

## EPISTEMIC LUCK

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**ABSTRACT:** There has been a great deal of discussion in the recent literature regarding the supposed phenomenon of “epistemic luck.” This is the putative situation in which an agent gains knowledge even though that knowledge has come about in a way that has, in some sense to be specified, involved luck in some significant measure. Unfortunately, very little of the literature that deals with epistemic luck has offered an account of it that is anything more than suggestive. The aim of this paper is to offer a more nuanced elucidation of what is involved in different types of epistemic luck. More specifically, an account of luck is proposed and several varieties of epistemic luck are shown to be compatible with knowledge possession, in contrast to two other varieties whose status is much more problematic. It is argued that by being clear about what is involved in epistemic luck one can gain an insight into several central debates in epistemology, including the “Gettier” counterexamples, the problem of radical scepticism and the so-called “metaepistemological” challenge to externalist theories of knowledge.

**A** common intuition that is often expressed regarding knowledge is that it is true belief that has been formed in a non-lucky or non-accidental fashion.<sup>1</sup> Indeed, this is often thought to be the proper moral to be drawn from the Gettier (1963) counterexamples to the classical tripartite account of knowledge—that the classical account left knowledge possession unduly exposed to the vagaries of luck.<sup>2</sup> It is not difficult to see the attraction of such a view, since knowledge is clearly a cognitive achievement of some sort and cognitive achievements are not naturally thought of as being due (either in whole or part) to serendipity.

Nevertheless, this cannot be the full story because it does seem that all knowledge must be, to some degree, dependent upon luck. After all, knowledge involves a kind of union of agent and world, and thus is ineliminably dependent upon the co-operation of that world. As Wittgenstein (1969, section 505) famously put it, “It is always by favour of Nature that one knows something.” This essential dependence upon the co-operation of the world has led some commentators to urge that we must accept the existence of epistemic luck. For sure, they argue, knowledge cannot be wholly due to luck (such as when one gains a true belief via a lucky guess for example<sup>3</sup>), but we must be wary of concluding from this that luck must play no part in the proper possession of knowledge. Accordingly, one finds such distinguished writers as Linda Zagzebski (1999, 109) arguing that “epistemic luck permeates the human condition, whether for good or ill.”

One should be cautious about being so sanguine in the face of epistemic luck, however, for two reasons. The first is that, as so often in epistemological disputes, the radical sceptic is lurking in the background waiting for a chance to strike. Since the intuition that knowledge precludes luck is so strong, it is open to the radical sceptic to use this concession as a way of motivating her intellectually devastating conclusion. We will return to explore the radical sceptical challenge at the end of this paper. The second reason why we should be wary, is that many of the writers who allow epistemic luck often fail to give any detailed account of just what it is that they are conceding and how, in particular, it differs from that variety of epistemic luck that should not be conceded (as in the supposedly “pure” case of a lucky guess). A more detailed examination of epistemic luck is thus in order.

Section I briefly outlines a rough modal theory of luck. Section II looks at Peter Unger’s (1968) account of this notion and uses it to highlight several varieties of epistemic luck that are compatible with knowledge possession. In contrast, Sections III–IV consider two types of luck that do seem to pose a genuine problem for knowledge possession, and draws some general epistemological morals as a result. In particular, the following issues are discussed in the light of this treatment of epistemic luck: the “Gettier” counterexamples (including the “barn façade” and “assassination” cases); the epistemic externalism/internalism distinction; the problem of radical scepticism; and the so-called “metaepistemological” challenge to externalist theories of knowledge. Finally, Section V offers some concluding remarks.

## I. LUCK

One of the problems that has afflicted attempts to get a handle on the notion of epistemic luck is that many of the discussions on this topic have tended to take the notion of luck itself as either an undefined primitive, or else merely gesture at a loose conceptual characterisation.<sup>4</sup> Nevertheless, a

closer inspection of these partial conceptual elucidations of the notion—along with the main problems that they face—is useful to help us understand what luck is.

One of the most standard accounts of luck offered in the literature involves defining it in terms of the notion of an accident. William Harper (1996), for instance, notes that “‘luck’ overlaps both with ‘accident’ and ‘chance,’” and Peter Unger (1968, 158) cashes out his anti-luck epistemology in terms of a clause which states that it is “not at all an accident that the man is right about its being the case that  $p$ .” Carolyn Morillo (1984) seems to adopt a similar line because throughout her discussion of the topic she uses the notions of luck and accident interchangeably. For example, she notes (Morillo 1984, 109), that knowledge precludes luck and then immediately goes on to say that it is for this reason that some analyses of knowledge demand that the truth of the belief in question should not be accidental.

The relationship between the notions of luck and accident is not nearly so straightforward as these commentators appear to believe, however. Consider, for example, the paradigm case of luck—the lottery win. In such a case, it is a matter of luck (given the odds) that one wins the lottery, but it need not thereby be an *accident* that one wins (at least absent some further details about the scenario). If one deliberately bought the ticket in question and, say, one self-consciously choose the winning numbers, then it would be odd to refer to the resulting outcome as being accidental.

Interestingly, Harper, in the quotation just cited, does not just group the concept “luck” with the concept “accident,” but also with the concept “chance.” This too, is a common way of characterising the notion of luck, with Nicholas Rescher being one of the foremost exponents of a version of this thesis (see, for example, Rescher 1995, 19). Again, however, although there is manifestly a close conceptual connection between the concepts, it is far from clear exactly how they relate. After all, intuitively at least, chance events can occur without anyone’s life being affected by them, and yet it is only events which are significant to agents in some way that are counted as being lucky.<sup>5</sup> For example, it may be a matter of chance that a landslide occurs when it does (or occurs at all), but if no one is affected by this event (either adversely or otherwise), then it is hard to see why we would class this occurrence as lucky (or unlucky for that matter).<sup>6</sup>

This issue is further complicated once one reflects upon what the relevant understanding of chance is in this context. After all, events that have a low probability of occurring from the agent’s point of view (such as a lottery win) are nevertheless plausibly regarded as predetermined to occur given the initial conditions of the situation and the relevant fundamental physical laws. With this in mind, it is not transparent that the relevant sense of chance at issue here should be understood in terms of low probability. Moreover, identifying chance with indeterminacy would fare little better since it ought to be uncontroversial

that at least some lucky events are not brought about by indeterminate factors. It thus appears that a more subtle account of chance is needed.<sup>7</sup>

Another common way of characterising luck is in terms of control, or rather the absence of it. If, for example, one were to say, “I discovered the buried treasure by luck,” one would be naturally understood as implying that one did nothing to ensure that one would discover what one did (or, indeed, that one would discover anything at all)—that the discovery itself was out of one’s control in some way. This is, perhaps, the most common account given of the notion in the philosophical literature, and its influence is probably due to the fact that in his influential paper on the topic of moral luck Thomas Nagel defines this species of luck in just these terms. Here is Nagel:

Where a significant aspect of what someone does depends on factors beyond his control, yet we continue to treat him in that respect as an object of moral judgement, it can be called moral luck. (Nagel 1979, 25)

Following Nagel, a number of writers have adopted this line as regards luck in general.<sup>8</sup> Daniel Statman, for example, offers the following account of good and bad luck:

Let us start by explaining what we usually mean by the term “luck.” Good luck occurs when something good happens to an agent *P*, its occurrence being beyond *P*’s control. Similarly, bad luck occurs when something bad happens to an agent *P*, its occurrence being beyond his control. (Statman 1991, 146)

And a similar account is offered by Andrew Latus (2000). Nevertheless, both Statman (1991, 146) and Latus (2000, 167) also note, in footnotes, that lack of control could only plausibly be regarded as a necessary condition for luck. After all, as Latus (2000, 167) neatly points out, the rising of the sun this morning was an event the occurrence of which was out of one’s control. But would we really want to say that it *was lucky* that the sun rose this morning? Moreover, the issue of control is particularly problematic when it comes to epistemic luck, because (on most views at least) belief is a component of knowledge, and it is certainly common to regard the formation of at least one’s most basic perceptual beliefs as not being within one’s immediate control. Nevertheless, it seems too odd to argue on this basis that basic perceptual belief is “lucky.”

So although there is clearly something intuitive about thinking of luck in terms of accidentality, chance, or the absence of control, there is no straightforward way available of accounting for luck in these terms. Unfortunately, the philosophical literature does not go further to offer any deeper analysis of the concept of luck that goes beyond these suggestive equivalences. Nevertheless, a plausible (though rough) modal account of luck can be offered—one which can meet the main intuitions in play in the philosophical discussion.

The account comes in two parts. The first, which captures the specifically modal dimension to luck, can be expressed as follows, where possible worlds

are to be understood, in the standard way, as ordered in terms of their similarity to the actual world:<sup>9</sup>

- (L1) If an event is lucky, then it is an event that occurs in the actual world but which does not occur in most of the nearest possible worlds to the actual world (worlds which most resemble the actual world).

With L1 in mind, consider how it captures two of the paradigm cases of luck mentioned above, the lottery win and the lucky discovery of treasure. In the former case, we have a lucky event which, true to L1, occurs in the actual world, but which—so long, of course, the lottery was both fair and sufficiently demanding—does not occur in most of the nearby possible worlds. The very attraction of a fair lottery lies in the fact that the possible world in which one wins is very like the actual world, even though it is in fact unlikely that such a possible world should be the actual world. This point highlights the sense in which the similarity ordering of possible worlds is not tantamount to an ordering in terms of probability. For although it is highly unlikely that one should win the lottery, it is still nevertheless the case that there is a nearby possible world in which one does win the lottery because very little needs to be different to turn the actual (non-lottery-winning) world into the appropriate (lottery-winning) possible world (for example, a few numbered balls just need to fall into slightly different holes on the machine that draws the lottery numbers). L1 thus explains our first paradigm case of luck, in that the lucky event of a lottery win is clearly an event which, on this conception of possible worlds, obtains in the actual world but not in most nearby possible worlds.

Similarly, L1 can also account for the case of the lucky discovery. According to L1, this event can count as lucky because, although it occurred in the actual world, it does not occur in most of the possible worlds that are most alike the actual world. And, indeed, this conforms to our intuitions concerning this case. To say that the discovery is lucky is to say that, in most possible worlds similar to the actual one, one would not have made the discovery that one did. Accordingly, it follows that although the treasure was found in the actual world, it would not have been found in most nearby possible worlds, just as L1 demands.

Significantly, this condition on luck can also accommodate examples which are not, intuitively, cases of luck. For example, it is not lucky that the sun rose this morning, on this view, because although this is an event that is out of one's control, it is nonetheless also true that the sun rises in most (if not all) of the nearest possible worlds to the actual world.

A further motivation for employing this type of condition on luck is that it can explain why accidentality and lack of control are both closely related to, but not essential to, luck. This is because if one has control over a certain event, such that one is able (typically) to determine that a certain outcome obtains, then that is naturally understood as implying that in most nearby

possible worlds, that outcome is realised and therefore not lucky (just as L1 would predict). Consider the example of a fair 100m race between an amateur athlete and an Olympic gold medallist at this distance, both of whom want to win. Presumably, we would say that if the gold-medallist wins then that win is not due to luck, whilst if the amateur athlete wins then (all other things being equal) it is (because it will be due, for example, to the gold-medallist falling over or succumbing to some similar fate). Moreover, this is reflected in the fact that it is only the Olympic gold-medallist who has significant control over the outcome in this respect. Thanks to her prodigious skill, coupled with her strict training schedules and heightened levels of concentration and so forth, she is able to not only ensure that she wins in the actual world, but also in nearly all of the nearby possible worlds as well. Indeed, the only worlds where she fails to win are those where something goes wrong, such as those worlds where she stumbles and falls before the finish line. Accordingly, should the other runner win the race, then this win will be lucky because in most of the nearest possible worlds she loses. Control over events is thus a good determinant of whether or not luck is involved.

Similar remarks apply to accidentality. To say that an event is an accident is, intuitively, to say that in most nearby possible worlds it does not occur. Accordingly, on the rough modal analysis of luck offered above, it would follow that accidental events will tend to be lucky events. For example, to say that one found the buried treasure by “accident” is naturally taken to mean both that in most nearby possible worlds one does not find the treasure, and also that one’s discovery is due to luck.

L1 is also able to capture the relevant sense of “chance” that we saw commentators trying to identify above. The chief concern raised regarding accounts of luck formulated in terms of chance was that it was unclear how one is to understand the notion of chance in this context. In particular, it was noted that two plausible ways of understanding this notion—in terms of low probabilities or indeterminacy—were highly unsatisfactory since there were paradigm cases of luck where the event in question was, at least in one sense, neither indeterminate nor of a low probability. By employing L1 we can evade this concern by noting that the sense of chance in play is merely that modal notion of how the event in question, though it occurs, does not occur in most worlds similar to the actual world. On this view, the temptation to identify chance with indeterminacy, low probabilities, or some other factor is simply a red herring.<sup>10</sup>

L1 alone does not capture the core notion of luck, however, because, as noted above, we also need to say something about the significance that the agent in question attaches to the target event, since it is only significant events that are counted as lucky or unlucky. The example cited to illustrate this was that of the landslide which did not affect anyone, either positively or adversely. Clearly, such an event is neither lucky nor unlucky. Nevertheless, it might

still be an event that meets the condition outlined in L1, and hence this example serves to illustrate that L1 alone is not sufficient to capture the core notion of luck.

We thus need a second condition that captures the “significance” element of luck. Here is one possible formulation:

- (L2) If an event is lucky, then it is an event that is significant to the agent concerned (or would be significant, were the agent to be availed of the relevant facts).

Though vague, this condition should suffice to capture the basic contours of the “subjective” element of luck, and thus also capture the sense in which luck can be either good or bad. Take the landslide example just noted, for instance. L2 rules this event out as being an example of luck on the grounds that it is not an event that is of any significance to anyone. Moreover, by adapting this scenario, we can accommodate the manner in which whether or not an event is judged to be lucky can depend upon the significance attached to the event by the agent concerned. For example, if only one person was affected in a significant way by the landslide, then this event would be lucky (or unlucky) for them only. Furthermore, the manner in which the event affects the agent will determine the type of luck that is involved. For example, if the landslide has adverse effects on the agent (as one would expect)—such as if it destroys her house—then we would expect this agent to regard this event as being unlucky. Conversely, however, if the landslide has positive effects—if, for example, it levels the hillside that she was about to pay a small fortune to have levelled artificially—then we would expect the agent to regard this event as lucky. The type of luck, and its very existence from that agent’s point of view, thus depends upon the significance that the agent attaches to the event in question.

We need to add the *caveat* regarding the significance that the agent would attach to the event were she to be availed of all the relevant facts in order to deal with cases where agents do not count an event as being lucky simply because they are not aware of certain features of the event. For example, one might have narrowly avoided being hit by a thunderbolt, and thus losing one’s life, and yet simply fail to notice that one had had such a lucky escape. Accordingly, the event would not be significant even though it was manifestly lucky. Clearly, the way to deal with such an example is to widen our understanding of significance so that it includes what the agent would find significant were she to be apprised of all the relevant facts.<sup>11</sup>

Of course, there will be considerable room for manoeuvre regarding how one is to interpret “significance” in this account, though, typically, one would expect the context to fix the appropriate reading. For example, in the case of epistemic luck the conception of significance seems quite broad in that it merely involves the event being significant enough for the agent to form the relevant belief (and perhaps only the relevant disposition to believe), whereas

in non-epistemic cases more appears to be involved. After all, one might form the relevant beliefs in the landslide case just mentioned, and yet still not regard the event as lucky because the event is not something that one cares about either way.

Nevertheless, the conjunction of L1 and L2 is clearly able to accommodate a number of our basic intuitions about luck. Accordingly, whilst this account of luck is admittedly vague, it should suffice to aid us in our discussion of the phenomenon of epistemic luck.<sup>12</sup>

## II. THREE BENIGN VARIETIES OF EPISTEMIC LUCK

Perhaps the subtlest account of the notion of epistemic luck in the literature is that offered by Unger (1968) who presents a “non-accidental” theory of knowledge (where, recall, for “accident” read “luck”). What makes Unger’s analysis particularly interesting is that he is one of the few thinkers to give at least a passing attempt at distinguishing between epistemically significant and epistemically insignificant varieties of luck. Consider the following passage:

In my analysis of human knowledge, a complete absence of the accidental is claimed, not regarding the occurrence or existence of the fact known nor regarding the existence or abilities of the man who knows, but only as regards a certain relation concerning the man and the fact. (Unger 1968, 159)

Unger here distinguishes two harmless ways in which luck can have an influence on knowledge. They can be summarised as follows:

- (1) It is lucky that the proposition known is true.
- (2) It is lucky that the agent is capable of knowledge.

The example that Unger gives to illustrate the first type of epistemic luck is of someone who happens to witness a paradigm case of an accidental event—a car accident. Unger (1968, 159) notes that even though it is an accident that this event should have occurred, and thus that it is in this sense an accident that the proposition which says that it has occurred is true, nevertheless an agent can know that proposition just so long as “it is not accidental that he is right about its being the case” that the accidental event happened. Unger is surely right here, in that there seems no essential reason why the content of the proposition at issue should affect an agent’s knowledge of that proposition provided that all the usual conditions for knowledge have been met (i.e., truth, belief and whatever epistemic conditions are needed to transform true belief into knowledge). Moreover, note that Unger’s example of an accident conforms to the account of luck offered above. For a car accident is naturally understood to be an event which occurs in the actual world, but not in most nearby possible worlds (for then it wouldn’t be an accident), and which is of

some significance, both to the person concerned and, in this case, to the witness to the event.<sup>15</sup>

As regards the second type of epistemic luck, there is an ambiguity regarding what Unger has in mind. He talks of how it is “largely accidental” that one exists when one does (or even at all), though this claim is far from obviously true (unless he is illicitly identifying “accidental” with “contingent,” and even this claim is far from contentious). The example he offers to illustrate his main point, however, is more straightforward. He speaks of how an agent may be looking at a turtle and, as luck would have it (and unbeknownst to him), he has at that moment narrowly avoided being smashed to pieces by a rock that would ordinarily have fallen onto him by now (Unger 1968, 160). Here we clearly have a case of good luck since, *ex hypothesi*, in most nearby possible worlds our protagonist would be dead (and his death is, we might reasonably suppose, an event which is highly significant to him). Nevertheless, Unger argues that although

it is indeed quite an accident that the turtle watcher is alive at the time he sees the turtle crawling on the ground before him . . . it is not at all accidental that he is right about its being the case that there is a turtle on the ground. [Thus] the turtle watcher knows that there is a turtle crawling there upon the ground. (Unger 1968, 160)

Again, then, we find Unger arguing, plausibly, that genuine knowledge possession is not undermined merely by the fact that it is lucky that the agent is in a position to know anything at all at that moment. And, again, this example conforms to our account of luck, for the event in question is clearly one that obtains in the actual world but not in most nearby worlds, and which would be significant to the agent involved if only he was aware of the relevant facts in this regard.

Although Unger only explicitly lists the above two types of harmless epistemic luck in his discussion of accidentality, one can discern two other types of luck if one pays careful attention to the text. For example, Unger makes the following remark:

[A] man may overhear his employer say that he will be fired and he may do so quite by accident, not intending to be near his employer’s office or to gain any information from his employer. Though it may be an accident that the man came to know that he will be fired, and it may be somewhat accidental that he knows this to be so, nevertheless, from the time that he hears and onwards, it may well be not at all accidental that the man is right about its being the case that he will be fired. Thus, he may know, whether by accident or not. (Unger 1968, 159)

Curiously, however, although this example is adduced within the account given of the first type of benign epistemic luck, it does not conform to either of the types distinguished above. After all, this is not a scenario in which the

agent is lucky to be able to possess knowledge in the first place nor even a case in which the proposition known is only luckily true. It would seem, then, that Unger has stumbled across another form of harmless epistemical luck. We can characterise this type of luck as follows:

(3) It is lucky that the agent acquired the evidence that supports her knowledge.

As Unger points out, we would be quite willing to ascribe knowledge to the unfortunate man in this example even though it was entirely lucky that he came across the evidence which supports his knowledge (since in most nearby possible worlds he does not acquire this evidence). Furthermore, the agent's acquisition of this evidence clearly constitutes a case in which the event at issue obtains in the actual world, but not in most nearby possible worlds, and which is also of significance to the agent concerned. We have thus identified a third variety of innocuous epistemic luck.

Indeed, such cases of evidential epistemic luck are common in the contemporary epistemological literature (although they are rarely explicitly understood in these terms). For instance, consider the following example offered by Robert Nozick (1981) in his discussion of his modal theory of knowledge, where he asks us to imagine a situation where "the bank robber's mask slips off as he is escaping and the bystander sees it is Jesse James" (Nozick 1981, 193). On this basis, argues Nozick, the bystander can come to "know that Jesse James is robbing the bank" (193) even though it is purely a matter of luck that the bystander is in the position that he is when James's mask happens to slip. This is clearly a case of evidential epistemic luck in that it is lucky that the agent should acquire the evidence that supports his true belief in the identity of the bank robber. After all, this is an event (the sighting of Jesse James's face) that is significant enough to the agent for him to form the relevant belief and which, in most nearby possible worlds, does not obtain. Accordingly, the agent would not form this belief in (most of) those worlds, because he would not see James's face.

One might think, however, that this way of putting the matter runs two distinct forms of innocuous epistemic luck together, evidential and *doxastic* epistemic luck. That is, that although these cases concern situations in which one acquires evidence in a lucky fashion, and thereby also forms the relevant belief in a lucky fashion, nevertheless, the luck that attaches itself to the evidence and the luck that attaches itself to the belief could come apart, so that there are cases of evidential epistemic luck that are not thereby cases of doxastic epistemic luck, and *vice versa*. We can characterise this notion of doxastic epistemic luck as follows:

(4) It is lucky that the agent believes the proposition known.

Although it is true that one can distinguish these two types of luck, nothing of consequence hangs upon this distinction because any case of evidential epistemic luck will thereby be a case of doxastic epistemic luck and *vice versa*.<sup>14</sup>

Consider first those potential counterexamples to this claim that involve evidential epistemic luck without the corresponding doxastic epistemic luck. For example, one might think that it is possible to be evidentially epistemically lucky without thereby being doxastically epistemically lucky on the grounds that it is surely possible to acquire evidence in a lucky fashion without thereby acquiring the relevant belief in a lucky fashion. Such cases do not pose a problem for the putative coexistence of evidential and doxastic epistemic luck, however, because in these cases the very fact that the agent fails to form the relevant belief suffices to indicate that the luck at issue is no longer epistemic. That is, for the luck to be epistemic it must coexist with the agent's knowledge of the target proposition, but if the agent does not even form the relevant belief then she is not in the market for knowledge in the first place. Where this particular objection goes awry is thus by failing to distinguish between epistemic luck and luck *simpliciter*.

A second possible objection to the idea that all epistemic luck that is evidential is thereby doxastic (and *vice versa*) might be that there are cases in which one acquires the evidence that supports one's knowledge in a lucky fashion without thereby acquiring the belief in a lucky manner, because one had already formed that belief in a non-lucky fashion (although it was previously insufficiently supported by evidence). Such examples are controversial, however, once one spells out the details. For if it is true that the agent would retain her belief in the target proposition even if she lacked the evidence that currently supports her putative knowledge, then it ceases to be plausible that she really does know that proposition in the first place. For example, if a jury member only comes across the evidence which supports her belief in the defendant's guilt through luck, but would have believed in his guilt in most nearby possible worlds where she lacks this evidence regardless, then it seems that her belief in this respect is just too insensitive to the facts to count as knowledge, even if, as in the actual world, her true belief is well supported by evidence. Again, then, we find that potential counterexamples to the claim that all epistemic luck that is evidential is thereby also doxastic (and *vice versa*) are illusory.

What about the other direction of fit, that between epistemic luck that is doxastic and epistemic luck that is evidential? Here the objection may be that one might be lucky to have acquired the belief that one does without thereby being lucky in acquiring the relevant evidence that supports one's knowledge. Again, however, the devil is in the details. For the question we now need to ask is just what it is that gives rise to the agent's lucky belief in these cases, if it is not evidence that has also been luckily acquired. Suppose, for example, that the agent had the evidence all along (and acquired it in a non-lucky fashion), but failed to form a belief in response to that evidence because she did not properly attend to it (a kind of epistemic *akrasia*), and only eventually formed the relevant belief because she was lucky enough to reflect on her

evidence at a certain moment of rare lucidity. The problem with such an example is that the very story that has to be told to explain why the acquisition of the evidence did not give rise to the belief undermines the plausibility of supposing that the agent has knowledge in the first place. For if we grant such a story then it follows that in most nearby possible worlds in which the agent has the same evidence as she does in the actual world, she fails to form the relevant belief as a result, and this kind of insensitivity to the evidence normally suffices to indicate that the agent lacks knowledge.<sup>15</sup> And as we saw earlier, if the agent is not even in the market for knowledge, then the luck under consideration can no longer be regarded as epistemic at all.

Despite first appearances, then, there is no separate account needed of doxastic and evidential epistemic luck, since any case of the former will be a case of the latter, and *vice versa*. Henceforth, we will refer to these cases of epistemic luck as evidential and simply take it as granted that this classification also covers doxastic epistemic luck.

We have thus identified several possible ways in which knowledge can be based on luck, all of which are entirely consistent with the possession of knowledge. As we will see, the importance of distinguishing these types of epistemic luck is that the kind of cases in which there is a genuine tension between luck and knowledge can easily be confused with cases in which there is no tension at all. Distinguishing between those types of luck that undermine knowledge possession and those that do not is thus essential if we are to capture the source of the supposed tension between luck and knowledge.<sup>16</sup>

### III. VERITIC LUCK AND THE GETTIER COUNTEREXAMPLES

In effect, the types of epistemic luck that we have identified as being epistemically harmless concern luck in the initial conditions for knowledge, rather than luck in the knowledge itself. As Unger put the point in the passage cited above, the issue about problematic examples of epistemic luck is that they impair the epistemic “relation concerning the man and the fact,” and the types of luck that we have examined so far do not have this effect. We must thus look more specifically at the sort of luck that affects this epistemic relationship between the knowing subject and the fact known.

We can express this type of luck in terms of how, even if all the relevant epistemic conditions on knowledge demanded by the epistemological theory in question are met, it is still a matter of luck that the belief is true:

- (5) It is a matter of luck, given that the agent’s belief meets all the relevant epistemic conditions, that the belief is true.

We will call this type of luck “veritic” luck.<sup>17</sup> So construed, veritic luck clearly constitutes one sense in which luck can be epistemologically significant. Indeed, this is the type of luck that is famously at issue in the Gettier

counterexamples to the classical tripartite account of knowledge, where on this account the relevant epistemic conditions are understood in terms of the agent's justification. That examples which highlight the presence of this type of luck are widely thought to refute decisively a certain epistemological theory should suffice to indicate that this particular species of luck is incompatible with knowledge possession (and is therefore not, strictly speaking, *epistemic* at all).

Consider the following example adapted from one given (though in a different context) by Bertrand Russell (1948, 170–1). A man comes downstairs every morning around about the same time and looks at the time on the old clock in his hall. The clock has been a highly reliable timepiece now for many years, and the man has no grounds for thinking that it is faulty this morning. The clock tells him that it is 8:22, and it is indeed usually around about 8:20 a.m. that the man comes downstairs. Furthermore, the clock is right, because it is 8:22 a.m. Nevertheless, unbeknownst to our protagonist, the clock has in fact broken down (it broke down twelve hours before). This is clearly a case where, even given the excellent grounds that the agent has, his belief is only luckily true, since in most nearby possible worlds where the agent forms his belief on the same basis, it is false.<sup>18</sup> Clearly, we would say in such a case that the man does not know what the time is, even though he has excellent grounds to justify his belief—and thus, seemingly, has met all the relevant epistemic conditions in this regard—and even though his belief is in fact true. We thus have found a sense in which luck can undermine an agent's putative possession of knowledge.

As Zagzebski (1994; 1999) points out, there is a systematic method for generating Gettier counterexamples of this sort. First, take a justified true belief, but one where the justification in question does not entail the truth of the belief. Next, stipulate a case of bad luck that would usually prevent the agent from having a true belief. Finally, stipulate a further case of good luck that cancels out the bad luck and ensures that the belief is true. For example, in the case just given, the bad luck that (despite all the good grounds for thinking the contrary) the clock is broken is cancelled out by the good luck that the clock happened to break down at the time that it did, so that, twelve hours later, the agent forms a true belief regardless.

The standard diagnosis of these examples is that they show that merely true belief supported by good grounds will not suffice to ensure knowledge, because the quality of such grounds will not be sufficient to rule out luck. More specifically, we can note that the problem is not the presence of luck *per se*, but rather the presence of veritic luck. Mylan Engel (1992) concludes from this that veritic luck poses a fundamental problem for all internalist epistemological theories, on the basis that whatever internal epistemic conditions are adduced by such theories, they will not incorporate the kind of external relationship to the truth that would eliminate this sort of luck. Engel does not offer a full-fledged account of what he has in mind regarding epistemological

internalism here, but his comments seem to fit the standard conception of this position. For example, James Pryor, in a survey article on recent trends in epistemology, characterises what he calls “simple internalism” in terms of a conception of justification that demands that:

[W]hether or not the agent is justified in believing  $p$  is wholly determined by facts which one is in a position to know about by reflection alone. (Pryor 2001, 100)

Pryor goes on to characterise what is meant by “reflection” here in terms of a priori reasoning, introspective awareness of one’s own mental states, and one’s memory of knowledge acquired in those ways. (Pryor 2001, 100)

On this conception of internalism, one can see why in any internalist theory of knowledge which merely held that knowledge was justified, true belief would be hostage to veritic luck. After all, there is no fact that one could know by reflection alone that would ensure that one’s justified true belief was not “Gettiered.” For example, the facts that the agent in the “stopped clock” example above knows by reflection alone could also be known by a counterpart agent who is in exactly the same circumstances except that the clock has not stopped and he has knowledge. That is, the difference between the agent whose putative knowledge is subject to a significant and undermining degree of veritic luck, and the counterpart agent whose knowledge is not influenced by veritic luck (and so is *bona fide*), is not one that can be captured in terms of the facts that the agent is able to know by reflection alone. Accordingly, knowledge cannot just be true belief that is justified by the lights of the internalist account.

Nevertheless, Engel is wrong to conclude on this basis that there is some essential problem with all internalist theories of knowledge. This is because it is entirely open to internalists to advocate extra epistemic conditions in addition to an internalist conception of justification in their account of knowledge. Indeed, this is one key reason why one cannot usefully draw the epistemic externalism/internalism contrast as it applies to theories of knowledge in terms of justification, because it is entirely possible that both externalists and internalists might advance an internalist conception of justification. In such cases, where the theories diverge will be in terms of the role that they accord to this notion of justification. In particular, whereas internalists about knowledge will typically regard meeting this condition as being necessary for knowledge, externalists will demur, allowing that at least in some cases (such as basic perceptual knowledge, say) an agent could have knowledge by meeting external epistemic conditions alone (such as some sort of reliability condition).<sup>19</sup> So whilst veritic luck is indeed epistemically significant—in that it is inconsistent with knowledge such that its elimination is an adequacy condition on any theory of knowledge—its ramifications for contemporary epistemological discussion are not quite as dramatic as Engel claims.<sup>20</sup>

The way to eliminate veritic luck from one's theory of knowledge—and thus evade the Gettier counterexamples—is thus to identify some external epistemic condition which ensures that the relationship between the epistemic conditions and the truth of the target proposition is such that luck cannot intervene. More specifically, one needs to identify an external epistemic condition that makes it such that meeting the relevant epistemic conditions entails the truth of the target proposition.<sup>21</sup> One easy, but unilluminating, way of doing this would be to simply specify that knowledge is justified true belief that arises in a “Gettier-free” fashion, where the latter condition is an “external” epistemic condition, in the sense that it is not a condition that the agent will be able to know reflectively has obtained. Indeed, Unger's (1968) “non-accidental” account is along these lines. A more plausible theory would, of course, specify what it means for an agent's justification to be Gettier-free. Such theories as the indefeasibility thesis propounded by Keith Lehrer and Tom Paxson (1969) could be construed as attempts to offer such a specification.

With our characterisation of luck in terms of L1 and L2 in mind, we can offer a more general account of what is required to eliminate veritic luck. Recall that what is needed is a theory of knowledge that ensures that it is not a matter of luck that the agent's belief is true given that she meets all the relevant epistemic conditions. This means that provided the agent meets all the relevant epistemic conditions in the actual world, then in most nearby possible worlds in which she forms the same belief on the same basis, her belief is true. For example, the stopped clock case is clearly not an instance of knowledge, because there is a wide range of nearby possible worlds where the agent forms the same belief regarding what the time is on the same basis (i.e., by looking at the clock), and where his belief is false. Moreover, this is entirely consistent with epistemological internalism, because merely making this demand does not prejudice the issue of whether the internalist conception of justification is a necessary condition on knowledge.

In order to see this account in more detail, consider how it deals with two of the standard examples offered in epistemology. First, the “barn façade” scenario, a version of which was first advanced (in print) by Alvin Goldman (1976). In this example we are asked to consider the epistemic status of Henry's true belief that the barn before him is a real barn given that he is currently in Barn Façade County, where all the other barns are fake. Intuitively, although Henry has a true belief based (by hypothesis) on impeccable evidence, it is not an instance of knowledge. We can explain this intuition in terms of our account of veritic luck by noting that it would not be true in this case that in most nearby possible worlds where Henry forms the same belief on the same basis (i.e., by simply looking at the “barns”) his belief is true. After all, in a great number of nearby possible worlds where he forms his belief on the same basis, Henry will be looking at barn façades rather than barns, and so will

form a false belief as a result. Accordingly, his putative knowledge in this case is infected with veritic luck, and so is not genuine knowledge at all.

In contrast, consider the “assassination” case offered by Gilbert Harman (1973, 142–154). In this example we are asked to consider the epistemic status of Jill’s true belief that the president has been assassinated, a belief that she has formed on the basis of reading what is, normally, a reliable newspaper. The twist in this story comes from the fact that subsequent editions of the paper retract the story for political reasons, and had Jill read the retractions (she does not), she would no longer have believed that the president had been assassinated. Unlike in the barn façade example, however, our account of veritic luck issues in a surprising result in this case, because it allows, contrary to the conventional wisdom on this matter, that Jill does indeed have knowledge. The reason for this is that there are going to be very few nearby possible worlds where Jill forms her belief on the same basis and yet forms a false belief as a result, since the general reliability of the newspaper ensures that in most nearby possible worlds where Jill trusts what she reads, she will form a true belief as a result. Properly understood, then, the type of luck that is in play in this example is of an evidential, rather than of a veritic, variety, in that it is only lucky that Jill acquires the evidence she does given that subsequent editions of the newspaper retract the story. This is the reason why Jill’s knowledge is so unstable, and thus, as a consequence, why it looks as if it might not be genuine knowledge at all.

Indeed, we can also explain why other commentators are inclined to draw a different conclusion from this example by reflecting upon the type of epistemic instability in Jill’s knowledge that is in play here. The story that is being told is ambiguous in a crucial respect. Although it is stipulated that the newspaper is reliable, the fact that it is also part of the story that the newspaper is, in this case, an unreliable source of information, tends to obscure the issue of whether or not the luck at issue is of an evidential or veritic variety. On the supposition that the newspaper is not a reliable source of information, we do get the standard result that Jill lacks knowledge, because now there will be a wide class of nearby possible worlds where she forms her belief about the death of the president via reading the newspaper, and yet forms false belief as a result. The devil is thus in the details. If we take the example at face value, it is not a case of veritic luck and Jill does have knowledge, whilst if we read into the example that the newspaper is not a reliable source of information, then it is plausible to contend that there is veritic luck in play here, and thus that Jill lacks knowledge.<sup>22</sup>

The conclusions that we draw from such examples are thus dependent upon the type of luck that is in play. Moreover, once we are clear about the variety of luck at issue, then even commonplace examples in epistemology can generate surprising conclusions.<sup>23</sup>

#### IV. REFLECTIVE LUCK, SCEPTICISM, AND THE METAEPISTEMOLOGICAL CHALLENGE

Eliminating veritic luck from one's epistemology does not suffice to evade the *prima facie* tension between luck and knowledge, however, because another form of luck remains that is potentially just as epistemologically significant. This is because, as noted above, what is common to all Gettier-proof epistemologies (whether they be internalist or externalist theories) is that they cite at least one epistemic condition (the condition which ensures that the theory is Gettier-proof), which the agent is not in a position to know reflectively has obtained. The type of epistemic luck that results thus concerns the manner in which an agent can have knowledge, and yet, from that agent's reflective position, it is a matter of luck that she has met all the epistemic conditions in question and thus has knowledge. We will call this type of epistemic luck "reflective" epistemic luck and characterise it as follows:

- (6) It is a matter of luck, given what the agent is able to know by reflection alone, that she has knowledge of what she truly believes.

For example, imagine two counterparts whose epistemic situation, and in particular what they are able to know by reflection alone, is identical except that the first, but not the second, lacks knowledge because her putative knowledge has been "Gettiered." As noted above, such an example is entirely possible; thus an extreme form of epistemological internalism which did not incorporate a non-reflectively accessible external epistemic condition on knowledge, would always be hostage to examples of this sort. With this condition in play, however, it follows that whether or not an agent has knowledge is not something that the agent can come to know by reflection alone. Accordingly, or so the thought runs at any rate, it can be a matter of luck, given what the agent is able to know by reflection alone, that she has knowledge. In the example just described, for instance, we would have to argue that what distinguishes the agent who has knowledge from the counterpart agent who has been Gettiered, and so does not have it (but who is otherwise identical), is that the former agent has met an epistemic condition that the latter agent has not. And since one is unable to know by reflection alone whether one's knowledge has been Gettiered, it follows that, relative to what one is able to know by reflection alone, one could just as well be in the situation of the Gettiered agent as that of her non-Gettiered counterpart.

Despite these suggestive remarks, however, it is far from clear on closer inspection what exactly is lucky about these scenarios. For example, one might understand the claim being made here as that it is entirely possible for an agent to have a true belief in the actual world which meets all the relevant epistemic conditions and so is an instance of knowledge and yet, in most nearby possible worlds where what one reflectively knows is exactly the same (at least in the relevant respects), and where one forms the same belief on the

same basis, one lacks knowledge because the relevant external epistemic condition is not met. The problem, however, is that by having an external condition on knowledge that eliminates veritic luck, such examples just are not possible because this condition will ensure that in most nearby possible worlds where one forms the same belief on the same basis, one's belief is true. Accordingly, if one has knowledge in the actual world then one also has knowledge in most nearby possible worlds in which one forms the same belief on the same basis, regardless of whether those worlds are ones where what one reflectively knows remains constant.

For example, suppose I gain knowledge by looking at the (reliable) clock in my office in good cognitive conditions (good lighting and so forth). If this is a genuine case of knowledge which is not infected by veritic luck, then in most nearby possible worlds where I form this same belief on the same basis, my belief will be true (and thus, at least in the majority of these worlds, I will come to have knowledge of this proposition). Now, it is certainly true that there will be a small cluster of possible worlds where the belief I form on this basis is false (such as where the clock stopped a few minutes before I looked), and also a small cluster of possible worlds where my belief is Gettiered so that, whilst true, it is not an instance of knowledge (perhaps because the clock stopped only seconds earlier). And in the case of the latter worlds, it could well be that what I reflectively know remains unaltered from the actual world. Nevertheless, it cannot be the case that in the majority of the nearby possible worlds where I form my belief on this basis and have the same reflective knowledge as in the actual world, my belief is Gettiered, because the fact that the knowledge at issue is genuine (and thus that veritic luck is excluded) means that there are only a limited number of worlds of this sort (if any) near to the actual world. Strictly speaking, then, eliminating veritic luck from one's theory of knowledge should suffice to eliminate reflective luck as well, at least as it is understood here.

So what, then, is the issue as regards reflective luck? Well, presumably, the worry is that in terms of what one can reflectively know, one is unable to take for granted that the possible worlds are ordered in the fashion just indicated, such that we can safely disregard the role of reflective luck in our knowledge. That is, we need not worry about reflective luck provided we can take for granted that we do have genuine knowledge in the actual world, and thus are entitled to assume that the possible worlds are ordered such that very few of them are worlds in which one's reflective knowledge remains the same but one's belief is Gettiered. The problem, however, is how this can be taken for granted, given that in terms of what we can reflectively know the actual world might not be a world where one has genuine knowledge, and thus where Gettier worlds are few and far between in the modal neighbourhood.

Just such a thought regarding epistemic luck seems to be in play in certain sceptical arguments. Take a sceptical possible world to be any world in which

a radical sceptical hypothesis—such as that one is a brain in a vat being fed one's experiences by computers—is true. Now if one were in a sceptical possible world then it is quite possible that one's actual belief about what the time is could happen to be true, and yet in most nearby possible worlds in which one forms the same belief on the same basis, and where what one reflectively knows is exactly the same, one's belief is false. Such a scenario would clearly be one where we would say that the agent lacked knowledge, even despite the excellent grounds she might have in support of her belief, and even despite the fact that her belief was true. Now contrast this world with that described above, where the agent is held to possess knowledge of what the time is. Clearly, the agent in each world could well have exactly the same reflective knowledge. Since this is so, what one is able to reflectively know does not serve to distinguish between the scenario where one is in the sceptical world (and so lacks knowledge) and the scenario where one is in the non-sceptical world (and so, putatively at least, has knowledge). It is thus a matter of luck, given what one reflectively knows, that one is in the non-sceptical world (and thus has knowledge).

Again, however, it is not clear that this is a problematic case of epistemic luck at all. That is, the sceptic seems to be faced with a dilemma. Either she grants that there are no sceptical possible worlds near to the actual world, in which case it is obviously not a matter of luck that one has knowledge given what one can reflectively know, since in most nearby possible worlds where one believes what one does on the same basis and where one's reflective knowledge is the same, one continues to have knowledge. Alternatively, she could argue that there are sceptical possible worlds near to the actual world, in which case we should all agree that the agent lacks knowledge. Crucially, however, the reason why we should agree that the agent lacks knowledge in this case is because the presence of such sceptical possible worlds near to the actual world will ensure that there is a significant degree of veritic luck in play, such that although the agent has a true belief in the actual world, she lacks a true belief in a significant number of nearby possible worlds where she forms the same belief on the same basis. So either reflective epistemic luck does not undermine knowledge, or else knowledge is undermined but not because of reflective epistemic luck but simply due to veritic luck. Either way, reflective epistemic luck does not pose the distinctive threat to our theories of knowledge that was advertised. As a result, the sceptical challenge cannot be captured in terms of a supposed tension between knowledge and luck (although note that this *is not* to say that there is no sceptical challenge that needs responding to).<sup>24</sup>

A similar problem afflicts the so-called “metaepistemological” sceptical challenge that has been made against externalist theories of knowledge. Here is Zagzebski:

The dispute between externalists and internalists looms large mostly because of ambivalence over the place of luck in normative theory. Theorists who resist the idea that knowledge . . . is vulnerable to luck are pulled in the direction of internalism. . . . Externalists are more sanguine about luck. Ironically, one of the attractions of externalism is that it is supposed to be antiskeptical and thus bypasses the threat of the worst sort of epistemic luck. That is, it is not necessary to have an answer to the skeptical hypotheses in order to have knowledge on these theories. But, of course, there is lots of room for luck in externalist theories since the conditions that makes it the case that the knower is in a state of knowledge are independent of her conscious access. (Zagzebski 1996, 39)

Here we get all the essentials of the metaepistemological challenge and, moreover, an account of the role of luck in that challenge. The idea appears to be that both internalist and externalist epistemologies are subject to a problematic degree of epistemic luck, either the veritic luck that afflicts internalist epistemologies or the reflective luck that afflicts externalist epistemologies. Either way, then, we are unable to avoid allowing luck to play a constitutive role in the possession of knowledge, despite our strong intuitions to the contrary.

Zagzebski is surely wrong in this regard, however, for two reasons. First, she is mistaken to believe that the kind of reflective luck that she describes only afflicts externalist epistemologies since, as we have seen, it is essential to any Gettier-proof epistemology, whether externalist or internalist, that it incorporates an external condition on knowledge, the obtaining of which, will not be reflectively accessible to the agent. Accordingly, if this is a problem at all, it is a problem that afflicts all adequate post-Gettier epistemologies.<sup>25</sup>

Second, she is wrong to think that the kind of reflective epistemic luck that any Gettier-proof epistemology is susceptible to poses the same kind of challenge as that presented by the veritic luck that undermines extreme forms of epistemological internalism. In order to see this, one need only note that the point that lies behind the metaepistemological challenge is contiguous with that which motivates the more general radical sceptical challenge just noted. Recall that the sceptical claim is that the epistemological theories at issue allow, in terms of what the agent can reflectively know, that there need be no difference between the non-sceptical scenario in which the agent has knowledge and the sceptical scenario in which she lacks knowledge. Accordingly, it can be a matter of reflective epistemic luck that the agent has knowledge; thus, since luck and knowledge are incompatible, the theories of knowledge in question must be rejected. The metaepistemological challenge, at least as Zagzebski expresses it, is simply a weakened version of this thesis, since it merely notes the problematic relationship between luck and knowledge, and so draws the weaker conclusion that the epistemological theories in question are not nearly as uncontentious in this regard as they may at first seem.

As with the radical sceptical challenge, however, the metaepistemological sceptic is faced with a dilemma. Either the sceptical scenarios in question really are modally far off, in which case the epistemic luck at issue is unable to undermine the agent's possession of knowledge, or they are modally nearby, in which case insofar as there is a problem regarding the role of luck here at all, it is one that will be dealt with by whatever response one makes to the problem of veritic luck. Either way, no special challenge is being posed to theories of knowledge (externalist or otherwise) that incorporate an external condition.

Often, however, this challenge is not raised with the connection to luck made explicit. For example, Richard Fumerton makes the following point:

It is *tempting* to think that externalist analyses of knowledge . . . simply remove one *level* of the traditional problems of skepticism. When one reads the well-known externalists one is surely inclined to wonder why they are so sanguine about their supposition that our commonplace beliefs are, for the most part, . . . knowledge. . . . Perception, memory, and induction *may* be reliable processes (in Goldman's sense) and thus given his metaepistemological position we may [have knowledge of] the beliefs they produce but, the sceptic can argue, we have no reason to believe that these process are reliable and thus even if we accept reliabilism, we have no reason to think that the beliefs they produce [constitute knowledge]. (Fumerton 1990, 63)<sup>26</sup>

In effect, the complaint that Fumerton is giving expression to here is that externalism allows that there are certain conditions on knowledge that one is unable to reflectively know have obtained. Indeed, Fumerton is more explicit about the focus of his objection when he goes on to write that:

[T]he main problem with externalist accounts, it seems to me, just is the fact that such accounts . . . develop concepts of knowledge that are irrelevant. . . . The philosopher doesn't just want true beliefs, or even reliably produced beliefs, or beliefs caused by the facts that make them true. The philosopher wants to have the relevant features of the world directly before consciousness. (Fumerton 1990, 64)

Presumably, to argue that externalist accounts of knowledge are problematic because they fail to demand that the relevant facts should be "directly before consciousness" is simply to complain that such theories make the satisfaction of non-reflectively accessible external epistemic conditions essential to knowledge possession. And, intuitively, the worry here is that this leaves these epistemological theories open to the kind of reflective luck that we saw earlier.

Another famous exponent of the metaepistemological challenge is Barry Stroud. He writes:

[S]uppose there are truths about the world and the human condition which link human perceptual states and cognitive mechanisms with

further states of knowledge and reasonable belief, and which imply that human beings acquire their beliefs about the physical world through the operation of belief-forming mechanisms which are on the whole reliable in the sense of giving them mostly true beliefs. . . . If there are truths of this kind . . . that fact alone obviously will do us no good as theorists who want to understand human knowledge in this philosophical way. At the very least we must believe some such truths; their merely being true would not be enough to give us any illumination or satisfaction. But our merely happening to believe them would not be enough either. We seek understanding of certain aspects of the human condition, so we seek more than just a set of beliefs about it; we want to know or have good reasons for thinking that what we believe about it is true. (Stroud 1994, 297)<sup>27</sup>

It is difficult to understand Stroud's objection here if it is not to be construed along similar lines to that found in the passages from Fumerton cited above. Stroud's thought seems to be that it is not enough merely to meet the epistemic conditions that give us knowledge, rather we should also have the special kind of internal access to those conditions that (he thinks) the internalist demands (and perhaps even more than that). Again, then, the thought seems to be that externalist epistemologies, by incorporating external epistemic conditions, allow reflective luck and thus, since knowledge appears to be incompatible with luck, that this is a problem for epistemological externalism.

As with Zagzebski's expression of the metaepistemological challenge, however, the version of the challenge posed by Fumerton and Stroud is fundamentally flawed. First, because insofar as this is a problem at all, then it is problem that afflicts all Gettier-proof epistemologies, not just externalist ones. Second, because, as we have seen, the presence of reflective epistemic luck is compatible with knowledge possession.

## V. EPISTEMIC ANGST

One of the key features of the discussion of epistemic luck in Section IV is that it highlights how our theories of knowledge appear to be hostage to two superficially incompatible intuitions regarding the role of luck in knowledge possession. The first is that represented by veritic luck concerning how it ought not to be a matter of luck, given that one meets all the epistemic conditions, that one's beliefs are true. Interestingly, however, meeting this intuition behooves us to contravene a second intuition, represented by reflective luck, that it ought not to be lucky that one has knowledge given what one reflectively knows. If both of these intuitions were sound and of equal weight, then we would be caught in a philosophical bind that would give rise to a paradoxical conclusion: that one or other of these key intuitions should be denied, or that radical scepticism was true. Such a situation could only be to the sceptic's advantage. Crucially, however, we have seen that one of the varieties of luck, reflective luck, is

not what it seems, and so does not carry the dialectical weight that is often set upon its shoulders.

Nevertheless, it is worth reflecting upon what the consequences are for any epistemology that eliminates the possibility of veritic luck. For although one cannot capture the sceptical challenge—or, indeed, the metaepistemological challenge—in terms of a supposed incompatibility between knowledge and a certain type of luck, it does seem that a slightly different challenge is licensed by the considerations brought to bear here, which is that there is a sense in which what our epistemic position is, and what we take it to be, can come apart in undetectable ways. This conclusion is not a sceptical conclusion, however (at least not in itself), but rather represents a challenge to configure our epistemology without the assurance that can be gained from conceiving of our epistemic position entirely in terms of what we are able to know reflectively. This feature of our epistemic predicament gives rise to a certain epistemic *angst* that our epistemic situation is not what we take it to be, a fear that lacks any specific ground but which can never be allayed in any decisive manner. It could well be, then, that the appropriate way to respond to scepticism is neither to accede to it nor to simply reject it, but rather to show how scepticism, properly understood, is simply the confused conflation of the view that knowledge is impossible with the view that knowledge of a variety that will not licence such epistemic *angst* is impossible. If such *angst* is here to stay, then we must learn to live with it.<sup>28</sup>

### ENDNOTES

1. In fact, some epistemologists base their whole theory of knowledge around this claim. As noted below, Unger (1968) is one example. For a more recent example, see Heller (1999). The reader should note that here, as throughout this paper, I am assuming that the type of knowledge at issue is empirical knowledge of contingent propositions.
2. As Dancy (1985, 134) puts the point, “[J]ustification and knowledge must somehow not depend on coincidence or luck. This was just the point of the Gettier counter-examples; nothing in the tripartite definition excluded knowledge by luck.”
3. Though even with the case of the lucky guess matters are not quite as they at first seem, because it is not at all clear in such cases that the agent even has the requisite *belief* in the first place (and thus that the agent’s lack of knowledge is not simply due to her failure to meet the belief condition for knowledge). After all, the formation of belief is not (at least usually) simply a matter of fiat, although some commentators seem to write as if this were so. Accordingly, a mere guess, and a self-conscious one at that, would not ordinarily suffice for belief.
4. Foley (1984), Gjelsvik (1991), Hall (1994), Greco (1995), Heller (1999) and Vahid (2001) are all representatives of the former camp, since none of them offers an account of luck at all. Moreover, some writers who do seem to offer at least a loose conceptual characterisation of the notion of luck fare little better. Engel (1992, 59), for example,

describes the notion of epistemic luck in terms of “situations where a person has a true belief which is in some sense fortuitous or coincidental,” which is hardly illuminating. Indeed, in general, there is no real developed account of luck available in the literature, perhaps the closest being Rescher (1995).

5. This point has been made by experimenters who have studied the psychology of luck. For a survey of the key treatments of luck in the psychological literature, see Pritchard and Smith (2002).

6. Indeed, the very same event can be judged to be lucky by one person, unlucky by another, and neither lucky nor unlucky by a third person. See, for instance, the example of the sinking of the Spanish Armada offered by Rescher (1995, 20).

7. Rescher (1995) is actually sensitive to these issues (though not to others). His view is discussed in more detail below.

8. For more on the debate regarding moral luck, see the papers collected in the anthology edited by Statman (1993), in particular the exchange between Nagel (1979) and Williams (1979) reprinted in that volume.

9. For the sake of brevity, in what follows I will be setting aside the concerns raised by those who are sceptical about the very possibility of outlining an adequate account of possible worlds. It should be noted, however, that any theory of luck (and thus, given what I say below, of knowledge) which, like mine, makes essential use of possible worlds will be hostage to the conclusions reached in this more general debate.

10. Two further advantages to L1 are that it can incorporate our intuition that some events are luckier than others, and also capture the sense in which the notion of luck is inherently vague. To take the former point first, it is certainly the case that there sometimes occur events which are so fortuitous that they appear to constitute a greater degree of luck than is usual. For example, that one happens to find one’s wallet, with its contents, in the street the day after losing it is clearly lucky, but it is not nearly as lucky as losing one’s wallet and then finding it again, with its contents unharmed, a year later. A plausible explanation of why we think the second event is luckier than the first is that there are far fewer nearby possible worlds where the second event occurs than where the first event occurs. L1 thus captures the sense in which extremely unusual events can be regarded as luckier than just plain unusual events.

As to the latter point, there will be events such that it is just not clear whether or not they are lucky. For example, does dropping one’s wallet and finding it (untampered with) ten minutes later when one retraces one’s steps (and knowing that one has only just dropped it) count as lucky? Possibly, though, equally, possibly not. Our confusion here relates to the fact that such an event is part of the wide range of penumbral cases where it is simply not transparent that luck is involved. L1 captures this aspect of luck because it will likewise be a vague matter whether or not the event does not occur in most of the nearby possible worlds. In general, possible worlds are not well suited to drawing sharp boundaries, because it isn’t always straightforward how one is to measure accurately the nearness of the relevant possible world or (relatedly) to count possible worlds in the required manner. This is the so called “world order” problem for possible worlds. For discussion, see Lewis (1973; 1987). Since our notion of luck is not sharp either, however, the vagueness inherent in measuring or counting possible worlds is all to the good.

11. There are further issues here, of course. What should we do, for example, with those agents who are (counterfactually) unresponsive to the relevant facts? Should we maintain that in these cases the event just is not lucky or tighten our *caveat* so that it involves some claim about what the agent *ought* to regard as significant were she to be apprised of all the relevant facts? My inclination here is towards the former alternative, on the grounds that when it comes to meeting L2, luck is, in the relevant sense, in the eye of the beholder. This raises a further issue, however, of what to do with cases where the agent in question does not regard the event as lucky, but others do (such as, for example, a scenario in which a devoutly religious person who regards all events as predestined is regarded as lucky to survive a plane crash in which everyone else was killed). In these cases our intuitions are not, I think, all that clear, and I will thus be setting this problem aside for now. In any case, this rough account of luck should be informative enough to suffice for our purposes here.

12. A challenge to this model of luck is posed by those, such as Rescher, who argue that luck is inextricably tied to what the agent can rationally expect to occur. On this view, an event could be lucky for an agent even though it occurred in most nearby possible worlds just so long as the agent could not be rationally expected to have predicted such an event. Fortunately, the examples that Rescher offers to support this line are unpersuasive. Here is one of them:

[A] happy or unhappy development can be a matter of luck from the recipient's point of view even if its eventuation is the result of a deliberate contrivance by others. (Your secret benefactor's sending you that big check represents a stroke of good luck for *you* even if it is something that he has been planning for years). Thus even if someone else—different from the person affected—is able to predict that unexpected development, the eventuation at issue may still be lucky for those who are involved. (1995, 35)

It is far from clear that this is a case of luck, however, no matter how much the agent may regard it as such. Indeed, the example seems more accurately to be an instance of good fortune rather than luck, where fortune relates to those cases where certain events that one has no control over count in one's favour (where fortune smiles on one) rather than cases where luck is specifically involved. (On this view of fortune, one could regard lucky events as being part of a more general class of fortunate events. Interestingly, Rescher (1995, *passim*) also makes this distinction between luck and fortune, though he does not draw the same consequences from it.) In order to see this, one need only note that if the agent were to discover that this event had been carefully planned all along, then he would plausibly no longer regard it as a lucky event. Indeed, once he discovered that this event was always due to occur, it seems natural to suppose that he would regard himself as no more lucky than a favoured son is lucky to have received a vast inheritance from his rich father (i.e., not lucky at all, but merely fortunate). The moral to be drawn from such cases is thus not that lack of information on the part of the agent is a determinant of luck (which is the moral that Rescher draws), but rather that lack of information can seriously affect the agent's ability to correctly determine whether or not an event is lucky in the first place. Similar remarks apply to the other examples that Rescher (1995, section 2.5) offers to support his case in this regard. For further discussion of Rescher's account of luck, see Pritchard and Smith (2002).

13. There is a broader sense of "accident" which applies even if the event in question was not, strictly speaking, an accident at all. Such a case might be where someone deliberately

drives into the oncoming traffic. The subsequent news reports would no doubt still refer to the ensuing carnage as being a traffic accident even though there was nothing at all accidental about this event. When I talk about the notion of an accident, however, I have the stricter meaning in mind that excludes this usage.

14. I am grateful to an anonymous referee from the *Journal of Philosophical Research* for helping me to be clearer on this point.

15. For example, once this moment of rare lucidity has passed, what happens to her putative knowledge then? One might think that the knowledge is now “banked” for further use, but there seems no good reason for thinking that this is so. Indeed, one would rather expect her subsequent states of intellectual muddlement to be insufficient to support knowledge of the target proposition, and that the agent lacks knowledge of the target proposition in most nearby possible worlds is pretty definitive indicator that she lacks it in the actual world also.

16. See Harper (1996) for more discussion of Unger’s account of epistemic luck in this respect.

17. I borrow the term from Engel (1992), who argues for a similar characterisation of epistemic luck, although he specifically puts the point in terms of evidence.

18. We need to specify that the worlds at issue are those where the agent forms her belief on the same basis as in the actual world in order to distinguish the type of luck at issue here from the sort of evidential epistemic luck discussed above. Without this constraint, there will be cases where the agent is epistemically lucky in an evidential fashion, such that there are nearby possible worlds where she doesn’t form the belief in question, or else forms a different belief (perhaps that the target proposition is false, rather than true). The agent would thus be taken to lack knowledge, even though, as we have seen, evidential epistemic luck is compatible with knowledge possession. For more on the need to index a modal theory of knowledge to the manner in which the agent actually forms her belief, see Nozick (1981, 179–185).

Note that this example works even if the likelihood that the clock should break down is extremely low (one in a billion say), because it would still remain that in most nearby possible worlds in which the agent forms his belief on the same basis as in the actual world (i.e., by looking at the clock), the belief is false. In order to see this, notice that the agent is only going to form the same belief on the same basis provided that the clock is showing the time of 8:22a.m. Accordingly, the range of nearby possible worlds that is relevant here is only those worlds in which either the clock is working or it is broken but still showing the time of 8:22a.m. Moreover, even given the low odds of the clock breaking, since it is a feature of the actual world that the clock is broken, it will nevertheless be true that in most nearby possible worlds the clock will remain broken. Accordingly, it will be true that in most nearby possible worlds the agent will form a false belief as a result of seeing the clock. I am grateful to an anonymous referee from the *Journal of Philosophical Research* for pressing me on this point.

19. For more on this point, see Pritchard (2001).

20. For a similar account of the externalist/internalist distinction as it applies to knowledge, see Brandom (1998). For the key discussions of this distinction in general, see the

anthology edited by Kornblith (2001). Vahid (2001) also notes that Engel is mistaken in this regard, although for slightly different reasons than those offered here.

21. For further discussion of this claim, see Merricks (1995).

22. Hetherington (1998) also argues that Jill has knowledge in this case, and for similar reasons to that offered here, although he also argues for the dramatic conclusion that the agents in both the barn façade and the Gettier cases have knowledge as well. In terms of the model of epistemic luck being advanced here, Hetherington's mistake is to fail to recognise that whilst luck might be epistemically permissible in some cases (i.e., where it is merely evidential luck that is at issue, for example), this does not mean that it is *always* epistemically permissible (i.e., even in cases where veritic luck is in play).

23. A possible challenge to this treatment of veritic luck is posed by the so-called "lottery" example. Suppose that the agent has one of millions of losing tickets in a free and fair lottery and that she believes (on grounds of probability) that it is a losing ticket. Can this agent know, prior to being informed of the result, that she has a losing ticket? With the odds so determined, there is no possibility of the belief in question here being veritically lucky, since in most nearby possible worlds in which she forms her belief in the same way as in the actual world, her belief remains true. Nevertheless, there does seem to be a *prima facie* difficulty with ascribing knowledge in such a case. My inclination here is to bite the proverbial bullet and claim that the agent *does* have knowledge, whilst limiting the counterintuitive force of this claim by noting that there is nonetheless something epistemically undesirable about her belief. In particular, I think that cases such as these highlight that we usually want an agent to do more than merely know a proposition (where this means simply having a non-veritically lucky true belief in the proposition in question). Rather, we also want the agent to be able to offer grounds that would support a claim to knowledge of that proposition that would not generate false conversational implicatures. In this case, for example, the agent could not properly claim that she knew the proposition in question since it would generate a number of false conversational implicatures (e.g., that she had special grounds which indicate that the particular set of numbers on her ticket is not the set of numbers that were generated by the lottery draw). For further discussion of this type of example, see Cohen (1998). He also concludes that the agent in this case can have knowledge, although he tempers this conclusion somewhat by limiting it to a particular set of contexts, and thus epistemic standards. I am grateful to an anonymous referee from the *Journal of Philosophical Research* for pressing me on this issue.

24. For example, one common way of motivating the sceptical challenge in the contemporary literature has been to make appeal to the so-called "closure" principle for knowledge (roughly: that if one knows a proposition *p*, and knows that it entails a second proposition *q*, then one knows *q*). Using this principle, one can straightforwardly argue that an agent's inability to know that she is not a brain in a vat suffices to ensure that she cannot know any one of a wide number of everyday propositions which she takes herself to know and which she knows are inconsistent with the brain-in-a-vat hypothesis. In any case, the claim that the sceptical tension cannot be captured in terms of a tension between knowledge *simpliciter* and luck is consistent with the thought that it can be captured in terms of a tension between knowledge *of a certain sort* and luck. I further remark upon this point in section V. For more on the contemporary debate regarding radical scepticism, see Pritchard (2002).

25. Of course, there can still be room for a difference of degree here regarding how different epistemologies are able to evade the kind of concerns outlined. After all, a completely externalist epistemology which did not find any room for internal epistemic conditions would seem to make knowledge possession more reflectively lucky than a standard internalist account which was merely supplemented with a Gettier-evading external epistemic condition. Indeed, one can regard the move from pure reliabilist epistemologies to virtue-theoretic accounts as being motivated by these sorts of concerns. After all, by conceiving of knowledge in terms of the stable cognitive faculties of the agent, virtue epistemologies evade the problematic cases that pure reliabilist theories face where the agent has knowledge purely by meeting some external epistemic condition even though the agent has clearly not exhibited any kind of cognitive achievement (perhaps because it is a case where the reliability is as a result of the world tracking the agent's beliefs rather than *vice versa*). For more on the difference between pure and virtue (or agent based) reliabilist theories, see Greco (1999). For discussion of these two types of virtue epistemology in the light of the problem of epistemic luck, see Axtell (2001) and Pritchard (forthcoming).

26. Fumerton develops this line of attack at length in Fumerton (1995).

27. Stroud was explicitly responding here to Sosa (1994). See also, Stroud (1996).

28. For a recent work that licenses the claim that our knowledge is always subject to epistemic *angst* in the fashion just described, see Williamson (2000).

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