EPISTEMIC CONTEXTUALISM VERSUSTHEVARIABLE IMPLICIT MODAL MODIFIERS THEORY

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1. Introductory

Keith DeRose provides us with an interesting puzzle about variability in the warranted assertability of knowledge attributions:

> Bank Case A. My wife and I are driving home on a Friday afternoon. We plan to stop at the bank on the way home to deposit our paychecks. But as we drive past the bank, we notice that the lines inside are very long, as they often are on Friday afternoons. Although we generally like to deposit our paychecks as soon as possible, it is not especially important in this case that they be deposited right away, so I suggest that we drive straight home and deposit our paychecks on Saturday morning. My wife says, "Maybe the bank won't be open tomorrow. Lots of banks are closed on Saturdays." I reply, "No, I know it'll be open. I was just there two weeks ago on Saturday. It's open until noon."

> Bank Case B. My wife and I drive past the bank on a Friday afternoon, as in Case A, and notice the long lines. I again suggest that we deposit our paychecks on Saturday morning, explaining that I was at the bank on Saturday morning only two weeks ago and discovered that it was open until noon. But in this case, we have just written a very large and very important check. If our paychecks are not deposited into our checking account before Monday morning, the important check we wrote will bounce, leaving us in a very bad situation. And, of course, the bank is not open on Sunday. My wife reminds me of these facts. She then says, "Banks do change their hours. Do you know the bank will be open tomorrow?" Remaining as confident as I was before that the bank will be

open then, still, I reply, "Well, no. I'd better go in and make sure."[1]

We shall refer to this as "the Puzzle." One of its interesting features is that it relies on widely held judgments about the two cases, but the judgments have at least the appearance of being inconsistent.[2] If it is appropriate to attribute knowledge in case A, and B case is evidentially equivalent, then it seems consistency demands that we should ascribe knowledge to the husband in case B. But if case B shows that it is inappropriate to ascribe knowledge to the husband, then we should resist attributing knowledge to him in case A. The fact that we are willing to ascribe knowledge in the first case, but not in the second, even though they are evidentially equivalent, suggests an additional factor is operative in knowledge attributions. A likely candidate, it seems, is that knowledge attribution is sensitive to pragmatic interests.

DeRose offers an epistemic contextualist (EC) explanation for the Puzzle: the variability in warranted assertability of knowledge claims is explained by the variability in truth conditions for "knowledge." I argue for a competing explanation: the embedded propositions in knowledge claims, the "P" in "S knows that P," is ambiguous. A theory of speakers' meaning must provide an account of "implicit modal modifiers," e.g., "certainly," "highly probable," "probable," and so on, and the appropriate implicit modal modifier to attribute to speakers varies with context. This view I call the "variable implicit modal modifier" (VIMM). I offer two independent arguments for VIMM. The first is that considerations of parsimony favor VIMM over EC. The second is that a theory of speakers' meaning requires, in some cases, attributing implicit modal modifiers to speakers. Once these commitments are made explicit there is no way to solve the Puzzle without VIMM, and with VIMM, EC is redundant.

2. The Contextualist Solution to the Puzzle

Although EC is probably best thought of as a family of views,[3] for our purposes it will be sufficient to describe some similarities. EC says that attributions of knowledge are context sensitive and attributor relative. It is often explicated in terms of the context sensitivity of words like "bald," "rich," "flat," etc.[4] Analogously, "knowledge" is said to be contextual, e.g., in many everyday circumstances we use a "low" standard for knowledge, in other circumstances we tend to raise the bar for knowledge. Thus when the husband says: "I know it'll be open." EC says we use a lower standard for "knowledge," in case B a higher standard is invoked and the knowledge claim is rejected. In other words, "know" has different truth conditions depending on the context. A consequence of this contextual relativity is the attributed knowledge in case A "disappears" when the higher standard is invoked.[5] Since speakers use different standards for "knowledge," an obvious question to ask is whether the lower or higher standard is correct, but according to EC, the question itself is misconceived. As Cohen argues "neither standard is simply correct or simply incorrect. Rather, context determines which standard is correct."[6]

Thus EC claims that the context determines how attributors' understand speakers' meaning, and attending to this feature of the meaning of the verb "to know" solves the Puzzle. EC also offers an explanation of how the puzzle arises in the first instance: speakers are not fully aware that there are contextual standards for "knowledge." Once this is accepted, we are in a position to see that there is no contradiction between the two cases, and there is no need to worry about disappearing knowledge. Indeed, there is no Puzzle among the EC intelligentsia—those meta-linguistically aware of the shifting standards of "knowledge." If the couple were members of this group, the bank drama would have played out differently. In case A, the husband would have said: "I LOW-know that it'll be open." ("LOW" refers to the lower standards for "knowledge" used in non-practically urgent cases. "HIGH" is used in situations where the practical stakes are more urgent).[7] In case B, the husband would deny that he HIGH-knows the bank is open on Saturdays, he only LOW-knows that it will be open on Saturday. One factor that makes case B a HIGH context is the fact that, as DeRose puts it, the bank being closed on Saturday would be a disaster, not just a disappointment.[8]

A critical concept for EC theorists of all stripes is the notion of "contextually shifting standards for knowledge." One aspect of this notion is attributors' understanding of context—what we might think of as "attributors' access" to a shift. There must be features of a context such that attributors are aware of them in order to know the appropriate context. Typically, two are discussed. The first is the practical urgency of the situation. As we have just seen, the bank cases differ in their practical urgency, and according to EC, it is awareness of this fact that in part signals a shift in context. The second is the introduction of a skeptical hypothesis. As DeRose suggests:

> It does help if something that functions as a "sceptical hypothesis'" is inserted into the conversation in HIGH—a hypothesis that is perhaps too far-fetched to be considered in LOW…. Thus in my high standards bank case, my wife raises the possibility that the bank has changed its hours in the last two weeks….[9]

EC also offers an analysis of "standards for knowledge," indeed, a number of different EC analyzes have been offered, here we will briefly mention just one. Relevant alternative contextualism builds on Dretske's relevant alternatives (RA) analysis of knowledge. [10] Roughly, RA says that if some person S knows that Q, and H is a relevant alternative to Q, then S is in a position to know that H is false.[11] The main difficulty in spelling out RA contextualism is to say what constitutes a relevant alternative. Fortunately, we do not need to investigate this issue, rather it is sufficient for our purposes to note that however "relevant alternative" is explicated, it will say that the wife's skeptical hypothesis that the bank has changed its hours in the last two weeks is not a relevant alternative in case A, but is a relevant alternative in case B. If it were a relevant alternative in case A, then according to RA contextualism we ought not attri-

bute knowledge to the husband because he is not in a position to know that this relevant alternative is false. Of course in case B, the whole point of raising the alternative is to show that he has not eliminated the skeptical hypothesis.[12]

3. THE VIMM SOLUTION

VIMM says that the husband's knowledge claim (1) about the bank being open is prima facie ambiguous between:

  1a: I know it will [certainly] be open.
  1b: I know it will [highly probably] be open.

By "prima facie ambiguous" I mean that in different contexts it may be appropriate to understand the husband's utterance as either 1a or 1b. (The square brackets indicate that the modal modifier is implicit). In case A, the husband is interpreted as saying 1b. In case B it is 1a that is at issue. So, VIMM offers an explanation of the Puzzle in terms of good old-fashioned equivocation: speakers equivocate between 1a and 1b. The Puzzle is generated by not attending to this equivocation.

The shift from 1b to 1a is explained in a familiar fashion. One factor is that attributors are aware of the change in practical context. Not much rides on the bank being open on Saturdays in case A, and so the high probability of it being open is sufficient for the couple's purposes. However, in case B it is 1a that is at issue. The husband does not know this proposition, but he does not know it in Case A either. It only becomes relevant in case B where the stakes are higher, where disaster, not just a disappointment, threatens.[13] Practical concerns mean that 1b is not sufficient; 1a is required. Similarly, attributors must understand the wife's skeptical hypothesis as directed against 1a. After all, the skeptical hypothesis is consistent with 1b, only 1a is threatened by the skeptical hypothesis. The VIMM explanation is charitable in making the original knowledge claim plausible, since it is hard to see how the husband would think he is in a position to assert 1a, and it also explains why the original knowledge claim is inadequate in the high stakes case. Knowledge does not "disappear," but rather, what is known in the first case does not adequately address the practical concerns of the second case.

We are now in a position to draw a few comparisons between EC and VIMM. Both are linguistic solutions to the Puzzle, in particular, they both suggest that making manifest certain (conjectured) aspects of natural languages explains the Puzzle. Both have an invariantist element to them. Contextualism is invariantist about the embedded proposition in propositional knowledge, that is, the "P" in "S knows that P."[14] VIMM is invariantist about "knowledge."[15] Both have an error theory: EC says that we fail to understand the contextual relativity of "knowledge;" VIMM says that we fail to appreciate the ambiguity in the embedded propositions (distinguished by different implicit modal modifiers).

4. VIMM is to be Preferred on Grounds of Parsimony

Let us stipulate the "dogmatic mode" is the mode of judgment that does not involve any explicit mention of probabilistic terms, while the 'probabilistic mode' always explicitly mentions probabilistic terms.[16] It is worth noting a couple of points about this admittedly non-standard way of making the distinction.[17] First, the probabilistic mode of judgment is not confined to numerical assertions of probability. Natural languages provide resources for making probabilistic judgments; for example, using adverbial modal modifiers we can alter Jeffrey's example of a dogmatic assertion:

2: It will rain tomorrow.

into the probabilistic mode of judgment:

2a: It certainly will rain tomorrow.[18]
2b: It almost certainly will rain tomorrow.
2c: It very probably will rain tomorrow.
2d: It probably will rain tomorrow.
2e: It possibly will rain tomorrow.
2f: It is very unlikely it will rain tomorrow.

Admittedly, the probabilistic mode of judgment provided by English is not as rich as the real numbers between 0 and 1, but it does provide a richer palate for "depicting your state of mind" than the dogmatic mode. Second, as 2a illustrates, the probabilistic mode of judgment is not distinguished from the dogmatic mode in terms of certainty; rather, it is merely the "surface" feature of whether any explicit commitment is made to a modal modifier that distinguishes the two.

We are now in a position to see why VIMM is more parsimonious: it appeals to a device to solve the Puzzle, modal modifiers, that ordinary (non-philosophical) speakers of English regularly use. Indeed, it is not even possible to generate a plausible version of the Puzzle once we try to restate it using the probabilistic form of judgment. Thus, imagine the husband and wife have foresworn the use of the dogmatic mode. In restating the bank drama the husband cannot say 1, but plausibly, must choose between either:

1a*: I know it'll certainly be open.
1b': I know it'll highly probably be open.

It is clear what the husband should assert in case A. There is some slight probability that the bank may have changed its hours in the last two weeks, as the wife rightly notes in case B, and his evidence does not eliminate this possibility, so it would be foolish for him to assert 1a*. On the other hand, he is in a

good position, evidentially speaking, to assert 1b*. In case B, where financial disaster threatens, it is clear that the mere high probability is not sufficient. We might imagine the wife says that the husband is in a position to assert 1a*, but not 1b*; this is why he must go into the bank and further enquire about their Saturday hours.

All competent English speakers know how to use and understand modal modifiers, and VIMM explains the Puzzle by saying that the modal modifiers are implicit in the dogmatic mode. Contrast this with EC. As we have just seen, there is no need to appeal to shifting standards for knowledge when stated in the probabilistic mode, since in both the LOW and HIGH cases 1b* is assertable but 1a* is not.[19] So, EC must concede that there is no need to appeal to EC when stated in the probabilistic mode. Thus, if EC and VIMM are otherwise equal in explaining the Puzzle in the dogmatic mode, then there should be some preference for VIMM in terms of simplicity: it does not require a new mechanism for explaining the Puzzle. VIMM says modal modifiers work in both the probabilistic and the dogmatic modes, while EC must invoke a sui generis mechanism, shifting standards for "knowledge," in the dogmatic mode.

If VIMM is correct, then there is an unnoticed ambiguity in our language. An implication is that if our language was made more explicit, then the Puzzle should disappear. For example, compare the "Pseudo-Puzzle" where each of the following propositions seems plausible but jointly inconsistent:

i: S knows the banks are flooded.
ii: S knows that if the banks are flooded, then S knows that S's money is wet.
iii. S knows that S's money is not wet.

The Pseudo-Puzzle easily dissolves when the equivocation is noted. In particular, we can restate the Pseudo-Puzzle using the less ambiguous locutions "river banks" and "financial institutions." Analogously, other things being equal, if VIMM is correct, we should expect there to be no paradox when the dogmatic mode is disambiguated with explicit modal modifiers, that is, in the probabilistic mode. This is precisely what is found: I have yet to find someone who thinks that the husband knows 1a* in case A or case B; and I have yet to find someone who thinks that the wife is asking about 1b rather than 1a in case B. And all (non-philosophers) see VIMM as a very intuitively plausible way to clarify the seeming contradiction noted above between case A and case B. That is, the husband knows 1b in both cases, but it is fully intelligible in case B when the wife is enquiring whether he knows 1a.[20]

5. A Transcendental Argument

The second main argument for VIMM is that we must understand speakers using the dogmatic mode of judgment as having an implicit commitment to

modal modifiers. Once this commitment is made manifest, EC is unable to explain the Puzzle.

The first step of the argument is to consider the plausibility of the view there are no interesting logical relations (NILR) between the dogmatic and the probabilistic modes.[21] The following transcendental argument[22] shows why NILR is mistaken, in particular, that a proper understanding of a dogmatic assertion "P" conveys the speaker's at least reasonably high confidence in P.

Speakers do not contradict themselves if they utter 2 in conjunction with:

3. It will be windy tomorrow.
4. It will be warm tomorrow.

There may be inductive relations between 2 and 3 or 4, but there are no interesting logical relationships, so NILR is a perfectly adequate theory for the relationships between 2, 3 and 4. Now compare that with the uttering of 2 in conjunction with 2Pa to 2Pf. If NILR is correct, then there is no reason to think that speakers commit some infelicity if they assert 2 in conjunction with any of 2Pa-2Pf. However, clearly there is something untoward if they assert 2 in conjunction with 2Pe or 2Pf. Imagine Richard says to his wife "It will be rainy tomorrow" with the hope of thwarting her picnic plans. Thirty seconds later he says to his daughter, "It is unlikely it will be rainy tomorrow." Surely Richard is guilty of some sort of infelicity that is not merely inductive.[23] Suppose he responds as follows: "I said it will be rainy tomorrow, I did not say how likely it was to rain. I simply provided additional information to my daughter; just as saying there will be "heavy rain" adds additional information to the idea that there will be rain. I may be guilty of omitting the additional information to my wife, but I did not contradict myself any more than there is an inconsistency in saying 'It will rain tomorrow and there will be heavy rain tomorrow.'"

I take it that no one will be persuaded by Richard's reply. The question is why. The apparent absurdity cannot be explained in terms of surface logical operators, as in a case of someone asserting "P" and "not-P."[24] Rather, the problem is one of the logic of assertion.[25] Viable explanations must say something to the effect that in asserting a sentence like 2 we understand the speaker to have a reasonably high level of confidence in the claim "it will rain tomorrow." If this is the case, then the inconsistency is plain. Asserting 2 commits the speaker to a greater than 50% chance of rain, while 2Pe and 2Pf commit the speaker to a less than 50% chance of rain, and so are inconsistent. For our purposes it does not matter how speakers' commitments are cashed-out here, for example, whether this confidence is handled by a theory of semantics or pragmatics. All we need for our argument is the bare assumption that in asserting "P" speakers are understood as having a fairly high confidence that P, leaving to others the task of explaining why this is so. So, NILR is not viable.[26]

6. IIMM Won't Explain the Puzzle

The commitment to implicit modal modifiers can be cashed-out in one of two ways. One theory says that a theory of invariant implicit modal modifiers (IIMM) is appropriate, while the other (VIMM) says that a theory of variable implicit modal modifiers is required. If IIMM is plausible, then this leaves room for the EC theorist to suggest a hybrid theory of speakers' meaning: the conjunction of IIMM and EC. This section adduces reasons to reject IIMM, both as a general theory and with respect to the specifics of the Puzzle.

The most straightforward version of IIMM applies to all dogmatic assertions. For example, a prevailing view among linguists is that sentences in the dogmatic mode are *always* used to indicate the highest degree of certainty.[27] The view also has some philosophical defenders.[28] One problem with this view is, as Jeffrey notes, "It would be a mistake to identify assertion with probability 1 and denial with probability 0, e.g., because someone who is willing to assert that it will rain need not be prepared to bet life itself on rain."[29]

The obvious alternative is to understand all dogmatic assertions as committed to very high probability. But this too is subject to counterexamples. After a rafting accident your true love says: "I will do everything in my power to get you help." This would license you to respond: "Thank you for very highly probably doing everything in your power to get help, but I would appreciate it if you could avow certainty that you will do everything in your power to get help." Surely this would be a misunderstanding of the implicit modal commitment of your true love. Your true love intends certainty: to do everything possible, even if it means forfeiture of her life. Similarly, if you know your friend is a diehard supporter of the NDP, then it is best to understand the assertion, "I will vote for the NDP in the next election," as "I will [certainly] vote for the NDP in the next election. So IIMM as a general theory of implicit modal modifiers oes not look particularly plausible.[30]

EC theorists need not stick their necks out so far as to say that IIMM applies as a general theory, but rather, the implicit modal modifier is univocal in at least the bank cases. I hope to show that there is an insurmountable dilemma for the EC theorist.

Let us start with the high probability interpretation, that is, 1b. As noted above, this makes plausible the idea that he speaks the truth in Case A. It also makes more intelligible his actions: if he thinks that it is only highly probable the bank is open Saturdays, then this explains why he thinks going into the bank will increase his confidence.

However, there are difficulties with an IIMM understanding of the highly probable interpretation. First, the wife's point that banks sometimes change their hours seems to be a low probability event, and so it is hard to see how this could undermine a claim that it is highly probable that the bank will be open on Saturday. Second, it seems that the practical urgency of the matter means that in case B, knowing that it is highly probable that the bank is open on Saturday is not sufficient. Imagine this *deus ex machina* variant of the Puzzle: when the

wife points out that banks sometimes change their hours, God appears in the car with the couple and says that He will guarantee that it is highly probable that the bank will be open tomorrow. He adds that if the couple wants greater certainty than this, the husband will have to go into the bank and inquire about their hours. Given the practical urgency of getting the money in the bank, it seems plausible to assume the husband will be sent into the bank "to make sure"—God's divine guarantee that it is highly probable would not be enough. But this tells us that what they want to know is not 1b, but 1a.

The problem of course for 1a is, as said previously, that it is not a particularly charitable interpretation. We said the husband would have to be a fool or worse to not realize that banks sometimes change their hours, and so the real possibility that this might happen is sufficient to show that he is in no position to be certain. Indeed, even in the low stakes case A, it is difficult to see why anyone would accept his knowledge claim, even if they had no practical interest in the matter. Imagine you overhear the couple's conversation. You bank elsewhere and, thus, have no other interest in the matter. Even under these circumstances it does not seem appropriate to think the husband is in position to know 1a. The evidence that the bank was open on Saturday two weeks ago is good evidence that it is highly probable that it is open on Saturdays, but the evidence is not so compelling as to make it certain that the bank is open this Saturday.

But it might be objected by the RA EC theorist that the husband is certain in the low stakes case because all the RAs have been eliminated. The husband is not certain that all irrelevant alternatives have been eliminated, but this is not required for knowledge on the RA account. Here, the thought might be that the husband knows:

1a**: I LOW-know it'll [certainly, that is, all the relevant alternatives have been eliminated] be open.

But, either the RA theorist takes the "irrelevant alternatives" as merely low probability alternatives, in which case 1a** is an extensionally equivalent but convoluted version of 1a; or, the irrelevant alternatives may be high probability alternatives, in which case RA is an implausible account of knowledge.

Let us take the second horn first. Imagine again the EC intelligentsia. We said that the husband could still claim LOW knowledge that the bank is open on Saturday even in light of the wife's skeptical hypothesis. If the husband can maintain LOW knowledge even in light of a highly probable alternative, then this would be sufficient for distinguishing EC and VIMM. Could the husband still claim to LOW-know the bank is open on Saturday if his wife said that she had heard on the radio that 60% of the banks in the neighborhood will be closed on Saturday? Presumably EC will deny the husband LOW-knows in this case. Any alternative with more than a low epistemic probability is perforce a relevant alternative.

This first horn says that relevant alternatives may be safely ignored only

when they are low probability alternatives. So, irrelevant alternatives will always be low probability alternatives. But then 1a** is a disguised way of saying:

> 1a***: I LOW-know it'll [certainly, that is, all the high probability relevant alternatives but not some of the low probability irrelevant alternatives have been eliminated] be open.

But 1a*** seems a long way around the barn to say exactly what 1a says, which is that it is highly probable but not certain that the bank will be open. So, an invariantist understanding of the implicit modal modifier will not work.

Conclusion

EC, at least as it is defended by DeRose, Cohen (et. al), asks us to take seriously the linguistic practices of ordinary (non-philosophical) speakers of English. As DeRose notes:

> the intuitions that the relevant claims in each of the cases (the ascription of knowledge in LOW and the denial of knowledge in HIGH) are true can become extremely powerful indeed. And these strong intuitions of truth are buttressed by the presumption that what is properly said is true. And even with respect to these very strong strongest cases, invariantists must deny one of these intuitions involved.[31]

But DeRose offers us a false dilemma: either we reject one of these intuitions or we reject invariantism about "knowledge." As we have seen it is possible to be an invariantist about "knowledge" so long as we are not invariantists about the embedded proposition in propositional knowledge. I have attempted to adduce good reasons to think that modal modifiers, often explicitly used by speakers of English, offer a means to disambiguate the embedded proposition in a way that allows us to accept the intuitive judgments of ordinary speakers while preserving the intuition that "knowledge" is invariant (at least in the cases discussed). Relatedly, but more circumspectly, it looks like answering the question of the relationship between the dogmatic and probabilistic modes of judgment may be important to the question of the viability of EC.

Notes

1. DeRose, "Contextualism and Knowledge Attributions" 913. Stewart Cohen offers a structurally similar example, his well-known "airport case" (Cohen, "Contextualism, Skepticism, and the Structure of Reasons"). DeRose thinks the two examples are at root the same. See DeRose, "The Ordinary Language Basis for Contextualism, and the New Invariantism."

2. See DeRose, "Contextualism and Knowledge Attributions" and DeRose, "The Ordinary Language Basis for Contextualism, and the New Invariantism."

3. See DeRose, "Solving the Skeptical Problem"; Chapter 2 of Hawthorn, "Knowledge and Lotteries"; Cohen, Contextualism, Skepticism, and the Structure of Reasons"; and Conee,

"Contextualism Contested."

4.   Ordinarily we might call a pool table "flat" even though its surface might look quite bumpy under an electron microscope. Similarly, we might call an airport runway "flat" even though it would be too bumpy to shoot a pool ball straight. The context determines the appropriate standard for the use of the word "flat." The microscope standard is what we might think of as a "high standard for flat," the pool table standard a 'medium standard for flat', and the airport runway a "low standard for flat."

5.   Hawthorne. Chapter 2.

6.   Cohen, "Contextualism, Skepticism, and the Structure of Reasons" 59.

7.   "LOW" and "HIGH" appear in DeRose, "The Ordinary Language Basis for Contextualism, and the New Invariantism."

8.   Ibid. 177.

9.   Ibid. 178.

10.   F. I Dretske, "Epistemic operators," *The Journal of Philosophy* 67, no. 24 (1970): 1007–1023.

11.   See Cohen, "How to be a Fallibilist" 101.

12.   Another well-known form of contextualism takes its cue from Nozick's subjunctive conditionals analysis of knowledge (SCA) The key idea here is whether a belief is "sensitive" or "insensitive': "S's belief that P is insensitive if S would believe that P if P were false…. We tend to judge that S doesn't know that P when we think S's belief that P is insensitive" (Nozick 18). Applying this to the Puzzle, in LOW the assertion of 1 need not be sensitive to the skeptical possibility that the bank may have changed, as the situation is not that urgent. In case B where the practical urgency has risen, and with the introduction of the skeptical possibility that the bank may have changed its hours, the standard is raised: the belief associated with (1) must be sensitive to this possibility, and since the husband's belief is insensitive, he does not know according to the SCA version of EC.

13.   DeRose, "The Ordinary Language Basis for Contextualism, and the New Invariantism" 177.

14.   DeRose, "Assertion, Knowledge, and Context" 167. DeRose applies the idea that "knowledge is the norm of assertion" (TWilliamson p. 243) to suggest that context may govern assertion as well as knowledge. However, the meaning of "P" is invariant on DeRose's analysis, warranted assertability is not invariant.

15.   Clearly there are possibilities for mixed models here, but we shall consider only "pure" forms of contextualism and VIMM. In particular, nothing will be said about whether VIMM can be applied to more theoretical cases like the skeptical possibility that I am a brain-in-a-vat.

16.   Richard Jeffrey writes:

> If you say the probability of rain is 70% you are reporting that, all things con-sidered, you would bet on rain at odds of 7:3, thinking of longer or shorter odds as giving an unmerited advantage to one side or the other. A more familiar mode of judgment is flat, "dogmatic" assertion or denial, as in "It will rain" or "It will not rain." In place of this "dogmatism," the probabilistic mode of judgment of-fers a richer palate for depicting your state of mind, in which the colors are all the real numbers from 0 to 1. The question of the precise relationship between the two modes is a delicate one, to which I know of no satisfactory detailed answer. (3)

17.   Another way to draw the distinction is for the probabilistic mode to cover probabilities greater than 0 and less than 1, which are the domain of the dogmatic mode. See below for how the present distinction differs.

18.   Here and below we are obviously talking about doxastic rather than metaphysical mo-dality. I'm taking some liberties lumping probabilities and adverbial modifiers (such as 'prob-

ably' or 'certainly') together. For example, Ennis resists equating the two, providing instead a speech-act analysis in terms of speakers' guarded commitment to the truth of the proposition that it modifies ("'Probably'" and "'Probable' and its Equivalents"). Little turns on this lumping, since we shall focus henceforth almost exclusively on various adverbial modifiers.

19. I am assuming that the two theories are mutually exclusive here. Below in section 7 we will consider the possibility that they are jointly necessary to explain the Puzzle.

20. Furthermore, VIMM wins out in terms of not having to attribute to ordinary speakers a peculiar type of semantic blindness. As mentioned above, EC theorists often invoke the analogy with contextually relative terms like "tall." A seeming paradox where someone might call John tall and not tall can easily be clarified. John is tall compared with the population at large, but John is not tall compared with his basketball teammates. As is often noted, the trouble is that most people easily see the contextual relativity of "tall," but the contextual relativity of "know" is much less obvious. (See Stanleyand Rysiew.) Even Cohen, a long-time defender of EC, admits "it may be very difficult even after some amount of reflection for competent speakers to accept context-sensitivity. It may take subtle philosophical considerations concerning the best way to resolve a paradox in order to 'see' the context-sensitivity of 'knows'" (Cohen, "Contextualism Defended" 61). The semantic blindness of EC is curious because speakers must have some access to the shifting standards of knowledge if EC is correct, but also fail to recognize these standards when EC theorists point them out. Conversely, it is obvious to (non-philosophical) speakers of English that the husband is not in an epistemic position to assert 1a, but only 1b, and this is the key point for VIMM. So, VIMM better accords with speakers' intuitions without having to appeal to a particular semantic blindness.

21. I use "logic relation" in a broad sense here. Consider that a Moorean sentence: "'P' and I don't believe that 'P.'" There is no logical inconsistency in one sense: it is possible for both conjuncts to be true. The infelicity however is not merely inductive: there is some type of inconsistency here that is connected with the logic of belief and assertion (Hájek 217).

22. I use "transcendental argument" here in the broad sense delimited by Stern.

23. We could make this into a Moorean absurdity by changing the example to involve belief and assertion, e.g., suppose the husband says to the wife: "I believe that it will be rainy tomorrow." As Alan Hájek notes, there is a continuum of cases between the classic "P and I don't believe that P," and "It is probable that P and I don't believe that P."

24. A simple truth table might explain the absurdity in the case of "P and not-P," not so for the sort of infelicity we are considering.

25. See Gullvåg.

26. One of the traditional worries about transcendental arguments is that what looks like a necessary presupposition may not in fact be so. The classic example, of course, is Kant's argument that a Newtonian three-dimensional view of space and time is a necessary presupposition of empirical judgments. This view was overturned with the development of non-Euclidean geometries and Einstein's general relativity theory. The claim here that we must understand the dogmatic mode as having an implicit commitment to modal modifiers is meant only to apply to speakers of English (and relevantly similar natural languages), so the claim is a little less broad than Kant's (which he contended applied to all humans (and other beings which share our rational nature)). Still, there is a lingering worry that what looks necessary here may be a mere artifact of looking at the problem through the lens of professional philosophy. To at least partially allay this worry consider some empirical research. I have surveyed students several times (prior to mentioning contextualism or the Puzzle) about the relationships between 2 and 2a-2f. The questionnaire was primed as follows. I asked participants to imagine that they overheard their sister Sara speaking on the phone to a friend, and then Sara talking with her mother a moment later. They were asked to imagine hearing Sara say D1 to her friend and then D2 to her mother in one case, and D1 and D3 in a second case.

> D1: I'm wearing a pink and purple wedding dress.
> D2: I'm wearing a non-traditional wedding dress.
> D3: I'm wearing a traditional white wedding dress.

I explained that Sara was not guilty of a lie of commission because both D1 and D2 can both be true (at the same time, in the same respect). Sara is perhaps guilty of a lie of omission, because her mother may well want to know D1, but the survey interest is in lies of commission.

In the second case, Sara is guilty of a lie of commission: D1 and D3 cannot both be true at the same time in the same respect. With this background I asked students to do the similar pairwise comparisons between 2 and 2a-2f. More than 80% of the students surveyed think Sara does not make a lie of commission in asserting 2 and 2a-2c. Surprising, to me at least, was the fact that nearly 60% thought that there is no lie of commission in asserting 2 and 2d. There is universal assent that asserting 2 and 2f is a lie of commission. The only means to explain these results is that ordinary speakers understand a dogmatic assertion 'P' as a commit to at least the probability, high probability, or certainty that "P" by the speaker.

27. Swan 334.

28. Dudman 204. Dudman's view is criticized in DeRose, "Knowledge, Assertion and Lotteries.

29. Jeffrey 3 (note 3).

30. Dudman attacks the view that "things are assertable just to the degree they are probable" (204), but seems to understand the theory to be a form of IIMM. He demonstrates the implausibility of this by using the well-worn lottery example: If there is even a small chance that I will win the lottery, then it seems reason enough for me to dissent from: "My ticket won't win." The defence, as he notes is, "Someone has to win, why not me?" (205). VIMM is consistent with this, because here we understand the assertion as "My ticket [certainly] won't win," and I am not in a position to assert this. But this is because of the context, and changing the context can necessitate a different understanding. Consider this case. We have received news that a friend is dying. If we leave the conference right away and take the bus, we can be home in 12 hours. I have ten tickets for a lottery for a new car. If I win the car, we can be home in 6 hours. If we wait for the lottery draw and lose, we will miss the bus, and the next bus does not leave for 24 hours. My friend says: "What shall we do? Do you feel lucky? Are you going to win the car?" I say: "No, I'm not going to win, there has to be at least ten thousand other ticket holders, let's take the bus." I take it that this dogmatic utterance concerning not winning would be accepted by non-philosophical speakers of English, and the VIMM explanation is that the relevant understanding here is: "No, I'm [almost certainly] not going to win."

31. DeRose, "The Ordinary Language Basis for Contextualism, and the new Invariantism" 181.

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