-grained commitments. I find much about this line attractive. But note that because coarse-grained spaces are probability spaces, even this approach would have it that the believers it models see the *necessary* proposition *and* assign it full credence. So (unsurprisingly) I will need to tell a metalinguistic story about ‘might’ statements like

- (6) It might be that every even number greater than two is the sum of two primes.

The framework can straightforwardly represent the changes that occur when there are changes in what possibilities a believer sees and overlooks. In particular, if a believer comes to see the possibility represented by u , for each set S in the algebra of her previous coarse credal space we add a set consisting of the u worlds in S and a set consisting of the \bar{u} worlds in S . Similarly, we can represent coming to overlook (or ignore) a possibility by coarsening a believer’s coarse credal space, from a probability space defined over an algebra \mathcal{F} to one defined over an appropriate subalgebra of \mathcal{F} . As I just noted, the use of probability spaces means that we cannot model believers who overlook the necessary proposition, or assign it less than full credence. And the framework also does not offer a way to represent a believer who overlooks the possibility that ϕ but sees the possibility that $\neg\phi$. (I doubt that there are such believers.) But these artefacts aside, the framework puts no unusual constraints on the norms, if any, that govern the relationships between overall doxastic states and the possibilities a believer sees and overlooks.

In light of this neutrality it is important to be clear about what work the framework does. As we saw, when it occurs to someone that it might be that ϕ , often she will not be sure whether or not ϕ —which suggests that we will need a probability

4. It can also model believers who overlook entailments of possibilities they see, but I leave this to the reader.

space to model her credences—and she will come to see the possibility that ϕ . To describe the effects of epistemic ‘might’ statements, we need a way to represent both of these changes, and we need to allow that the changes can occur independently of each other. Earlier I raised the worry that we cannot represent the distinction between overlooked and seen possibilities with a probability space. The framework gives us a modest way to defuse this worry, for the time being: we represent a belief state using *two* probability spaces that agree on all the credences measured by both. We can tackle the *analysis* of the distinction between overlooked and seen possibilities on another day.

2. Assertion

Though it will need some modifications, I start from the idea that the central function of assertion is to eliminate possibilities. That is, a successful assertion that ϕ :

1. Excludes worlds in which $\neg\phi$ from the addressee’s belief set; and
2. Excludes worlds in which $\neg\phi$ from the context set. (STALNAKER 1978)

A conversation’s **context set** is the set of possible worlds compatible with the common ground, where for it to be a common ground that ϕ is for it to be a common commitment (traditionally, ‘common belief’) among the participants in the conversation that they all treat it as true that ϕ for purposes of conversation. A group has a **common commitment** that ϕ just in case each member of the group has a commitment that ϕ , each member has a commitment that each member has a commitment that ϕ , each member has a commitment that each member has a commitment that each member has a commitment that ϕ , and so on. (I am using ‘commitment’ here in the sense that I introduced earlier: common commitment just is what is ordinarily meant by ‘common belief.’ But I want to highlight the fact that on my account we *overlook* the possibilities corresponding to the n^{th} -order attitudes of common belief, for suitably high values of ‘ n ’. As we saw with the egg cracking case, our credences with respect to overlooked possibilities can still influence our behavior, and I think they do so when we have common attitudes.)

Stalnaker’s way of representing the changes effected by successful assertion needs two changes if it is to represent the changes that are characteristic of epistemic

‘might’ statements. First, in his work on assertion and presupposition Stalnaker idealizes by assuming that belief and belief-like attitudes are not *degreed*. This idealization is benign for his purposes, but not for mine. Recall

- (5) # Maxine is absolutely certain that the door is locked, but she allows that it might be unlocked.

I take the infelicity of (5) to show that a believer who thinks it might be that ϕ gives *some* credence to the proposition that ϕ . But this will often be much less than full credence. This is why we must describe the effects of epistemic modals in terms of *degreed* belief and commitment. And so I do not treat a successful assertion that ϕ , for example, as *eliminating* possibilities in which $\neg\phi$ from the addressee’s belief set. I say instead that a successful assertion that ϕ (by a trusted speaker, etc.) ensures that the addressee gives relatively low credence to $\neg\phi$, thereby ensuring that she gives relatively high credence to ϕ . I follow Stalnaker in treating the context set as non-*degreed*, however, because I doubt that we need a *degreed* common attitude⁵ or a non-*degreed* common attitude with a *degreed* ‘base’ attitude to characterize pragmatic presupposition.⁶ The second, quite minor change is that the ‘coarse credal units’ that are affected by speech acts are not particular possible worlds—as they would be for a believer who overlooked no possibilities—but rather *sets* of possible worlds, where those sets may not be singletons.

Before turning to epistemic ‘might’ statements, I should say a little about the norms governing assertion. I am interested in one of the form:

It’s appropriate for S to assert that ϕ only if/at most to the degree to which:

- It’s true that ϕ , or
- S believes that ϕ , or
- S believes that ϕ with good reason, or
- S believes truly that ϕ , or

5. Like common *p*-belief, in the sense of MONDERER & SAMET 1989 and MORRIS & SHIN 1997.

6. Note that even a non-*degreed* context set determines a probability space: the measure function of the space is simply into $\{0, 1\}$. The standard uses of conversational common ground demand (1) that the common ground have the closure properties of probability spaces with such measure functions, and, because the common ground must not include any logically inconsistent propositions, (2) that the necessary proposition is common ground.

- S knows that ϕ (WILLIAMSON 2000), or
- S “undertakes justificatory responsibility” to defend the claim that ϕ (BRANDOM 1983, 641; BRANDOM 1994, 16–17 and ch. 3)

and so on.

I will not discuss these proposed norms here. What I want to emphasize is that *everyone* should agree that to assert that ϕ is, among other things, to present yourself as being in a good epistemic position with respect to the proposition that ϕ . And everyone should agree that it is appropriate to assert that ϕ only if it is appropriate to present yourself as being in a good epistemic position with respect to the proposition that ϕ . I argue later that the fact that this is a norm of assertion cuts against some recent theories of epistemic ‘might’ statements.

3. ‘Might ϕ ’ in Conversation

Now I want to consider a case that brings out several important features of epistemic ‘might’ statements. Suppose I have no idea where my car keys are, and neither does my wife. She gets home from work—and so has no good sense of where I’ve looked—and I ask her if she knows where my keys are. She says to me “They might be on the kitchen table.” Now her utterance in this case may or may not be helpful to me, because I may have already scoured the kitchen table for my keys. But whether or not what she has said is helpful, all she has done is remind me to look on the table if I haven’t already. More specifically, she has ensured that I not overlook the possibility that my keys are on the table, and recommended that I not inadvertently assign too little credence to (or ‘rule out’) that possibility. So the effects of epistemic ‘might’ statements are not much like those of assertions.

The modest effects of ‘might’ statements are reflected in the modest norms governing their use. Whether or not the ‘might’ statement my wife used is helpful to me, it is *appropriate*, and she *knows* that it is appropriate. It wouldn’t be fair for me to say in response “No, I’ve already looked on the kitchen table. They’re not there. So why did you say they might be there?” All I can say is something like “No, I’ve already looked on the kitchen table. They’re not there.” This shows that although someone who says “It might be that ϕ ” thereby presents the proposition that ϕ as a live possibility for *her*, such a speaker often leaves wide open the possibility that her addressee knows that he knows that $\neg\phi$, and thus will not find the

‘might’ statement helpful. Unlike assertion, the speech act associated with expressions of epistemic possibility is a recommendation that one adopt a certain kind of epistemic strategy—that, as I said, the addressee shouldn’t *inadvertently* rule out certain possibilities. But when we use ‘might’ statements, we generally allow that the addressee may continue to rule out those possibilities if she has good evidence with respect to them.

We also use ‘might’ statements in a less hedged way. For example, we use them in the course of *rejecting* assertions:

SMITH: The weather report says it will definitely rain tomorrow, so it will rain tomorrow.

JONES: It might not rain tomorrow—weather reports are sometimes wrong.

In Stalnakerian terms, Smith has proposed (inter alia) both that Jones exclude from his belief set possible worlds in which it does not rain tomorrow, and that the context set exclude the same sort of possible worlds. Jones’s response is a way to make manifest the fact that he rejects those proposals. This might seem to be more than a suggestion that one not inadvertently rule out certain possibilities. But Jones’s response is not a counterexample to the characterization of ‘might’ statements that I offered in the preceding paragraph. Note that Jones *gives a reason* to reject Smith’s proposals—Smith and Jones would be in an odd conversational situation if Jones had said, instead,

JONES: # It might not rain tomorrow.

and left it at that. This conversational move is incomplete in a way that cannot be easily accommodated. Thus we can say that Jones’s appropriate use of a ‘might’ statement to reject Smith’s assertion is a recommendation that, *in light of the fact that weather reports are sometimes wrong*, Smith not inadvertently rule out the possibility that it will rain tomorrow. It is not plausible that this sort of speech act is assertion.

‘Might ϕ ’ statements that are not rejected typically have three basic effects on the non-conversational parts of addressees’ credal spaces, and on the context set. They:

1. Ensure that all the conversational participants’ levels of credence in the proposition that ϕ meet at least a low threshold;

2. Ensure that all the conversational participants see the possibility that ϕ —formally, that the conversational participants’ coarse credal spaces distinguish sets of worlds that differ on the truth value of ‘ ϕ .’
3. Ensure that there are some worlds in the context set in which it is true that ϕ . Or, equivalently: They ensure that the proposition that $\neg\phi$ is not common ground.

Effects 1 and 2 should be unsurprising, since they are analogues of the effects that obtain when it occurs to a single believer that it might be that ϕ .

Effect 3 is new, however. Here is one way in which it manifests itself. Someone who admits that it might be that ϕ may give very little credence to the proposition that ϕ : “I might be a bodiless brain in a vat, but I really doubt it.” But despite the low credence given here to the proposition that ϕ , to admit that it might be that ϕ is to make it inappropriate simpliciter to presuppose that $\neg\phi$. Consider this dialogue:

BETTY: I saw Ron walking his dog last night with Sam.

CLARA: Are you sure it was Ron’s dog? It might have been a neighbor’s.

BETTY: # I think it was Ron’s dog, but I might be wrong. Anyhow, Ron’s dog was really misbehaving ...

Betty’s response is infelicitous because the presuppositions typically carried by the definite expression ‘Ron’s dog’ are neither in place nor easily accommodated. This phenomenon is explained by effect 3. Betty’s admission that it might not have been Ron’s dog ensures, thanks to effect 3, that the context set includes worlds in which Betty was wrong to think that the dog she saw was Ron’s dog. And this prevents Betty from appropriately presupposing that ‘Ron’s dog’ denotes the dog she saw. We can now see one reason why it’s hard to argue with skeptics: give them an inch of credence, and they are *entitled* to take a mile of presupposition:

RICHARD: My hand hurts.

TOM: Are you sure you have a hand? You might be a bodiless brain in a vat.

RICHARD: # I think I have a hand, but I might be wrong. Anyhow, my hand has been hurting for several days now.

Richard’s response to Tom is not as marked as Betty’s response to Clara—but only insofar as Richard is conveying that he’d prefer not to play the skeptic’s game today.

Note that these would-be failed presuppositions can be supplied by the antecedent of a conditional, thereby preventing presupposition failure:

BETTY: I think it was Ron's dog, but I might be wrong. Anyhow, if it was Ron's dog, his dog was really misbehaving . . .

—

RICHARD: I think I have a hand, but I might be wrong. Anyhow, if I have a hand, my hand has been hurting for several days now.

The felicity of these responses strongly suggests that what is going on here really is presupposition failure. Given a pragmatic analysis of presupposition, effect 3 then falls out immediately.

We can see effect 3 in other places as well. As I noted earlier, we often use 'might' statements when we reject assertions:

SMITH: The weather report says it will definitely rain tomorrow, so it will rain tomorrow.

JONES: It might not rain tomorrow—weather reports are sometimes wrong.

On my modified Stalnakerian picture of assertion, the conversational participants have 'taken on board' Smith's assertive utterance that it will rain tomorrow only if the common ground comes to exclude worlds in which it doesn't rain tomorrow. Why are 'might' statements used to reject such conversational moves? I answer that speakers exploit effect 3 as a way of making their rejection manifest. To assertively utter ' ϕ ' is to propose, *inter alia*, that the common ground exclude worlds in which $\neg\phi$. A speaker can manifest her rejection of such a proposal by making a counterproposal, namely, that the common ground include some such worlds. Because of effect 3, 'It might be that $\neg\phi$ ' does precisely this. The speaker rejects the assertion by making a proposal that is inconsistent with one of the assertion's intended effects.

'Might' statements are quite often used to structure further inquiry: after someone says that it might be that ϕ , it's often natural to proceed by collectively trying to determine whether the proposition that ϕ is true. I suspect that this phenomenon can be explained by appeal to the increased common salience of the possibilities raised by the 'might' statement, together with the operation of Gricean mechanisms conversationally implicating that the speaker both does not know whether

ϕ and would find it worthwhile to know whether ϕ . Speakers sometimes exploit this phenomenon by using ‘might’ statements to make a peculiar kind of pseudo-concession. For example, an effective way to respond to and discuss a student’s claim that ϕ is sometimes to say “It might be that ϕ ,” even if one lends no credence to the proposition that ϕ . Here the ‘might’ statement is used *purely* as a gentle way of structuring further inquiry: the teacher and student will often go on to see that the proposition that ϕ is false, perhaps by seeing what would follow from it. Thus the teacher uses the ‘might’ statement without intending for it to have effect 1: the teacher knows that it will not ensure that the conversational participants’ levels of credence in the proposition that ϕ meet at least a low threshold, because the teacher believes that $\neg\phi$. But effects 2 and 3 still obtain, and in particular the obtaining of effect 3 is what encourages inquiry to proceed in the expected way. I think it is safe to construe this kind of use of ‘might’ statements as parasitic on more standard uses.

4. Alternative Proposals

4.1. Kratzer Modals

On Angelika Kratzer’s influential semantics, ‘Might ϕ ’ means that the proposition that ϕ is compatible with “what is known.”⁷ Context helps determine which propositions count as part of what is known. In some contexts, for example, what is known is exactly what the speaker knows. In all other contexts, what is known *also* involves, in some sense, what other believers know.

The following situation yields a dilemma for Kratzer-style semantics, neither horn of which looks tenable.⁸ Suppose my wife and I are getting ready for a trip. As I turn off the lights and lock the front door, I see that she is busy settling our son into the car. After I get into the car, I start to feel as though I’m forgetting something. I mention this to my wife, who says

(7) You might have forgotten to lock the door.

As a matter of fact I know that I did lock the door, and that my wife didn’t see me do this because she was busy in the car. Nevertheless, it was *entirely appropriate*

7. See her 1977, 1981, 1986, and 1991.

8. Thanks to Sarah Moss for help with the example.

for her to say that I might have forgotten to lock the door.

Recall that it is appropriate for S to assert that ϕ only if it is appropriate for S to present herself as being in a good epistemic position with respect to the proposition that ϕ . So if a Kratzer-style semantics is right, S 's assertive utterance of 'Might ϕ ' is not appropriate unless it is appropriate for S to present herself as being in a good epistemic position with respect to the proposition she thereby expresses. Now a Kratzer-style semantics must say either that "what is known" in this context consists simply of what my wife knows, or that it *also* involves, in some way, what some other believers know. On any plausible analysis, I am the only other relevant believer in the scenario at issue.

FIRST HORN: If "what is known" in this context is simply what my wife knows, then (7) expressed the proposition that it was compatible with what my wife knew that I forgot to lock the door. This proposition would be uninformative to me, because I saw that my wife was busy with our son as I locked the front door, and hence I believe that she doesn't know whether I forgot to lock the door. Indeed, *she may believe* that I believe that she doesn't know this. But assertions that the speaker believes will be uninformative are generally not appropriate (GRICE 1987, 26; STALNAKER 1978).

SECOND HORN: If "what is known" in this context non-trivially involves what I know, then my wife will not be in a good epistemic position to assert (7). After all, she was busy with our son, and so has little reason to think that it's compatible with what I know that I forgot to lock the door. It will thus be inappropriate for her to present herself as being in a good epistemic position with respect to the proposition she expressed with (7), making her assertive utterance inappropriate.

On either horn, a Kratzer-style semantics for 'might' wrongly predicts that my wife's utterance of (7) was inappropriate.

4.2. Assessor Relativism

Recently there has been much interest in 'relativistic' semantics for epistemic modals, where this means that the truth values of epistemic 'might' statements depend in part on the epistemic position of the assessor of the statement.⁹ Such approaches

9. See MACFARLANE 2003, EGAN et al. 2005, and EGAN 2005.

are supposed to handle examples like this one.

EAVESDROPPING:

The White spies are spying on the Red spies, who in turn are spying on the gun for hire. Although the gun for hire has left evidence suggesting that he is in Zurich, one clever White spy knows that the gun for hire is in London. Finding the planted evidence, one Red spy says to the others, “The gun for hire might be in Zurich,” and the others respond “That’s true.” The clever White spy says “That’s false—he’s in London” to the other White spies, and explains how he knows this.

Many find both the Red spies’ utterance of “That’s true” and the clever White spy’s utterance of “That’s false” wholly appropriate, and are even willing to say that both the Red spies and the clever White spy have spoken *truly*. And these judgments are at the very least supposed to suggest an application for relativistic semantics: “The gun for hire might be in Zurich” is said to be ‘true relative to’ assessors in an epistemic position like that of the Red spies, and ‘false relative to’ assessors in epistemic positions like that of the White spies.

How can my treatment of epistemic ‘might’ statements explain our judgments about EAVESDROPPING? Quite generally, whether a piece of advice seems ‘all things considered’ appropriate can depend on the assessor’s epistemic position. The kind of advice that I say is the force of epistemic ‘might’ statements is often evaluated in a similar way: the apparent appropriateness of advice not to inadvertently rule out a possibility can depend on the assessor’s epistemic position. (And note that such advice can be inappropriate, in virtue (among other things) of being misleading.) Granted, we do say that epistemic ‘might’ statements are *true* or *false*. But such judgments are not nonnegotiable demands on semantics and pragmatics. We should not expect ordinary speakers to know precisely which aspects of meaning fall within the domain of semantics. We should instead construe ordinary uses of expressions like “That’s true” and “That’s false” as general expressions of approval or disapproval that may or may not latch on to properly semantic features.

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