Philosophy and Phenomenological Research
Vol. LXXV No. 1, July 2007

Knowledge and Lotteries*

RICHARD FELDMAN
University of Rochester

John Hawthorne's *Knowledge and Lotteries* is a rich and lively tour through a variety of issues in epistemology and related areas. It begins with a puzzle arising from our apparent inability to know that our lottery tickets are losers, argues that the puzzle extends well beyond its most familiar domain, and examines a set of possible resolutions. The book is interesting, original, provocative and engaging throughout, making valuable contributions on every topic it addresses. One cannot help but benefit from reading it. In this review I will summarize some of the central points and respond to a few of them.

1. The Puzzle

Hawthorne begins by describing "a tension between various ordinary claims to know and our apparent incapacity to know whether or not someone will lose a lottery."(1) A person of modest means will readily claim to know that he will not be able to afford an expensive African safari next summer. Yet such a person will also judge that he does not know that his lottery ticket will lose. However, given modest logical acumen, he also knows that if he will not be able to afford the vacation, then his lottery ticket will not be a winner. How can it be that he knows the ordinary proposition but is not able to know the lottery proposition that he knows it implies? That is the initial puzzle.

Following Vogel (1990), Hawthorne argues that many examples are strikingly similar to the one just described. Intuitions driving reactions to lottery propositions also suggest that one cannot know that one will not have a heart attack in the next month, that one's car has not been stolen from the parking lot in which it was parked earlier in the day, or that the particles making up the interior of the desk one (seems to) see did not undergo a bizarre change a moment ago, leaving behind just a desk facade. In effect, life entails constant entry in lotteries involving heart attacks, car thefts, and quantum mechanical breakdowns whose

* John Hawthorne, *Knowledge and Lotteries* (Oxford: Oxford University Press, 2004).

outcomes we cannot know (under typical conditions). As in the real lottery case, people readily make claims to know propositions that imply these lottery-like propositions. Thus, a typical person will claim to know that she will be at home for the summer, or that her car is parked in the library lot, or that she sees a desk. Since it seems clear that one can know the obvious consequences of things one knows, these claims do not go together comfortably. This extends the scope of the puzzle.

In general, then, the puzzle arises because we think we know ordinary propositions, we know that they imply (when formulated properly) lottery-like propositions, knowledge seems transferable through known implication, yet we think we cannot know the lottery-like propositions. Hawthorne says that the problem can be restated as an argument.(2-3) The safari example is the model:

1. S knows that S won't have enough money to go on a safari this year.

2. If S knows that S won't have enough money to go on a safari this year, then S is in a position to know that S will not win a major prize in a lottery this year.

3. Hence, S is in a position to know that S will not win a major prize in a lottery this year.

The premises are plausible. The argument is valid. The conclusion is counterintuitive. Where does the argument go wrong?

I will register some discomfort at the outset. I have doubts about our knowledge of the ordinary propositions in some of these examples and little doubt about our knowledge of the lottery-like propositions in the others. It is not clear to me that lottery entrants know what they will be able to afford in the future or that people generally know where they will be during the coming summer. In arguing that the puzzle extends widely, Hawthorne says that it generalizes to "cases involving the here and now."(3) He then describes the car theft case, which is about "now" but not "here." I have reservations about this case as well. In part my reservations about these cases may result from the fact that lotteries are won, hearts are attacked, and cars are stolen fairly regularly. The only cases he describes that are about the here and now are the quantum mechanics case and one involving pills that induce blue-green color inversions in perception. However, unlike the possibilities in the other examples, these involve possibilities that never do happen; tables never collapse in the way Hawthorne mentions and there are no such pills (as far as I know). This leaves me with some

inclination to deny knowledge in the former cases and to affirm it in the latter ones. No doubt such judgments are contentious and potentially distorted by background philosophical views. Furthermore, it is extremely difficult to identify a clear boundary separating the cases.

Hawthorne organizes his discussion around several possible responses to the puzzle. *Contextualism, skeptical invariantism*, *moderate invariantism*, and *sensitive moderate invariantism*. In the sections to follow, I will discuss the non-skeptical responses to the puzzles.

2. Desiderata

Early in the book Hawthorne identifies several principles that he thinks an adequate solution to the puzzle ought to respect. He concludes discussion of each response with a handy "scorecard" reporting how it does with respect to them. Among the criteria are the following:

a) Knowledge is the norm of assertion. Following Williamson (2000), Hawthorne finds plausible the idea that "the practice of assertion is constituted by the rule/requirement that one assert something only if one knows it." (23)

b) Knowledge requires zero probability of error. Hawthorne finds "extremely odd" (24) utterances of the form "I know that p but there is a chance that not-p." Thus, knowledge requires zero probability of error.

c) What is not known cannot be used as a premise in practical reasoning. Hawthorne suggests that there is "an intuitive link between knowledge and practical reasoning." (29) Thus, if you do not know a proposition, then you cannot properly use it in practical reasoning. (He seems also to hold that if you do know something, then it is acceptable to use it in practical reasoning.)

d) Single Premise Closure. Hawthorne finds plausible the principle that if a person knows one proposition, competently deduces another proposition from it, retains knowledge of the former, and believes the latter on the basis of the deduction, then the person knows the deduced proposition. (34)

e) Multi-Premise Closure. He also thinks it is best for a theory to be consistent with a principle just like Single Premise Closure except that it holds that deductions involving more

than one premise, each of which is known, also yield knowledge. (33)

I will reserve discussion of these desiderata for the sections below in which I examine Hawthorne's analyses of the various solutions to the puzzle.

3. Contextualism

Briefly, contextualism is the recently prominent idea that in ordinary contexts sentences of the form "S knows that p"—K-sentences, hereafter—often express truths, where the replacement for "S" refers to an ordinary person and the replacement for "p" picks out an ordinary proposition about the world. However, at the same time but in distinct "high standards" contexts, those same K-sentences express falsehoods. Hawthorne uses a "toy semantic theory" to illustrate how this might work:

An ascription of 'S knows that p' is true on some occasion iff there is no possible world in which S makes a mistake that is relevant on that occasion. (56)

When in the bookstore contemplating travel guides, a traveler of modest means will say, "I know that I cannot afford an African safari this summer." There are possible worlds in which she wins the lottery and is mistaken about what she can afford. However, her utterance seems true in its ordinary context. The contextualist says that it is true because these mistakes are not relevant in that context. In these ordinary contexts in which these mistakes are not relevant, the sentence "The traveler knows that she will not win the lottery" is also true. However, if she comes to think explicitly about the possibility of winning the lottery, and concludes that she might win, the relevant possibilities change, and these mistakes are now relevant. In such contexts, the same K-sentences would express falsehoods. In general, K-sentences can express truths in ordinary contexts and falsehoods in contexts in which more mistakes are relevant. Exactly how possibilities become relevant and how they affect knowledge attributions varies from one contextualist theory to another. I will largely ignore details about this here.

Thus, contextualists use context shifts to explain our seemingly inconsistent reactions to K-sentences. Hawthorne writes:

> The appeal of the solution is clear enough. The contextualist allows that ordinary knowledge ascriptions often come out true. And he allows that ordinary claims to the effect that lottery propositions are not known can come out true as well. And he explains away the apparent threat to closure provided by the original puzzles. The

> resolution of conflicting intuitions is, at least prima facie, extremely compelling. (82)

Perhaps it is annoying to insist that the expression of contextualism's appeal be put in the metalanguage. It is important to realize that, according to contextualism, Hawthorne's sentences containing "knows" or "knowledge" have whatever truth conditions their context imposes on them. Since the book is full of talk of skeptical hypotheses, and contextualists typically take such talk to induce high standards, it is likely that the context for Hawthorne, and for this review, is a high standards context. Thus, according to the theory, people have very little knowledge. If the phrase "knowledge ascription" is not metalinguistic—if it means "an ascription of knowledge"—then (in Hawthorne's and the present contexts) the truth is that few knowledge ascriptions come out true. The closest truth is metalinguistic: Many ordinary K-sentences express true propositions. Furthermore, if we are at a high standards context, we do not know, and, given the assertion principle cannot properly assert "Many K-sentences express truths in ordinary contexts." Perhaps we can properly say, "If our ordinary beliefs are true, then many K-sentences express truths."

It is also worth noting that in stating the attractiveness of the contextualist solution to the puzzle, Hawthorne slightly departs from its initial formulation. He said that the puzzle arose in part because of "our apparent incapacity" to know lottery propositions. But the solution denies any such incapacity. As developed, contextualism implies that we can know lottery propositions, or, more carefully, that many K-sentences about lottery propositions are true in ordinary contexts.

Hawthorne notes that certain "details remain unresolved" concerning contextualism. (84) He does not whine about this as much as I am inclined to. Suppose that you are trying to figure out how to save your failing business, and the possibility of getting the necessary funds by winning the lottery is mentioned. A plausible response is, "I know that that's not going to happen." Here, the possibility of winning has been made explicit yet the K-sentence is still confidently asserted. Hawthorne's contextualist wants it to be true. However, as Hawthorne says, if being explicitly mentioned in the context makes the possibility relevant, then, given anything like the toy theory, the sentence is false.(64) In discussing this, Hawthorne suggests a different account of what makes a possibility relevant, namely that it is one that the speaker "takes seriously."(64) Perhaps this has the desired result, though you might take the possibility of winning very seriously yet dismiss it as something that just is not going to happen. It is difficult for me to resist the thought that we get the toy semantic theory to work by

consulting our intuitions about whether the K-sentence is true, take that intuition at face value, and then say whatever needs to be said about relevant mistakes in order to get the desired result. No doubt that can be done. Whether this is objectionable is another matter.

In any case, contextualism seems to respect Hawthorne's desiderata. Consider assertion. In high standards contexts the traveler will resist asserting, "I will not win the lottery" and the theory implies that the correlated K-sentence is false there. In ordinary standards she is willing to assert, "I can't afford an African safari," and the correlated K-sentence is true in that context. Of course, one of the intuitions driving the discussion is our general unwillingness to assert lottery propositions. Presumably, the theory holds that just thinking about such propositions typically affects contexts in a way that makes them unassertable and makes the corresponding K-sentences false.

Consider practical inference. It seems acceptable for the traveler to use "I can't afford the Safari" when reasoning about which book to buy. But it also seems unacceptable for her to use "I won't win" in reasoning about whether to sell her lottery ticket for one penny (when the expected value of keeping it is high enough). Shifting contexts can be used to explain all this while preserving the practical reasoning principle.

And closure principles are not violated here, although, as Hawthorne notes, contextualists will presumably replace the principles stated above with metalinguistic variants saying that the stated principles are true at any context. (83)

Hawthorne argues, however, that there are problems for contextualism. The problems he discusses arise when two contexts come into play. One example concerns reports of propositional attitudes where the reporter and the subject are in contexts with different standards.(98-111) Suppose you are in low standards and I am in high standards. You say, "I know that p." It would seem that I should be able to report, "You said that you know that p." But, Hawthorne assumes, my use of "know" carries with it the standards from my context, and thus I incorrectly attribute a high standards claim to you. This objection relies upon the debatable assumption that the subject's context is not somehow absorbed into the speaker's attribution. I will not pursue this issue here.

The objections I find most interesting turn on connections among knowledge, assertion and practical reasoning.(85-91) Suppose that I am in a context with lower standards than you. The sentence "You know that you will not win the lottery" is true relative to my context, though presumably not entertained by me. (If it were, then perhaps my context would change.) At this time, suppose that you sell your ticket for a penny, foolishly reasoning from the premise that you will not win the lottery. Relative to my context, the sentence:

4. You are reasoning from a known premise but you are to be criticized for reasoning from that premise

comes out true. Similarly, suppose that I am at high standards and you are at low standards. You reason from a premise such as "I cannot afford an expensive vacation" and decide to buy a suitable travel guide. This is acceptable reasoning. Thus, it comes out true for me that

5. You are reasoning from premises that you do not know, but you are not to be criticized for reasoning from that premise.

The underlying idea is that whether you can be criticized is determined by your context (including what you are reasoning about), but which K-sentences come out true in my context is determined by my context. When those contexts come apart, we can get discrepancies between the truth values of K-sentences and the truth about what one should rely on in practical reasoning.

Similar results emerge for assertion. If I am at high standards and you are at low standards, then it comes out true in my context that

6. There are things that you do not know but you are not to be criticized for asserting.

Whether you deserve criticism depends, again, upon your context alone. But whether I can correctly ascribe "knows" depends upon my context. For similar reasons, if I am at low standards and you are at high standards, then it can come out true that

7. There are things you know, but you are to be criticized for asserting them.

Thus, contextualism does not respect the practical reasoning and assertion desiderata.

These are interesting results, but I am not confident that they constitute significant problems for contextualism. My reservations are of two kinds. For one thing, I do not find the principles being violated plausible, nor do I see anything problematic in (4)-(7). Consider (6). In many conversations, people assert things that all parties realize they do not know. My favorite examples involve discussions about upcoming sporting events. People assert things, and everyone knows that those making the assertions lack knowledge. Lack of knowledge does not warrant criticism. If there is an epistemic constraint on proper assertion, I think that it is something like this: in every context there is a contextually

determined epistemic standard such that people should assert things only if they satisfy that standard. The standard is relatively low at the sports bar, relatively high in discussions of whether you remembered to lock the front door before leaving on vacation, and at various other places at other times. If there are epistemic standards on assertion, then I think that they can go higher than mere knowledge. For example, a doctor may know the diagnosis of a patient, but ought not say it until one more test result comes in and the epistemic status of the diagnosis approaches certainty. In that case, (7) is true. I also find the sentences about practical reasoning unproblematic. I will return to them in later sections.

Even if there is a closer connection between knowledge and assertion than I think there is, I am not convinced that Hawthorne's arguments raise serious problems for contextualism. Like the closure principles, the assertion and practical reasoning principles can be reformulated metalinguistically. Stewart Cohen (2004) has argued for this with respect to the assertion principle. He suggests that the true assertion principle is something along of the lines of

> S is not to be criticized for asserting p just in case "S knows that p" is true in S's context.

Hawthorne has responded that the "metalinguistic rule predicts that having settled that someone knows that which they assert, the propriety of the assertion will strike us as an open question. But when evaluating the propriety of an assertion the primary issue is quite obviously what the person knows, not whether the assertion satisfies the assertor's own standards for 'know'."(2005, p. 518) However, the metalinguistic rule does not really predict how things will strike us. If, as contextualists admit, the context sensitivity of K-sentences is not something that we regularly recognize, then it is likely that we will not notice some consequences of that context sensitivity. Of course, if the data on which contextualism is founded are to be believed, our reactions to K-sentences themselves do change with context. But our responses may not be attuned to the metalinguistic assertion principle because we do not realize that we are making these shifts. If it is reasonable to believe that we are to this extent unaware of what we are doing, it is difficult to see what is additionally troublesome by our failure in this regard. Thus, the fact that an acceptable assertion principle will be metalinguistic does not seem to me to be a new and independently implausible commitment of the theory. It is just a further implication of a more familiar point. Thus, if there is a true principle linking knowledge and assertion, Cohen's principle seems good enough to me.

4. Moderate Invariantism

Moderate invariantism is in some ways a traditional view. The invariantist part is the view that the truth conditions for K-sentences do not vary with speaker's context. The moderate part is that the standards are not so high that meeting them is ruled out in virtually all cases. As Hawthorne conceives of the view, it holds that the ordinary K-sentences in the examples considered in the book are in fact true. As noted near the end of section 1, there is room for a more cautious version of moderate invariantism, according to which we can know some but not all of the ordinary propositions under consideration. Moderate invariantists might explain away our inclinations to deny knowledge of ordinary propositions in some contexts by appeal to something such as excessive cautiousness resulting from the salient possibility of error.

Moderate invariantism suggests that knowledge is not the most demanding epistemic state. "Certainty" is one word used to describe a more demanding state. Thus, for example, you can know that the lights are on even if you are not certain of it. Perhaps you can be certain that it seems to you that the lights are on. I would put consistency with such mundane facts on the list of desiderata to be used in assessing theories, though Hawthorne obviously would disagree.

Moderate invariantism has mixed results with respect to Hawthorne's desiderata. As he notes, it respects Single-Premise Closure.(149) This requires that it affirm knowledge of the lottery-like consequences of what is known. Given the truth of Single-Premise Closure, Multi-Premise closure will seem no more plausible than a Conjunction Rule holding that if you know P and you know Q, then you know (or are in a position to know) P and Q. If knowledge does not require certainty, then it is at least plausible that some large conjunctions of known propositions are quite far from being certain. Perhaps such conjunctions are not known. If you have doubts about the Conjunction Rule, then you will have doubts about Multi-Premise Closure: you will doubt the acceptability of its instances in which each of the premises is known but their conjunction is not.

It is at best unclear that moderate invariantists can plausibly accept the Conjunction Rule. As Hawthorne effectively argues, they cannot accept it (or Multi-Premise Closure) together with the view you can know that your own ticket in the lottery is a loser and also know all the other true propositions about losers. If, with respect to each losing ticket, you believed that it was a loser, then you could know the conjunction of these propositions, and then deduce (and thus know) that the remaining ticket was a winner.(145) This is plainly mistaken. Furthermore, it seems clear that you cannot know that this ticket is a winner since you have strong evidence against this proposition. But if it is

possible to have this sort of knowledge defeating evidence for what can be deduced from what one knows, Multi-Premise Closure is false. Thus, any moderate invariantist who accepts the Conjunction Rule seems forced to limit significantly how much we know.

Denying Conjunction, and Multi-Premise Closure, does not strike me as implausible. One can deny the Conjunction Rule yet affirm knowledge of many conjunctions. In fact, one can consistently maintain that ordinary reasoning only infrequently introduces unknowable conjunctions of known propositions. Thus, denying these principles is consistent with the claim that much of the reasoning that we ordinarily endorse does yield knowledge.

Hawthorne argues that moderate invariantism will have to either reject or modify the principles linking knowledge to assertion and practical reason. For reasons discussed in connection with contextualism, I do not find the rejection or modification of the assertion principle problematic. I will discuss the issues associated with practical reasoning in the next section.

As far as I can tell, Hawthorne's central complaint about moderate invariantism boils down to its conflict with intuitions about examples such as Stewart Cohen's airport case. This involves travelers who have looked at their itinerary for a trip but still feel the need to check with an agent to confirm the flight plan. Given moderate invariantism, such a traveler could say, "Okay, we know the plane stops in Chicago, but still, we need to check further."(Hawthorne, 148, quoting Cohen, p. 59) Hawthorne finds this "very odd." There are various potential distractions here that should be set aside. For one, the "need" to check might be a need to alleviate anxiety rather than a need for evidence in order to gain knowledge. For another, the worry must not have eliminated the kind of belief required for knowledge. But once such concerns are set aside, my own (possibly jaded) intuitions find nothing problematic in that remark. Sometimes we need greater certainty than knowledge requires.

I acknowledge that we may often use the word "knows" in a way that suggests that there is no point in further checking. Perhaps there is a cancellable implicature here. Thus, it seems acceptable to say, "I know that the plane stops in Chicago, but I'm not saying that it's not worth checking with an agent." Hawthorne's argument requires that there is a stronger connection between knowledge and the lack of a need to make further investigation. I do not think that there is, and thus I think that moderate invariantism escapes this objection.

5. Sensitive Moderate Invariantism

The view that seems to garner the most support from Hawthorne is sensitive moderate invariantism." It holds that

> the kinds of factors that the contextualist adverts to as making for ascriber-dependence—attention, interests, stakes, and so on—[have] bearing on the truth value of knowledge claims only insofar as they [are] the attention, interests, stakes, and so on of the subject. (157)

This view is invariantist because any two K-sentences about the same person, proposition, and time will have the same truth conditions. It is sensitive because it holds that the truth value of K-sentences is sensitive to factors in the subject's (not the speaker's) context. These factors are ones concerning attention, interests, etc. rather than factors such as evidence and belief that traditionally figure in accounts of knowledge.

According to sensitive moderate invariantism, as the stakes go up regarding a proposition, knowledge becomes harder to obtain. Thus, a typical traveler can know that his plane stops in Chicago on the basis of the itinerary, but the traveler with the same evidence who is especially worried about a change in flight plans will fail to know. Hawthorne thinks that the view respects the assertion principle since each of these travelers may, or may not, make assertions accordingly. To see how the practical reasoning principle is preserved, consider

Argument 1

1. The plane stops in Chicago.

2. So, I ought not bother checking with an agent.

Hawthorne thinks that Argument 1 displays bad reasoning on the part of the worried traveler. But Argument 1 displays good reasoning on the part of the less worried traveler. If this is good reasoning in the second case, then the problem for the worried traveler must not be the move from (1) to (2) but in (1) itself. The worried traveler does not know (1) but the less worried traveler does.

Furthermore, the closure principles seem to be safe, as long as your attention, interests, and so on do not change in ways that matter between the formulation of the premises and the conclusion. All of this leads Hawthorne to say that the scorecard for sensitive moderate invariantism is "fairly promising." (185)

Hawthorne admits that his preferred view has "residual costs." (166) He notes that it implies that knowledge can come and go remarkably quickly, with simple changes in attention. It implies that a belief could fail to amount to knowledge simply because the believer attends too carefully to unlikely alternatives.(166) Also, it may imply that

worry-free dullards know more than their more thoughtful friends.(167) Another oddity, not noted by Hawthorne, involves people with different concerns. If high stakes Hy and low stakes Lou are in the airport looking at the printed itinerary, Lou knows that the plane stops in Chicago but Hy does not, even though they have the same evidence. Being aware of the whole situation, Lou could truthfully say to Hy, as they look together at the itinerary, "I know something you don't know: the plane stops in Chicago." (Notably, given the alleged connection between knowledge and assertion, Hy cannot properly assert this truth since he does not know it.) It is possible to resist the conclusion that Lou has knowledge here by insisting that the stakes go up for Lou just by talking to Hy. But this seems to be a step in the direction of losing the distinctive characteristics of the approach.

There is also some lack of clarity in exactly how attention, interests, and so on are supposed to affect knowledge. Very close to the end of the book Hawthorne considers but rejects the idea that appeals to salience will serve the purpose.(173) His preferred account is that the "practical environment" is what matters. He writes

> Insofar as it is unacceptable—and not merely because the content of the belief is irrelevant to the issues at hand—to use a belief that *p* in practical reasoning on a certain occasion, the belief is not a piece of knowledge at that time. (176)

He goes on to say that the view is that knowledge, epistemic chance of zero, and suitability for use in practical reason come and go together. In the remainder of this section I will examine the idea that knowledge and being acceptable for use in practical reasoning are linked in this way.[1]

One familiar way to understand practical reasoning is in terms of expected utility calculations. Defenders of (insensitive) moderate invariantism will likely endorse such an approach, and Hawthorne admits that it has "a certain theoretic elegance." (148) As for the connection to knowledge on this view, he explains:

> Where the difference between zero probability and a small probability makes no difference, we can use the concept of knowledge to effectively evaluate the reasoning. But where that difference makes a difference, the concept of knowledge is too blunt an instrument. (148)

I think that this is approximately right. In good practical reasoning we are, in some or way or other, calculating expected value. Ordinary

[1] I am grateful to Stewart Cohen for extremely helpful comments on this section of the paper. I have also benefitted from reading Reed (manuscript) and Weatherson (2005).

calculations are of course very rough and we sensibly engage in simplifications. Sometimes there are factors whose impact on our calculations we can easily see to be insignificant. That is why Argument 1 seems good for the relaxed traveler: the small chance of error just does not matter. It is an acceptable simplification. Not so for the worried traveler.

A similar contrast emerges in another pair of cases in which one's knowledge of the premises is more secure:

Argument 2

1. There is a table directly in front of me.
2. So I should accept a penny rather than make a deal in which I get nothing if there is a penny there and eternal bliss if there isn't.

Argument 3

1. There is a table directly in front of me.
2. So I should put my package down there.

Argument 2 should seem bad. (Adjust the payoffs if it doesn't.) Argument 3 is acceptable. Hawthorne would say that I know the premise in one case but not the other. I think that Argument 2, unlike Argument 3, is a case where the small chance that a known proposition is false makes a difference. So, where Hawthorne wants to say that an argument is unacceptable and thus that its premise is unknown, I am inclined to say that the argument is a pragmatically unacceptable simplification of the more complex expected utility argument.

One might wonder what is wrong with the following expanded version of Argument 2:

Argument 2a

1. There is a table in front of me.
2. If (1), then I get a penny if I accept that option and nothing if I don't (i.e, if make the deal).
3. A penny is better than nothing.

4. So taking the penny will have better results than not taking it.

5. If taking the penny will have better results than not taking it, then I should take it.

6. So, I should take the penny.

This is a bad argument. Perhaps Hawthorne thinks that the error must arise from the fact that (1) is not known in this context. I will argue below that this does not by itself constitute an error. But even if did, a puzzle remains. (1)-(4) are true and (6) is false. (5) is equivalent to: if (4) then (6). (6) is true just in case taking the bet maximizes expected utility. It doesn't. So (5) has a true antecedent and a false consequent. What is true is that if taking the bet will have better results than not taking it, then taking the bet maximizes utility. But that says nothing about expected value. There are ways to try to improve upon (5), but it is difficult to find one that will not rely on an illicit move from facts about the world, or even known facts, to problematic conclusions about expected utility.[2]

Hawthorne says that in bad arguments like this people will say that the problem is that the first premise is not known. He explicitly mentions this in connection with an argument with "My ticket is loses" as the premise.(29-30). But I think that knowledge is a red herring here. We acceptably use premises we do not know in practical reasoning when pressed for time or too tired to make complex calculations. Even when such factors are not the issue, we acceptably use premises that we do not know. Suppose a husband and wife are discussing that night's dinner. He asks, "Will you be home for dinner?" She responds, "I don't know, but you can safely assume that I will." He sensibly reasons, "She'll be home. So I should get enough fish for two people." You can insist that he does know or that his premise is "really" some probability claim. Or you can abandon Hawthorne's contention that not knowing the premise undermines the practical reasoning. Suppose that I am in need of additional funds to save my failing business. I can get a bank loan or issue new shares of stock or I can do nothing, hoping to win the lottery. I reason, "I won't win the lottery, so I should sell stock or get a loan." This seems acceptable under the circumstances, but the intuition that I do not know I won't win is as firm (or not) as it ever was.(For that matter, the practical reasoning seems just fine even if I'm wrong about not winning. What matters is justification not knowledge. But that is a larger issue that I will not pursue here.) Even lower probability

[2] See Reed (Manuscript) and Weatherson (2005) for discussion.

events get treated similarly. Suppose that there is a three person political race and my preferred candidate is unlikely to win. Wanting to vote for the winner, it is acceptable for me to reason, "My candidate won't win, so I should choose between the other two." In all these cases, whether the premise is known seems irrelevant. The probabilities and values in the cases make the simplifications acceptable.

Perhaps Hawthorne has in mind some other way to understand "acceptable to use in practical reasoning" that somehow deals with these cases. Or maybe he will say that one does know the premises when reasoning in these ways. But I do not see plausibility in either response, and this leads me to think that the connections between knowledge and acceptability for use in practical reasoning are not as close as Hawthorne suggests. Thus, a fundamental idea underlying subject sensitive invariantism seems false to me.

6. A Final Remark

Hawthorne's discussion of knowledge, or "knowledge," focuses largely on its connections to the other things such as assertion and practical reasoning. In this respect, the book admirably extends the range of issues addressed in epistemology and it situates thinking about knowledge within a broader set of concerns. Unfortunately, as I see it, knowledge just does not have the stated connections to these other things. Perhaps, for some, that makes knowledge less interesting than Hawthorne's approach would make it.

By focusing so much on the connections of knowledge to reasoning and assertion, Hawthorne ends up saying little about many of the issues that have preoccupied many epistemologists recently. Whether this is a good thing or a bad thing (or neither) is another matter. To what I am sure is the relief of many, there is no discussion of the Gettier problem. There is little discussion of whether reliability or good reasons or some other condition is necessary for knowledge. Although skepticism is discussed, the focus is on the merits of various efforts to explain away our tendency to attribute knowledge. The view that skeptical arguments are just mistaken gets little attention. This is not a complaint, even though it comes from someone who has spent considerable time thinking about such issues. It is simply an observation on the direction in which Hawthorne's excellent book takes epistemology.[3]

[3] Thanks to John Bennett, Stewart Cohen, Earl Conee, Trent Dougherty, John Shoemaker, Joshua Spencer, and Ed Wierenga for helpful comments on earlier drafts of this paper.

References

Cohen, Stewart. 2004. "Knowledge, Assertion, and Practical Reason," *Philosophical Issues* 14.

Reed, Baron. XXX. Manuscript. "A Defense of Stable Invariantism."

Vogel, Jonathan. 1990. "Are There Counterexamples to the Closure Principle?" in M. Roth and G. Ross (eds.), *Doubting: Contemporary Perspectives on Skepticism*. Dordrecht: Kluwer.

Weatherson, Brian. 2005. "Can We Do Without Pragmatic Encroachment?" *Philosophical Perspectives* 19.

Williamson, Timothy. 2000. *Knowledge and Its Limits*. Oxford: Oxford University Press.