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IS EPISTEMIC LUCK COMPATIBLE WITH KNOWLEDGE?

Mylan Engel, Jr.

Northern Illinois University

Epistemic luck is a generic notion.* It is used to describe any of a wide variety of situations where a person has a true belief which is in some sense fortuitous or coincidental. Most epistemologists take the view that epistemic luck *simpliciter* is incompatible with knowledge.^{1,2} Let us call this view "the incompatibility thesis." My goal in the present paper is to demonstrate that the incompatibility thesis is false and to explore some of the far-reaching implications of its falsity.

Towards this end, I begin in section 1 by demonstrating the little recognized fact that the incompatibility thesis entails skepticism. Granted, this alone does not prove that the incompatibility thesis is false, for skepticism may be correct. Nevertheless, it does force anyone who wants to reject skepticism to face the logical music and reject the incompatibility thesis, as well. In section 2, I present two familiar cases, one due to Gettier and the other due to Harman, both of which provide examples of epistemic luck. This will set the stage for section 3, where I distinguish two kinds of epistemic luck, viz. veritic luck and evidential luck. I then argue that only the former is incompatible with knowledge and *a fortiori* that the incompatibility thesis is false. There, we shall also see that, of the examples presented in section 2, only Gettier's is legitimate, and as a result, any theory of knowledge which accommodates both examples is *ipso facto* false. In the final section, we shall discover that our reflections on epistemic luck have a direct bearing on the current internalist/externalist controversy in epistemology.

1. The Incompatibility Thesis and Skepticism

In order to prove that the incompatibility thesis entails skepticism, I shall make use of the following innocuous

Mylan Engel is assistant professor of philosophy at Northern Illinois University. He specializes in epistemology and has published articles in this area in journals such as *Philosophical Studies*, *Grazer Philosophische Studien*, and *Acta Analytica*.

stipulative definitions: An *internalist theory of justification* is any theory of justification which maintains that epistemic justifiedness is *exclusively* a function of the cognizer's internal states, i.e. states to which the cognizer has privileged access, e.g. belief states, memory states, perceptual states, etc.³ An *externalist theory of justification* is any non-internalist theory of justification. Hence, an externalist theory of justification maintains that epistemic justifiedness is (at least) *partly* a function of external features to which the cognizer lacks cognitive access, e.g. the actual reliability of the process producing the belief in question. An *internalist epistemology* is any theory of knowledge which incorporates *only* an internalist theory of justification. An *externalist epistemology* is any theory of knowledge which incorporates an externalist theory of justification.⁴

So defined, internalist and externalist theories of justification are mutually exclusive and jointly exhaustive. Furthermore, internalist epistemologies and externalist epistemologies are mutually exclusive and, on the plausible assumption that justification is necessary for knowledge, exhaust the class of epistemologies.⁵ Consequently, in order to prove that the incompatibility thesis entails skepticism, we need only prove that both internalist and externalist epistemologies lead directly to skepticism when they are coupled with the incompatibility thesis. Let us first consider internalist epistemologies.

To see that all internalist epistemologies result in skepticism when combined with the incompatibility thesis, we need first observe that no internalist theory of justification can provide a conceptual connection between justification and truth. In order for justification to be conceptually connected with truth, it must be the case that for every possible world W , if conditions C make person S 's belief B justified in W , then conditions C make it probable that B is true in W .⁶ Following Lehrer and Cohen, let us call this sort of connection a "truth connection."⁷ That no internalist theory of justification is capable of affixing a truth connection can be demonstrated as follows: Recall that, by stipulation, any internalist theory of justification makes epistemic justifiedness *exclusively* a function of states internal to the cognizer. So, on any internalist theory of justification, the conditions which make a person's belief justified will be formulated *exclusively* in terms of states to which the cognizer has privileged access and, hence, will be entirely internally specifiable. Of course, for any set of entirely internally specifiable conditions, C_1 , there will always be a possible world,

call it W_D , where an evil demon has seen to it that we possess the requisite internal states and, hence, satisfy C_1 , even though all of our contingent beliefs are false.⁸ But notice, the conditions C_1 which make S 's belief B justified in W_D do not make B probable in W_D . Since, for every internalist theory of justification, there will always be a possible world W (W_D is just one example) where the conditions C_1 which make S 's belief B justified in W fail to make B probable in W , no internalist theory of justification can provide a truth connection.

We are now in a position to see why, given the incompatibility thesis, all internalist epistemologies lead to skepticism. Since all internalist theories of justification fail to provide a truth connection, it is always a matter of luck when an internalistically-justified [I-justified] belief turns out to be true. To see why, let us return to the demon world W_D and consider my doppelganger there. By hypothesis, he has the same beliefs that I have, he possesses the same evidence that I possess, and he goes through the same internal reflections that I do. In short, our cognitive lives are phenomenologically indistinguishable. Consequently, if I satisfy the internal conditions for justifiedness (whatever they may be), then so does he, and so, we are both I-justified in our beliefs. If, on the other hand, I fail to satisfy these conditions, then he fails to satisfy them as well, and so, neither of us is I-justified in our beliefs. Let us now assume the former scenario, such that he and I are both I-justified in our beliefs. The only relevant difference between my doppelganger and me is that he is being systematically deceived, whereas, as good fortune would have it, I am not. If he and I were to change places, there would be no introspectable difference, and each of us would continue to believe as we do, only now I would be the hapless victim of deception. Obviously, it is simply a matter of luck that my I-justified beliefs are true, for it is simply a matter of luck that I am in this world (assuming I am in the world I take myself to be in) and not in W_D . Moreover, no amount or degree of internalistic justification could block this result, because my doppelganger would, by hypothesis, possess exactly the same degree of internalistic justification as me. Since these results can be generated no matter which internalist theory of justification one appeals to, it is always a matter of luck when an I-justified belief happens to be true. Since it is always a matter of luck when an I-justified belief turns out to be true, no internalist epistemology can eliminate the role luck plays in a person's coming to have a true belief. Since no internalist epistemology can eliminate the role luck plays

in a person's coming to have a true belief, if luck really is incompatible with knowledge, then no internalist epistemology can give rise to knowledge, and so, every internalist epistemology results in skepticism. This leaves us only with externalist epistemologies to consider.

At first glance, externalist epistemologies look much more promising as a means of preventing luck from playing a role in the acquisition of true beliefs, for some externalist theories of justification can and do provide a truth connection.⁹ Take, for example, the simplified version of process reliabilism which follows:

(PR) *S's belief B is justified in W iff B results from a belief-forming cognitive process [BCP] which is W-reliable.*¹⁰

That (PR) does provide a truth connection can be demonstrated as follows: By definition, a BCP is *W-reliable iff* it tends to produce beliefs in *W* which are true in *W*. This is equivalent to saying that a BCP is *W-reliable iff* the indefinite probability of beliefs produced by it in *W* being true beliefs in *W* is high. Since (PR) asserts that a belief *B* is justified in *W* iff it is produced by a *W-reliable* BCP, and since, by definition, the indefinite probability of beliefs produced by *W-reliable* BCPs being true beliefs in *W* is high, it follows that the indefinite probability of justified beliefs in *W* being true beliefs in *W* is high. As a reminder, indefinite probabilities are dyadic relations relating classes or properties by specifying the probability of a member of one class being a member of another class. So, by proving that (PR) entails that the indefinite probability of justified beliefs in *W* being true beliefs in *W* is high, we have *ipso facto* proved that (PR) entails that beliefs belonging to the class of justified beliefs in *W* have a high probability of belonging to the class of true beliefs in *W*. What this shows is that for any possible world *W*, the condition which makes *S's* belief *B* justified in *W*, viz. being produced by a *W-reliable* BCP, also makes it probable that *B* is true in *W*. Hence, (PR) does, in fact, generate a truth connection.¹¹

When considering internalist epistemologies, we saw that no internalist theory of justification can provide a truth connection and that, therefore, it is always a matter of luck when an *I-justified* belief happens to be true. To their credit, truth-connected externalist theories of justification like (PR) eliminate the need for this kind of epistemic luck. Given (PR)-justification's truth connection, it is not a mere matter of luck when a (PR)-justified belief turns out to be true. After all, we know from above that, for any possible world *W*, if

S's belief *B* is (PR)-justified in *W*, then it is highly probable that *B* is true in *W*, and surely, if it is highly probable that *B* is true in *W*, then it is not simply a matter of luck that *B* is true in *W*. In short, since (PR) guarantees that (PR)-justified beliefs are probably true, it is not a matter of luck when they turn out to be true. Thus, (PR) safely avoids the type of epistemic luck which so plagues internalist epistemologies.

Unfortunately, externalist epistemologies with truth-connected theories of justification simply replace one kind of epistemic luck with another, for while it is *not* a matter of luck when a (PR)-justified belief turns out to be true, it *is* a matter of luck when a belief turns out to be (PR)-justified. To see why, let us reconsider my doppelgänger in *W_D*. Again, by hypothesis, he and I share the same beliefs, possess the same evidence, go through the same internal reflections, and have phenomenologically indistinguishable cognitive lives. Even so, our beliefs do not have the same (PR)-justificatory status. His beliefs are not (PR)-justified, because they are produced by BCPs which the demon has rendered unreliable in *W_D*, whereas my beliefs are (PR)-justified, since they result from BCPs which are reliable in the actual world (I'm assuming, for the sake of example, that the actual world is the world we think it is.). According to (PR), it is not a matter of luck that my beliefs are true and his beliefs are false, for my beliefs are (PR)-justified, whereas his are not, and (PR)-justified beliefs are probably true. What is a matter of luck is the fact that my beliefs are (PR)-justified and his are not. After all, we both take ourselves to be in non-demon-manipulated worlds. As luck and ill-luck, respectively, would have it, I am correct and he is incorrect. Since there is no discernible difference between our worlds, I could have just as easily been the one with unreliable BCPs. But if I could have just as easily been the one with unreliable BCPs, then surely it is just a matter of luck that my beliefs are (PR)-justified. Of course, if it is just a matter of luck that my beliefs are (PR)-justified, then it is just a matter of luck that I have (PR)-justified true beliefs.

An analogous argument can be generated for any externalist theory of justification, since such theories always make justifiedness (at least) partly a function of external conditions, conditions whose satisfiedness lies outside the ken of the cognizer in question. Given any such set of external conditions, *C_E*, since their satisfiedness lies outside the cognizer's ken, both my doppelgänger and I remain in the dark as to whether or not *C_E* is satisfied in our respective cases. Both of us may think that *C_E* is satisfied, but only the lucky one

will be right. Since it is always a matter of luck when any given C_E is satisfied, it is always a matter of luck when one's beliefs turn out to be externalistically-justified [E-justified]. Since it is always a matter of luck when one's beliefs turn out to be E-justified, it is always a matter of luck when one possesses E-justified true beliefs. But if it is always a matter of luck when one possesses E-justified true beliefs, then no externalist epistemology can eliminate the role luck plays in acquiring such beliefs. Since no externalist epistemology can eliminate luck's role in acquiring E-justified true beliefs, if the incompatibility thesis is true, it follows that no externalist epistemology can yield knowledge, and therefore, that all externalist epistemologies lead to skepticism.

In the present section, we have seen that no internalist epistemology is capable of eliminating epistemic luck, because it is always a matter of luck when an I-justified belief turns out to be true. We have also seen that no externalist epistemology can eradicate epistemic luck, because it is always a matter of luck when one possesses E-justified beliefs. Since internalist and externalist epistemologies exhaust the class of epistemologies, it follows that no epistemology can rid us of epistemic luck's intractable presence. Therefore, the incompatibility thesis entails skepticism.

Most contemporary epistemologists would no doubt abandon the incompatibility thesis before embracing skepticism. Nevertheless, the current literature is filled with examples which appear to be predicated on the incompatibility thesis—examples where epistemic luck is thought to prevent some hapless cognizer, usually Smith, from knowing whereof he believes. In the next section, I shall present two of these examples.

2. Two Encounters with Epistemic Luck

Lady Luck made her contemporary epistemic debut in Edmund Gettier's seminal article "Is Justified True Belief Knowledge?"^{12,13} Therein, Gettier provides two extremely compelling counterexamples to the justified-true-belief analysis of knowledge, each of which presents us with a person whose justified belief only luckily turns out to be true. To set the stage for these counterexamples, Gettier asserts that

in the sense of 'justified' in which S 's being justified in believing P is a necessary condition of S 's knowing that P , it is possible for a person to be justified in believing a proposition that is in fact false.¹⁴

Having so avowed his fallibilism, Gettier presents us with a case where Smith has strong evidence for the proposition:

(p) Jones owns a Ford.

As far back as Smith can remember, Jones has always owned a Ford. Moreover, Jones has just offered Smith a ride while driving a Ford.¹⁵ Smith, being a clever logician, realizes that (p) entails:

(q) Either Jones owns a Ford or Brown is in Barcelona.

Although Smith has no evidence as to his friend Brown's whereabouts, having seen the connection between (p) and (q), he believes (q) on the basis of (p) and this recognized entailment, and so, he is justified in believing that (q). Now here is the rub. Unbeknownst to Smith, Jones has sold his Ford and is driving a rental car. But, as luck would have it, Brown happens to be in Barcelona. Thus, (q) is true, Smith believes that (q), and Smith is justified in believing that (q). But, Gettier avers, Smith does not know that (q), for it is just a matter of luck that Smith's justified belief that (q) turns out to be true.¹⁶

Ten years later in *Thought*,¹⁷ Gilbert Harman provides us with three additional cases of epistemic luck to ponder. Each of these cases presents us with a person who has a justified true belief that p , but who supposedly does not know that p , because there exists readily available misleading evidence which the person luckily does not yet possess. In what is perhaps the most compelling example, we are to imagine the following scenario:

A political leader is assassinated. His associates, fearing a coup, decide to pretend that the bullet hit someone else. On Nationwide television they announce that an assassination attempt has failed to kill the leader but has killed a secret service man by mistake. However, before the announcement is made, an enterprising reporter on the scene telephones the real story to his newspaper, which has included the story in its final edition. Jill buys a copy of that paper and reads the story of the assassination. What she reads is true, and so are her assumptions about how the story came to be in the paper.¹⁸

Harman maintains that even though Jill has a justified true belief, she does not know that the political leader has been assassinated. Harman's explanation for her lack of knowledge is as follows:

[Jill] does not know that the political leader has been assassinated. For everyone else has heard about the televised announcement. They may have also seen the story in the paper and, perhaps, do not know what to believe;

and it is highly implausible that Jill should know simply because she lacks evidence everyone else has. Jill does not know. Her knowledge is undermined by evidence she does not possess.¹⁹

Unfortunately, Harman's explanation for Jill's supposed lack of knowledge leaves much to be desired. Is it really so implausible that Jill should know just because she lacks evidence everyone else has? I think not. After all, it is not at all implausible that a person should know *just because he is in a different evidential situation than everyone else*. In fact, this happens all the time. Admittedly, the typical case is when the person in question has more evidence than everyone else and thus, knows, where everyone else lacks knowledge. But not always. Sometimes a person knows, where everyone else lacks knowledge, not because he has more evidence, but because he has different evidence. This suggests, and rightly so, that whether or not a person knows is more a function of the quality than the quantity of his evidence. Jill has less evidence than everyone else, but she has good evidence, for reputable newspapers are reliable sources of information. Is it implausible to think that Jill knows *just because she has good evidence in the form of a reputable newspaper's column*? Of course not. And this description of Jill's epistemic situation is no less accurate than Harman's. It is simply a mistake on Harman's part to focus on the quantity, rather than the quality, of Jill's evidence.

Why, then, the widespread acceptance that Jill lacks knowledge? Jill's apparent lack of knowledge is, by my lights, best explained, not by the quantity of her evidence, but by the lucky nature of her evidence. Had Jill gone home and turned on the T.V. like she usually she does, she would have found herself in the same epistemic quandary as everyone else. Consequently, Jill is extremely lucky to be in the evidential situation she is in. Since luck is generally thought to undermine knowledge, it looks as if Jill lacks knowledge, after all.

In the next section, we shall see that Jill's situation is not as bleak as it may seem, for we shall see that the two cases presented here rest on essentially different kinds of epistemic luck, only the former of which is incompatible with knowledge.

3. Veritic vs. Evidential Luck

The widespread acceptance of the incompatibility thesis, no doubt, attests to its intuitive seductiveness. Moreover, its seductiveness is not unfounded, for it derives from the general conviction that knowledge does not arise when a

belief merely happens to be true, a conviction which I share. In light of its seductive appeal, we must admit that there is a presumption in favor of the incompatibility thesis, which must be overridden if we are to reject it. As a result, the burden of proof clearly lies on those, myself included, who wish to dispute the incompatibility thesis. On the other hand, combining our section 1 proof with the plausible assumption that we do have knowledge suggests, contrary to the incompatibility thesis, that some kind of epistemic luck must be compatible with knowledge. The task of the present section is to reconcile the rather strong intuition that epistemic luck is not compatible with knowledge with the equally evident observation that it must be. This reconciliation will be achieved as follows: I shall begin by drawing a distinction between veritic luck and evidential luck. I shall then argue that, of these two kinds of luck, *only* veritic luck is incompatible with knowledge. If this argument is successful, we will be able to retain the intuition that epistemic luck in *some of its forms* is incompatible with knowledge, but we will be forced to reject the much stronger incompatibility thesis, according to which epistemic luck *simpliciter* is incompatible with knowledge.

There is, I submit, an epistemologically relevant difference between a person who is epistemically lucky in virtue of the fact that, given her evidential situation, it is simply a matter of luck that her belief turns out to be true, and a person who is epistemically lucky in virtue of the fact that she is lucky to be in the evidential situation she is in but that, given her evidential situation, it is *not* a matter of luck that her belief is true. I call the kind of epistemic luck had by the former "veritic luck" because it is just a matter of luck that her belief is *true* and the kind had by the latter "evidential luck" because it is just a matter of luck that she has the *evidence* she does.²⁰ I will subsequently argue that, of these two kinds of luck, *only* veritic luck is incompatible with knowledge, but first a methodological remark is in order.

To prove that evidential luck is *not* incompatible with knowledge, all we need do is find one instance of evidential luck which intuitively is compatible with knowledge, just as to prove that *not* all swans are white, all we need do is discover one black swan. Proving that veritic luck is incompatible with knowledge is quite another matter, since finding an instance of veritic luck which intuitively is incompatible with knowledge no more proves that veritic luck is incompatible with knowledge than finding one black raven proves that all ravens are black. Simply put, any thing

short of an *a priori* proof of the incompatibility of veritic luck and knowledge will fail to be conclusive, and the prospect of constructing such an *a priori* proof seems rather dismal. Therefore, for lack of a better, my tack for "proving" that veritic luck is incompatible with knowledge shall be as follows: I will construct a case, which I take to be representative of veritic luck in general, wherein a person's veritic luck clearly seems to be incompatible with knowledge. This will provide some confirmation of my claim that veritic luck is incompatible with knowledge. This confirmatory case, when combined with our prior observation of the presumption in favor of epistemic luck's being incompatible with knowledge, should suffice as providing a *prima facie* case for veritic luck's incompatibility with knowledge. One more point and this methodological digression is finished. The main contention of this paper is that the incompatibility thesis is false. So, should the *prima facie* case, which I offer in support of the claim that veritic luck is incompatible with knowledge, be subsequently defeated by a counterexample of veritic luck that is compatible with knowledge, this would only serve to strengthen my principal contention. Digression ended.

Consider the following case:

Dylan is an avid euchre player. One night between hands, the dealer asks Dylan which card he believes to be on top of the freshly shuffled euchre deck. Dylan thinks a moment and, recalling his fondness of bowers, comes to believe that the top card is the jack of hearts. After Dylan reports his belief, the dealer turns over the top card which just so happens to be the jack of hearts.

Is this a case of veritic luck? Clearly so. After all, the probability of the jack of hearts being the top card of a randomly shuffled euchre deck is $1/32$, and obviously, Dylan's bower fondness does nothing to increase this probability. Given the antecedent improbability of Dylan's belief, it is surely just a matter of luck that his belief is *true*. Since, given Dylan's evidential situation, it is just a matter of luck that his belief is *true*, Dylan is veritically lucky in believing as he does, and paradigmatically so.

Does Dylan's veritic luck prevent him from knowing that the top card is the jack of hearts? A tradition dating back to Plato says it does, for were we to say that Dylan knew that the top card was the jack of hearts, we would, in effect, be committing ourselves to the view that knowledge is mere true belief, a view which Plato refuted in the *Theatetus*. In fact, cases such as Dylan's are frequently used to demonstrate that justification is necessary for knowledge and *a fortiori* that true belief is not sufficient for knowledge.

Simply put, Dylan does not know for he just guesses correctly, and knowledge requires more than mere guesswork. Thus, Dylan's case and others like it strongly suggest that veritic luck is incompatible with knowledge.

Let us now contrast Dylan's case with that of Nadine the novelist:

One afternoon while working on a rather depressing novel in her study, Nadine looks out the window and sees rain pouring down, leaves whipping around, and intermittent flashes of lighting. Moreover, she hears rain slapping against the window, not to mention some rather loud thunderclaps. Nadine comes to believe that it is storming outside, and she is right.

Does Nadine know that it is storming outside? Intuitively, it seems clear that she does, for hers looks to be an ordinary case of perceptual knowledge. Of course, since we are doing epistemology, there are embellishments which need to be considered. Nadine hates to work in her study and rarely does so. She much prefers to work in her soundproof, windowless carrel located in the bowels of the library, and this is where she spends most of her afternoons. Had she not changed her routine on a whim, she would have been hard at work in her carrel and, consequently, would have been in a rather different and much less fortunate evidential situation vis-à-vis the storm. Thus, it is just a matter of luck that she is in her present evidential situation vis-à-vis the storm, rather than the evidential situation she would have been in, had she been in her carrel. Should we change our epistemic appraisal of Nadine, in light of the fact that she is just lucky to have the evidence she does? Absolutely not. After all, lucky or not, she is where she is and has the evidence she does, and surely, we do not want to deny that she knows that it is storming, when she sees and/or hears crashing rain, blowing leaves, lightning, and thunder outside her window, for what could be a more standard case of perceptual knowledge? In sum, although Nadine is evidentially lucky regarding the storm, she nevertheless knows that it is storming. Therefore, evidential luck is *not* incompatible with knowledge.

Let us now explore how these observations affect our respective epistemic appraisals of Smith and Jill, whom we met in section 2, starting with Smith. Recall that Smith believes the proposition,

(q) Either Jones owns a Ford or Brown is in Barcelona,

on the basis of his justified belief in the proposition,

(p) Jones owns a Ford.

Since Smith is entirely ignorant of Brown's whereabouts, Smith's sole evidence for (q) is his evidence for (p) which, since (p) is false, happens to be misleading. Moreover, (q) is true because Brown is in Barcelona, *not* because Jones owns a Ford (he doesn't). Consequently, there is no connection between Smith's evidence for (q) and the truth of (q). So, given Smith's evidential situation vis-à-vis (q), it is just a matter of luck that his belief that (q) is *true*. Therefore, Smith is veritically lucky in believing that (q). Since we have good reason *prima facie* for thinking that veritic luck is incompatible with knowledge, we have equally good reason for thinking that Smith does not know that (q), despite his having the justified true belief that (q). Thus, it certainly looks as if Gettier has provided a genuine counterexample to the justified-true-belief analysis of knowledge, which any adequate theory of knowledge must accommodate.

Jill, on the other hand, is *not* veritically lucky in believing that the political leader has been assassinated. After all, she has reliable evidence concerning the assassination in the form of a reputable newspaper's column, and given this evidence, it is *not* a matter of luck that her belief is true. However, she *is* evidentially lucky regarding the assassination, for had she turned on the T.V. as she typically does, she would have seen the fabricated story and would not have known what to believe. But, as we have seen, of these two kinds of luck, *only* veritic luck is incompatible with knowledge. Since evidential luck is *not* incompatible with knowledge, the fact that Jill is evidentially lucky does not preclude her from knowing. Unless there is some other reason for thinking that Jill lacks knowledge regarding the assassination, we must conclude that Jill does know, Harman's intuitions to the contrary notwithstanding.

One who shares Harman's intuitions might object that there *are* other reasons for thinking that Jill lacks knowledge. One reason is that, had Jill turned on the T.V., she would not have known that the political leader was assassinated,²¹ and surely, it is counterintuitive to think that she knows just because she failed to turn on the T.V. A second reason takes the form of a *reductio*. Suppose that Jill does know that the political leader has been assassinated in the case as Harman describes it. Next, modify Harman's example as follows: Suppose that Jill read the final edition when she got home at 5:00 p.m., but waited to turn on the T.V. until time for the eleven o'clock news, which she watched. Since we have supposed that Jill knows in Harman's example, by parity of reason, we must also

suppose that she knows in the modified example, *until* she turns on the T.V. at 11:00 p.m., but surely, it is counterintuitive to think that Jill knows that the leader has been assassinated from 5:00 to 11:00 p.m., but ceases to know thereafter. I will respond to each of these reasons in turn.

As for the first, it is no more counterintuitive to think that Jill knows just because she failed to turn on the T.V. than it is to think that Nadine knows just because she failed to work in her carrel. Nadine knows precisely because she did not work in her carrel, and by parity of reason, Jill knows because she did not turn on the T.V. The first objection is simply misguided.

The second reason merits more serious consideration, because it illustrates a genuine disanalogy between Jill and Nadine. If Nadine were to go to her carrel later in the afternoon, she still would know that it had been storming when she was in her study, whereas if Jill were to turn on the T.V. at 11:00 and see the fabricated story, she would no longer know (if she ever knew) that the leader had been assassinated. So, let us look at the modified example more closely. Jill gets home at 5:00 p.m., reads the final edition, and justifiably comes to believe (truly) that the political leader has been assassinated. At this point she would presumably *think* that she knows the leader has been assassinated. Then, at 11:00 p.m. she sees the fabricated story (which acknowledges the final edition story, but assures the audience that it was in error). One thing is clear: At 11:00 p.m. Jill does not know that the leader has been assassinated. Moreover, at 11:00 p.m. Jill may well claim to know that she did not know that the leader was assassinated, after all. But notice, her claiming this is consistent with her having actually known earlier, for knowing that you didn't know is tricky business, just as tricky, I dare say, as knowing that you know.²² Since Jill could easily be mistaken in thinking that she didn't know, her thinking this hardly constitutes good evidence that she did not know. Why then is it supposed to be counterintuitive that Jill know from 5:00 to 11:00 p.m., but not thereafter? Perhaps, our objector thinks that since at 11:00 p.m. Jill did not know that the leader was assassinated, she could not have known this ten minutes earlier. But this would only be true, if the following principle were true:

(K) If *S* does not know that *p* at *t*, then *S* did not know that *p* at *t-1*.

And (K) is false. *S* might know that *p* at *t-1* and then forget that *p* at *t* and, so, not know that *p* at *t*. Consequently, it

is not counterintuitive to think that Jill might know at 10:50 p.m., but cease to know at 11:00 p.m. Thus, our objector's second reason is also misguided.

Since there is no good reason to think that Jill lacks knowledge regarding the assassination and since Jill does have a well-evidenced true belief about the assassination, we must conclude that Jill does know that the political leader has been assassinated, and she knows this, despite the lucky nature of her evidence. Thus, Harman's purported counterexample is illegitimate, and any theory of knowledge which accommodates it is *ipso facto* false.

4. Conclusion: Externalism Vindicated

In Section 1, we demonstrated that the incompatibility thesis, which asserts that epistemic luck *simpliciter* is incompatible with knowledge, entails skepticism. It follows, therefore, that in order for knowledge to be logically possible, some kind of epistemic luck must be compatible with knowledge. In section 3, we proved that the incompatibility thesis is false. We did so by first distinguishing two kinds of epistemic luck, viz. veritic and evidential luck, and then showing that while veritic luck does seem to be incompatible with knowledge, evidential luck definitely is not incompatible with knowledge. This, in turn, allowed us to demonstrate that, of the two examples presented in section 2, only Gettier's is legitimate and that, therefore, any theory of knowledge which accommodates Harman's example is false. This finding is rather significant, since many epistemologists have tried to accommodate Harman's example. We are left with one further question to consider: Does evidential luck's compatibility with knowledge suffice to waylay the skeptical worry raised in section 1? The burden of this final section is to argue that it does.

In section 1, we observed that no internalist theory of justification can provide a truth connection (i.e. a conceptual connection between justification and truth). As a result, given any internalist theory of justification, it is always a matter of luck when an I-justified belief turns out to be true. Thus, it should be obvious that a person will always be veritically lucky whenever her I-justified belief happens to be true, because given that internalistic justification, it will always be just a matter of luck that her belief is true. Since veritic luck is incompatible with knowledge, no internalist epistemology can yield knowledge.

Truth-connected externalist epistemologies do not have

this untoward result, for although it is always a matter of luck when one's belief turns out to be E-justified, given that one's belief is E-justified, it is *not* a matter of luck that that belief is true.²³ Thus, while one is always evidentially lucky whenever one has an E-justified belief, one is *not* veritically lucky when such an E-justified belief is true. Since evidential luck is compatible with knowledge, externalist epistemologies make knowledge logically possible. Of course, whether or not we do have knowledge depends on whether or not we have E-justified beliefs.

One adequacy constraint on a theory of knowledge is that a theory of knowledge is adequate *only if* it is logically possible to have knowledge on that theory. Since knowledge is logically impossible on internalist epistemologies but is logically possible on externalist epistemologies, it follows that we need only consider externalist epistemologies when trying to find an adequate theory of knowledge.

NOTES

* I would like to thank William Tolhurst, Harold Brown, Wolfgang Gombocz, Sandra Visser, Daniel Hicks, and Christina Comer for their helpful comments on an earlier version of this paper.

¹ The post-Gettier literature is replete with examples of justified true beliefs which purportedly fall short of knowledge. The formula for generating such examples is to conjure up a case of a person who is just lucky to possess the justified true belief in question. The element of luck involved is *ipso facto* thought to prevent the belief from being an instance of knowledge. The nearly unanimous acceptance of such examples illustrates just how widespread the belief in the incompatibility of luck and knowledge is.

² Two notable exceptions are Richard Foley and Alvin Goldman. Foley contends that there are some cases where epistemic luck is compatible with knowledge, but he fails to provide us with a criterion for distinguishing the kinds of epistemic luck which are compatible with knowledge from those that are not. (See Chapter 4 of his *The Theory of Epistemic Rationality* [Cambridge, Mass. and London: Harvard University Press, 1987].) Goldman rightly maintains that luck is a component of knowledge, but he too fails to distinguish the kinds of epistemic luck which are compatible with knowledge from those that are not. (See his "Strong and Weak Justification" in *Philosophical Perspectives*, Tomberline, James E. [ed.], 51-69, 1988.)

³ Throughout this paper, the term 'justification' is to be understood as an abbreviation of the more cumbersome 'epistemic justification'.

⁴ Given these definitions, any theory of knowledge which incorporates both an internalist and an externalist theory of justification is, by stipulation, an externalist epistemology.

⁵ Strictly speaking, internalist and externalist epistemologies, as defined, do not exhaust the class of epistemologies. A third possibility exists, namely, a justification epistemologies. An *ajustification epistemology* is any theory of knowledge which denies that justification is necessary for knowledge. However, since what I will have to say concerning externalist epistemologies easily carries over to a justification epistemologies such as

Goldman's causal theory and Nozick's counterfactual theory, I will, for the sake of simplicity, ignore a justification epistemologies and treat internalist and externalist epistemologies as exhaustive of the class of epistemologies.

⁶ This spells out a *fallibilistic* conceptual connection between justification and truth. Justification is *infallibly* connected to truth *iff* for every possible world *W*, if conditions *C* make *S*'s belief *B* justified in *W*, then conditions *C* logically entail that *B* is true in *W*. Since infallibilism leads directly to skepticism, Descartes to the contrary notwithstanding, we need only consider the weaker fallibilistic kind of conceptual connection outlined in the body of this article.

⁷ Keith Lehrer and Stewart Cohen, "Justification, Truth, and Coherence," *Synthese*, 55 (1983), p. 191.

⁸ Those who, for one reason or another, doubt that such a demon world is logically possible may substitute a world *W_n*, where a malevolent neuroscientist uses a sophisticated brain probe and varying electric currents to systematically deceive us.

⁹ Since any externalist theory of justification which fails to provide a truth connection will be open to the same argument just presented against internalist epistemologies, we need only consider truth-connected externalist theories of justification. I have elected to use process reliabilism as a representative of the latter sort of theory, because it clearly does provide a truth connection. It should be noted, however, that the argument which will be presented to show that process reliabilism does not eliminate the role of luck in the acquisition of justified true beliefs can easily be applied to any truth-connected externalist theory of justification, as I will also demonstrate.

¹⁰ The term 'W-reliable' is shorthand for the more cumbersome 'reliable in *W*'.

¹¹ That (PR) yields a truth connection can also be seen as follows: (PR) identifies beliefs justified in *W* with beliefs produced by W-reliable BCP's. Since, by definition, beliefs produced by W-reliable BCP's have a high probability of belonging to the class of true beliefs in *W*, it follows that beliefs justified in *W* have a high probability of belonging to the class of true beliefs in *W* and, hence, are probably true in *W*.

¹² Edmund Gettier, "Is Justified True Belief Knowledge?" *Analysis*, 23 (1963), pp. 121-123.

¹³ I say "her contemporary epistemic debut" because nearly sixty years earlier Alexius Meinong provided some examples of epistemic luck. One such example concerns a man who experiences a pathological ringing in his ears which, as luck would have it, temporally coincides with someone's ringing the doorbell. This and a second example can be found in the Meinong *Gesamtausgabe*, ed. R. M. Chisholm, Vol. 5 (Graz: Akademische Druck- und Verlagsanstalt, 1973), pp. 398-399 and 619.

¹⁴ Edmund Gettier, "Is Justified True Belief Knowledge?" *op. cit.*, p. 121.

¹⁵ If need be, the case can be strengthened by assuming that Smith was with Jones a few months earlier when he purchased a Ford exactly like the one he was driving when he offered Smith a ride, etc., etc.

¹⁶ To stress the lucky nature of Smith's justified true belief that (q), Gettier tells us that Smith also believes the following propositions:

(r) Either Jones owns a Ford or Brown is in Boston.

(s) Either Jones owns a Ford or Brown is in Brest-Litovsk.

Smith has exactly the same evidence for (q), (r), and (s), namely, (p) which he is justified in believing and (p) entails (q), (r), and (s), which he, therefore, is also justified in believing. Surely, it is just a matter of luck from Smith's standpoint that (q) turns out to be true.

¹⁷ Gilbert Harman, *Thought* (Princeton, N.J.: Princeton University Press, 1973).

¹⁸ Harman, *op. cit.*, p. 143.

¹⁹ Harman, *op. cit.*, p. 144.

²⁰ Those who do not find this distinction an intuitive one should simply regard it as a stipulative one for the time being, for if my proof that only veritic luck is incompatible with knowledge is successful, this will *ipso facto* demonstrate that the distinction is a legitimate one.

²¹ She would not have known that the political leader had been assassinated, because she would not have been justified in believing that he had been assassinated. She would not have been justified in believing that he had been assassinated, because she would have seen the fabricated story which would have undermined her other evidence.

²² In order for you to know that you didn't know, you would have to believe that you didn't know, this belief would itself have to be justified, and it would have to be *true* that you didn't know, which in Jill's case is the very thing in question.

²³ This was demonstrated in section 1, and I will not repeat that demonstration here.