

## BAD LUCK FOR THE ANTI-LUCK EPISTEMOLOGIST

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**ABSTRACT:** Anti-luck epistemologists tell us that knowledge is incompatible with epistemic luck and that epistemic luck is just a special case of luck in general. Much work has been done on the intricacies of the first claim. In this paper, I scrutinize the second claim. I argue that it does not survive scrutiny. I then offer an analysis of luck that explains the relevant data and avoids the problems from which the current views of luck suffer. However, this analysis of luck is of no help to the anti-luck epistemologist for it uses knowledge to explain luck, making this account of knowledge circular. The main lesson is that the only viable analysis of luck is not suited for the anti-luck epistemologist's coveted noncircular analysis of knowledge.

Anti-luck epistemologists tell us that knowledge is incompatible with epistemic luck and that epistemic luck is just a special case of luck in general. Much work has been done on the intricacies of the first claim. In this paper, I scrutinize the second claim. My strategy is to look at the notion of luck used by anti-luck epistemologists and see if it survives the scrutiny. I argue that it does not. I then offer an analysis of luck that explains the relevant data and avoids the problems from which the current views of luck suffer. However, this analysis of luck is of no help to the anti-luck epistemologist for it uses knowledge to explain luck, making this account of knowledge circular. The main lesson is that the only viable analysis of luck is not suited for the anti-luck epistemologist's coveted noncircular analysis of knowledge.

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## 1. THE EPISTEMOLOGIST'S LUCK

In his seminal paper, "An Analysis of Factual Knowledge," Peter Unger (1968) suggested that one knows that  $p$  only if it is not an accident that one's belief that  $p$  is true.<sup>1</sup> Unger says that what explains why the subject in Gettier's original cases does not know is that "it is entirely accidental that he is right about the matter in question, whereas, for him to know, it must be quite the opposite. It must be not at all accidental that he is right about the matter" (165).

Unger's discussion is often cited as the first attempt to connect the phenomenon of gettierization (i.e., the counterexemplification of the claim that, necessarily, S knows that  $p$  if, and only if, S has a justified true belief that  $p$ ) to the notion of luck or accident. Unger himself never uses the term "luck" to describe these cases, but his unanalyzed use of "accidental" is usually taken to be synonymous with "lucky" by the anti-luck epistemologist.<sup>2</sup> More recently, Linda Zagzebski has suggested that one can use the notion of luck in a formula designed to produce Gettier cases: first, construct a case in which S forms a false belief in such a way that it has the epistemic property (or properties) required for knowing and that would usually lead to a true belief if it were not for *bad luck*; second, amend the case in a way such that an element of good luck cancels the first element of bad luck and makes S's belief true. It is safe to say that Zagzebski's "formula" for how to construct a Gettier case is the standard understanding of how luck interferes in those cases.<sup>3</sup>

Even though these epistemologists (and many others) embraced the ideology according to which Gettiered subjects fail to know because they are lucky to have formed a true belief, it was not until recently that anti-luck epistemologists started offering a careful analysis of epistemic luck itself. Influenced by Ernest Sosa's work on the notion of safety,<sup>4</sup> Duncan Pritchard (2005, 2012) proposed an analysis of epistemic luck in terms of safety and went as far as to suggest that the very point of the Gettier Problem is to show that a belief being justified and true does not exclude the possibility that the belief is true by luck. Gettier cases vindicate what Pritchard calls the *anti-luck intuition*: "when one knows, one's cognitive success (that is, one's believing truly) is not a matter of luck" (2012, 247).

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<sup>1</sup> Even before Unger, Bertrand Russell had alluded to the idea that knowledge excludes the possibility of luck when he asked "can we ever know anything at all, or do we merely sometimes by good luck believe what is true?" (1912, 131).

<sup>2</sup> Most prominently in Pritchard 2005, chap. 5. Peter Klein (1971) was another early adopter of the luck explanation of Gettierization: he suggested Gettiered subjects fail to know because it is merely a *felicitous coincidence* that their belief is true and justified at the same time.

<sup>3</sup> Cf. Zagzebski 1994, 69. Note that Zagzebski's formula fits the original Gettier cases only if she is talking about the same belief throughout, since in the original cases there is never a time when the conclusion of Smith's reasoning is false.

<sup>4</sup> For Sosa's views on safety, see Sosa 1999, 2007.

Moreover, in this picture, epistemic luck, like moral luck, is a *kind of luck*. Gettiered subjects, like lottery winners and Nagel's reckless driver, are all lucky.<sup>5</sup> Gettiered subjects are lucky to have a true belief, reckless drunk drivers are sometimes lucky when they do not hit anyone, and lottery winners are lucky to have won the lottery. Here is how safety-based accounts of epistemic and nonepistemic luck are usually presented:

(Luck) If an event E is lucky for S, then (i) E is significant to S (or would be significant, were S availed of the relevant facts); and (ii) E occurs in the actual world but does not occur in a wide class of the nearest possible worlds where the relevant initial conditions for that event are the same as in the actual world.<sup>6</sup>

(Epistemic Luck) If a contingently true belief that *p* is lucky for S, then S believes truly that *p* in the actual world, but falsely in one (or more) nearby possible worlds in which S forms the belief that *p* in the same way as she formed her belief that *p* in the actual world.<sup>7</sup>

To see how an appeal to Epistemic Luck, as presented above, explains why the protagonist in Gettier cases fails to know, remember Gettier's Case I: in Gettier's coin case, intuition says that Smith has a justified true belief that the man who will get the job has ten coins in his pocket but fails to know this is the case. This refutes the equation of knowledge with justified true belief.<sup>8</sup>

According to the anti-luck epistemologist, Epistemic Luck explains why Smith fails to know. Smith's belief that the man who will get the job has ten coins in his pocket is true in the actual world, but false in worlds in which Smith has eleven or nine coins in his pocket, and in worlds in which neither Smith nor Jones gets the job and the person who does get the job does not have ten coins in his pocket.

Most of the criticism to anti-luck epistemology focuses on Epistemic Luck and whether it is a necessary condition on knowledge.<sup>9</sup> Thus, I will not discuss the issue here. Instead, I will take a critical look at Luck. Although some

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<sup>5</sup> For the claim that epistemic luck is a kind of luck see Pritchard 2005, ch.5 and Coffman 2007. See Nagel 1979, Williams 1981, and the papers collected in Statman 1993 for a discussion of moral luck.

<sup>6</sup> See Pritchard 2005, 128–33.

<sup>7</sup> Epistemic Luck needs to be precisified further in order to account for necessary truths and different forms of epistemic luck. See Pritchard 2009, 45, and Sosa 2007, 26–27, for a suggestion on how to handle the first issue and Pritchard 2005, chap. 6, and Pritchard 2012, 253–56, for an approach to the latter issue.

<sup>8</sup> See Gettier 1963.

<sup>9</sup> There are many proposed counterexamples to Epistemic Luck in the literature. Many arguably show that safe true beliefs are sometimes luckily acquired. See Neta 2007, 308, Lackey 2006, 288, and Coffman 2010, 246, for some of those cases. But see Pritchard 2014 for a defense of Epistemic Luck that discusses some of those cases.

ink has been spilled on the topic of what luck in general is, I am not fully satisfied with what has been said.

A recent salvo against Luck was fired by Jennifer Lackey (2008, 261). According to her, the following case shows that *counterfactually robust* events (i.e., events that hold not only in the actual world, but also in most or all close possible worlds) are sometimes lucky—this should be impossible if condition (ii) in Luck were correct:

The Buried Treasure Case: Sophie knew she had very little time left to live and wanted to bury a chest filled with all of her earthly treasures on the island she inhabited. As she determined the best site for proper burial, her central criteria were, first, that the site must be on the northwest corner of the island and, second, that it had to be a spot where rose bushes could flourish. As it happens, there was only one particular patch of land on the northwest corner of the island where the soil was rich enough for roses to thrive. Sophie located this patch of land and buried her treasure, along with seeds for future roses to bloom. One month later, Vincent, a distant neighbor of Sophie's, was driving in the northwest corner of the island—which was his most beloved place to visit—and was looking for a place to plant a rose bush in memory of his mother who had died ten years earlier, since these were her favorite flowers. Being excellent at detecting the proper soil for rose bushes to thrive, he immediately located the same patch of land that Sophie had found one month earlier. As he began digging a hole for the bush, he was astonished to discover a buried treasure in the ground.

It seems that Vincent is lucky to have found the treasure, but it is not the case that he fails to find the treasure in any of the close possible worlds. Vincent does not decide to go plant roses in the northwest corner of the island by chance. He does that in virtue of his deep-seated desire to honor the memory of his mother and his love for that particular area of the island. He is lucky to have found Sophie's treasure, even though this is a counterfactually robust event (i.e., an event which holds in all close possible worlds). This result directly contradicts Luck's prediction about the case.

One might try to rescue Luck from Lackey's counterexample by insisting that once we look carefully at certain details of the case, such as what counts as an appropriate "patch of land" for Vincent to plant his roses and how deep Sophie must have buried her treasure, our inclination to attribute luck disappears. It seems that we need to get clear on the first issue because the relevant patch of land has to be big enough so that Sophie can fit the treasure chest in it, but small enough so that Vincent will not miss the chest when he plants his roses. On the other hand, it seems that it is important we know how deep Sophie buried the treasure chest, because that will determine

whether the chest is exposed by the effects of weather on the soil, and this, in turn, will determine how likely it is that someone other than Vincent finds the chest. It might be argued that once one fully specifies those details of Lackey's case, Vincent is guaranteed to find Sophie's treasure chest and that this is not compatible with it being lucky for Vincent that he found it.

Pritchard (2014, 610–12) took a similar argument to show that Lackey's case does not refute Luck. According to him, the "temptation" to say Vincent's discovery was lucky disappears once we realize that Vincent is guaranteed to find the treasure. This event is in fact modally robust but not lucky, for it was bound to happen in the actual world.

It is important to notice that Pritchard's suggestion entails that Vincent's discovery of the treasure, although utterly surprising to Vincent (and to anyone in Vincent's shoes), is not something that is lucky for him.<sup>10</sup> Pritchard, in fact, recognizes this consequence of his view and welcomes it. He thinks this is how things should be, since, according to him, we "ought to be [interested] in luck as an objective feature of events" and "be wary about drawing too many conclusions from agents' subjective judgements about luck" (2014, 604).<sup>11</sup>

Pritchard's objective approach contradicts condition (i) of Luck. With this response, Pritchard has dropped the requirement that an event be *subjectively significant* to a subject in order for this event to be lucky; he seems to be thinking that the modal weakness of an event is both necessary and sufficient for an event to be lucky. However, this is clearly mistaken: something is lucky only if it is lucky from that person's subjective point of view; that is why more often than not something is lucky only if it is significant enough *for someone* to be surprised it took place. If that were not the case, then we would have to consider highly unlikely but trivial events, such as a particular drop of rain falling in a particular flower in the middle of the uninhabited jungle, as lucky. Those events obtain in the actual world but not in most (or all) of the closest possible worlds. So, Pritchard's objective view faces a dilemma: it *either* gives up condition (i) in order to avoid Lackey's counter-example and has to consider unlikely but trivial events as lucky, *or* it retains that condition and is counter-exemplified by Lackey's case. We will have to look somewhere else for a proper account of luck.<sup>12</sup>

<sup>10</sup> Cf. Pritchard 2014, 611.

<sup>11</sup> Cf. Pritchard 2014, 604.

<sup>12</sup> There are other problems with Pritchard's more recent version of Generic Luck. In the same paper, he says that one does not know her ticket is a loser (even if it is) on the basis of statistical evidence because one's belief is true by luck. This approach to the case is surprising because one would have thought that one's belief that one's ticket is a loser is modally robust, and thus safe, in those circumstances. The reason for that should be clear: the probability that one's ticket is a winner is very small, and if the probability that E will obtain is very small, then possible worlds in which E obtains are not close to the actual world. Probability is a guide to possibility: given that one's belief that be clear, the probability that one's ticket is a winner is

E. J. Coffman (2007, 396) has presented a definition of luck he hopes will undergird Epistemic Luck.

(Luck\*) S is lucky with respect to E at  $t$  iff (i) S is sentient at  $t$ ; (ii) E has some objective evaluative status for S at  $t$ ; (iii) there was just before  $t$  a large chance that no event sufficiently similar and equal in significance to E would occur at  $t$ ; and, (iv) E lies beyond S's direct control at  $t$ .

Condition (i) excludes from the domain of luck inanimate objects like trees and rocks. Thus, in reply to the suggestion that we sometimes speak truly when we use sentences such as, "It was lucky for your family portrait to have survived the house fire" or "It was lucky for that rock to have survived water erosion," Coffman argues that these sentences in fact express, respectively, a true proposition about the relation between a sentient being and a nonsentient object and a proposition about the extremely low probability of that event taken place. So, according to this translation schema, if I use "It was lucky for your family portrait to have survived the house fire" in a context C, I express, in C, the proposition that you are lucky vis-à-vis the fact that the portrait survived the fire; whereas, if I use "It was lucky for that rock to have survived water erosion" in C, I thereby express the proposition that the rock's surviving the water erosion was highly unlikely.

One worry about the claim that luck applies only to sentient beings is that it excludes from the realm of luck entities like groups or organizations. We sometimes speak truly when we utter sentences like "It was unlucky for that criminal organization that the body they dumped into the East River floated" or "It was lucky for FC Barcelona that two of the best defense players from the Manchester United scored goals against their own team." One can also imagine the following situation. Suppose ACME Corporation is going bankrupt. The board members meet and they all agree on a desperate measure to try to save the company: they will buy a lottery ticket from the state lottery. The lottery jackpot is five hundred million dollars—enough money to keep ACME afloat for at least another year. As it turns out, ACME's ticket is the winner. I think it is clear that it is lucky for ACME that it won the lottery. This is true even though no (particular) sentient being is lucky to have won the lottery.

very small, and if the probability that E will obtain is very small, possible worlds in which E obtains are not close to the actual world. Probability is a guide to possibility: given that one's belief that one's ticket is a loser is highly probable, it follows that all close possible worlds are ones in which one's ticket also loses, making one's belief in the actual world NOT lucky. Surprisingly enough Pritchard (2014, 596) seems to deny the almost axiomatic claim that probabilities distribute over possibilities when he argues for his account of the lottery belief by saying "an event can be modally close even when probabilistically unlikely." If the price to pay for one's account of the lottery case is to sever what could be rightfully called the default view of the connection between probability and possibility, I, for one, will not be buying.

Coffman might want to reply to this kind of worry by saying that the group or organization is only *derivatively lucky* in the sense that the sentient beings that make up the group are lucky and that the group is lucky *in virtue of* being made up by those lucky individuals. That is a possible reply to this worry, but I am not sure what its merits really are. One problem with it is it entails that, by changing the individuals making up the organization, one will end up with a different organization. But that is implausible. Pepsi Corporation is the same company today as it was when it was created, even though all the founding members have died.<sup>13</sup>

Condition (ii) in Luck\* says that an event E needs to have “some objective evaluative status for S at  $t'$ ” in order for S to be lucky with respect to E at  $t$ .<sup>14</sup> This condition gets support from cases such as lottery wins. Winning the lottery objectively improves one’s life in paradigmatic cases. A variation of that case can be turned into a counterexample to this condition on luck. Condition (ii) entails that S cannot be lucky with respect to E if S’s wellbeing is neither improved nor worsened by E. Unfortunately, one can very easily imagine cases in which the obtaining of E neither improves nor worsens S’s wellbeing, but S is lucky that E obtains. Suppose Liz’s wealth amounts to more than fifty billion dollars. One day she buys a lottery ticket for fifty cents in a fair and large lottery, because she pities the person selling her the ticket (maybe the person told Liz he gets a small fraction of the fifty cents for every ticket he sells). Suppose further that the lottery’s prize is only *fifty-one cents*. Now, winning the main prize in this lottery is not important to Liz—she is, after all, a multi-billionaire; she bought the ticket only because she wanted to help the person selling it, and she stands to gain only one cent if she wins. It does not seem to follow from any of this, however, that Liz is not lucky to have won the lottery—she beat the odds! But this is what condition (ii) would have us say, because, by assumption, winning the lottery does not improve or worsen Liz’s wellbeing. The intuition seems to be that Liz is lucky because she beat the odds that were stacked against her, regardless of whether

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<sup>13</sup> He might also want to insist that corporations and other institutions are not only constituted by sentient beings but are themselves sentient beings. I will not be pursuing this possibility here. Note also that I am *not* taking issue with the claim that groups have mental states. On the contrary, I do think groups can know all kinds of things. For example, physicists and biologists know all kinds of things about the universe and the living things in the known universe. The point against Coffman is just that, intuitively, groups are not sentient beings even though their individual members are. But, since Coffman thinks sentience is a necessary condition on something being lucky for something else, it follows that his account mistakenly rules out the possibility that groups are lucky.

<sup>14</sup> Pritchard (2005, 132) and Levy (2009, 490) also endorse something like (ii) as a necessary condition on luck.

winning has any “objective evaluative status” for her. Condition (ii) is not a necessary condition on luck.<sup>15</sup>

Condition (iii) says that S is lucky with respect to E at *t* only if there was just before *t* a large chance that no event sufficiently similar and equal in significance to E would occur at *t*. Since Coffman (2007, 6) takes this condition to be “roughly equivalent” to the safety-based account of luck I criticized above, my criticism of Luck carries over to Luck\*, and so I will not spend more time on it here.

Condition (iv) in Luck\* says that S is lucky with respect to E at *t* only if E lies beyond S’s direct control at *t*. According to Jennifer Lackey (2008,258), the following case is a counterexample to this claim:

The Demolition Worker Case: Ramona is a demolition worker about to press a button that will blow up an old abandoned warehouse. Unbeknownst to her, however, a mouse has chewed through the relevant wires in the construction office an hour earlier, severing the connection between the button and the explosives. But as Ramona is about to press the button, her coworker hangs his jacket on a nail in the precise location of the severed wires. As it happens, the hanger on which the jacket is hanging is made of metal, and it enables the electrical current to pass through the damaged wires just as Ramona presses the button and demolishes the warehouse.

The point of the example is that Ramona is lucky to have blown the warehouse even though she has control over whether to press the button. Lackey concludes that one can be lucky with respect to an event even if one has control over that event.

A natural response to the case is for one to say that, although the situation Ramona is in is riddled with luck, the luck is not where Lackey puts it. Consistently with the lack of control requirement on luck, one can argue that Ramona was lucky to be in control of the detonation, but, once in control of the detonation, she was not lucky to have exploded the warehouse. Ramona was *lucky to be in a position to cause the detonation*, but, once so positioned, causing the detonation

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<sup>15</sup> Someone may suggest that winning the lottery *does* improve Liz’s wellbeing in that she acquired a capacity she did not have before winning the lottery. According to the skeptic, she now has the capacity to, say, pay the ransom of her children in a situation where kidnapers demand all her billions *plus one cent*. I do not think this shows what the skeptic claims, however. Consider: the case goes as described in the main text, except for the fact that, on her way to deliver the one cent prize to Liz, the person carrying the money loses the penny and, knowing that Liz does not care for the money anyway, never bothers to give Liz any other penny. Now, should we say that Liz is not lucky to have won the lottery because she never got her one cent prize and thereby acquired the capacity to spend all her billions plus one cent? I do not think so. But this is exactly what we would expect if the skeptic’s suggestion was on the right track. So, I conclude that, contrary to skeptic’s suggestion, Liz’s wellbeing was not improved by her winning the lottery. Thanks to Peter Klein for discussion here.



was not a matter of luck for her. That is, even though bad luck intervened in the form of a mouse chewing the electrical wires, good luck also intervened in the form of Ramona's colleague hanging his jacket at the right place and allowing electrical current to flow again; Ramona went from having no control to having control over the detonation. The point is that at the moment when Ramona exploded the warehouse she was in control of the detonation.<sup>16</sup>

Lackey (2008, 259) anticipated this reaction to her case: since Ramona acquired control over the detonation in a lucky way, the warehouse blowing up when she pushed the button was also lucky.

Regardless of the merits of this response,<sup>17</sup> a different case shows that the lack of control is not a necessary condition on luck:

The (Almost) Rigged Lottery Case: Liz works for the FBI improving the protection of governmental computerized systems against cyberattacks. One day, while working as a freelancer for the New York Lottery, she sees herself in a situation where she could rig the lottery in her favor and pocket ten million dollars. It would take only a couple of lines of code. What is more, since she is great at what she does, she knows she could erase all digital footprints and make the lottery look legit. She also knows she could use a friend as the "winner," so that no suspicion would be raised. Further, she knows she could rig the lottery now, two weeks before the drawing, or up to five minutes before the drawing takes place. Liz never rigs the lottery, though; she is not a criminal. She does take note of these facts and takes steps towards improving the security of the Lottery's cyber security instead.

Liz has direct control over what ticket would be the winner, but she chooses not to exercise that control and rig the lottery in her favor.<sup>18</sup> Now for the kicker: suppose Liz had a ticket for the lottery and that it is the winner. She did not rig the lottery, so she won fair and square. However, Liz is lucky that she won the lottery even though she had control over its outcome. Thus, the lack of direct control is not a necessary condition on luck.

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<sup>16</sup> Cf. Coffman 2009, 502.

<sup>17</sup> See Coffman 2009, 503, for his reasons to be dissatisfied with Lackey's example.

<sup>18</sup> It could be argued that Liz did not in fact have direct control over the lottery, because she did not take the necessary steps to rig it. She could have rigged it, but, since she did not, she did not have direct control over the outcome. I think this reply presupposes an excessively narrow account of direct control. If true, it would entail that anyone who is in a position to  $\phi$  (i.e., anyone who knows all the individually necessary and collectively sufficient steps to  $\phi$ -ing and is so situated that, were she to carry out those steps, nothing would prevent her from  $\phi$ -ing) but chooses not to  $\phi$  fails to have direct control over  $\phi$ -ing. This is an absurd result. I do have direct control over whether I type an "a" between "(" and ")" right now, but I chose not to exercise that control. The fact that I decided not to add that letter between the parentheses does not show that I do not have direct control over typing it there.

Something Coffman (2009, 504) says in reply to a similar case suggests the following rejoinder to this case: Liz was lucky to have won the lottery *fairly*; that is a different event from Liz's winning the lottery (full stop). She was free to rig the lottery and make herself the winner, but she was not free to do anything that would have resulted in a legitimate win. Once we distinguish between Liz's *fair* win and her win (full stop), we see that she did not have control over whether she would win *fairly* or not; she only had control over whether she would win (full stop). Therefore, we can uphold the lack of control requirement on luck, for Liz was lucky to have won the lottery *fairly*, but not lucky to have won the lottery (full stop).

This is a mistaken reply to the case, and it does not establish that lack of control is a necessary condition for luck. First of all, notice that I could have described the case in a different way, a way that entails that Liz was lucky even though she did have control over the outcome of the lottery. Liz did not merely have control over whether she would win (full stop), she had control over *whether she would win fairly*. When she decided not to rig the lottery, she made it possible for her to win the lottery fairly; she could not have won the lottery fairly if she had decided to rig the lottery. This is not to say, of course, that Liz has direct control over her fair *win* (which is due to luck); rather, she has control over whether she wins the lottery without breaking any laws, *if she wins at all*. So, Coffman cannot say that Liz did not have any measure of control over her fair win. In the usual case, the lottery winner has no control whatsoever over his or her win. Normally there is nothing an agent can do to influence the result of a state run lottery. But, the case I am discussing is not the usual case. Here, there is something Liz can do to influence the result. Once she finds herself in a position to rig the lottery in her favor, and to do so without anyone ever knowing, she is in a position to decide not only who wins, but also whether the win will be fair or unfair.

Compare (Almost) Rigged Lottery Case with the following case: my religion does not allow me to take drug A, but if I do not take drug A I have 1% chance of surviving. Suppose my doctor leaves me alone in a room with many flasks of drug A, and I know I could take the right dosage of the drug, cure myself from the disease threatening to kill me, and that no one would ever know I took it. Now, if I do not take the drug and survive the disease, I am lucky to have survived, not lucky to have survived "fairly," where "surviving fairly" means "surviving without breaking the rules of my religion." As in (Almost) Rigged Lottery Case, I also have control not only over whether I survive (full stop), but over whether I survive without breaking the rules of my religion. By choosing not to take the drug, I have also chosen that, *if I survive*, I will survive without breaking the rules of my religion. This does not mean that I have control over whether I will survive, but it does show that I have control over whether I survive without breaking the rules of my religion, *if I survive at all*. The upshot is

that Coffman's rejoinder in defense of the lack of control condition fails, and we can conclude that this is not a necessary condition on luck.

The general moral is that Luck\* does not model luck properly and will be of no help to the anti-luck epistemologist.

## 2. LUCK, BUT NO ANTI-LUCK EPISTEMOLOGY

In spite of what we said above, we must recognize, however, that something *like* the chance condition on Luck\* is a necessary condition for luck. There seems to be a sense in which an event being lucky depends in part on that event being improbable, unusual, or *chancy*. Can we appeal to anything besides counterfactual weakness to explain the connection between luck and chanciness? Yes. Besides not having control over her ticket being the winner, someone who plays the lottery does not have the right to expect her ticket to be the winner. S, at  $t$ , has the right to expect event E to hold at a later time  $t_n$  only if S is in a position to know at  $t$  that E will hold at  $t_n$ .<sup>19</sup> So, once Liz in (Almost) Rigged Lottery Case decided not to interfere with the lottery, she was not in a position to know that her ticket would be the winner and, thus, did not have the right to expect it to win. The way in which chance matters for luck, then, is more subjective than the requirement of counterfactual weakness suggests. Counterfactual weakness concerns what is objectively likely, when, in fact, what is needed is a condition telling us what the subject could rationally expect, given what she knows. This shift allows us to explain why Vincent in the Buried Treasure Case is lucky to have found the treasure. Vincent was lucky to have found the treasure, because, given what he knew, it was not rational for him to expect to find any treasure.

Roy Sorensen has argued that luck judgments are implicitly of the form "Given  $q$ , S was lucky that  $p$ " (1998, 187). The " $q$ " in "Given  $q$ " is something S knows. Hence, I can say that getting a flat tire on my way to catch a flight is bad luck *given that I know that I am driving a brand new car*, but that the same event amounts to good luck given that I know both that I am driving a brand new car *and that my flight will crash* (187–88). In this case, then, to say that "It will be lucky that I got a flat" is to say that things will turn out better than I now may reasonably expect (188). I can state this epistemic condition on luck in the following way:

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<sup>19</sup> The notion of being in a position to know is here being used in a way that excludes having (on balance) misleading evidence for believing that E will hold. My interpretation of this notion is in line with Williamson 2000; according to which, if one is in a position to know that  $p$  then there is nothing in "one's way," preventing one from knowing that  $p$  (except perhaps the fact that one does not yet believe that  $p$ ). In this sense, one cannot have (on balance) misleading evidence to believe that E will hold and be in a position to know that E will hold, for having (on balance) misleading evidence for believing that E will hold is something in one's way to knowing that E will hold.

(Chance) S is lucky with respect to E at  $t$  only if S is not in a position to know at  $t$  that E will hold at time  $t_n$  ( $t_n > t$ ).

Chance specifies a *necessary* condition on some event E being lucky for S. If one took Chance to specify a *sufficient* condition for E to be lucky for S, then one would have to say that any future event one is not *now* in a position to know if it will hold is lucky for one—clearly the wrong result.<sup>20</sup> I also need to say something about the notion of “being in a position to know.” Here is what I mean by this expression: I am in a position to know that  $p$  if and only if I would know that  $p$  if I were to believe that  $p$  on the basis of my total evidence. Consequently, according to Chance, being lucky amounts to a kind of ignorance. I am lucky to have won a fair and large lottery for which I bought only one ticket, because I was not in a position to know I would win before my number was drawn. I also could not have reasonably expected to win before I learned the result. Since one’s evidence before one learned that one’s ticket lost did not eliminate the possibility that one’s ticket would win, Chance says that losing the lottery was bad luck for one, for one is not in a position to know one’s ticket is a loser at the time when one buys it. I think this is exactly how things should be. After all, one’s ticket was as likely to win as any other ticket in the lottery. True, that one should pick a losing ticket was overwhelmingly likely, given that the probability of winning is, say 1 in 1,000,000. Still, the epistemological consensus seems to be that one is not in a position to know one’s ticket is a loser, and, to the extent that Chance is correct, it is to some degree unlucky that one did not win the lottery.

This highlights something that should have been obvious: that luck comes in degrees. According to Chance, the degree to which E is lucky for one at  $t$  is inversely proportional to how likely it is, on one’s total evidence, that E will obtain at a later time  $t_n$ —that is, the more likely it is, given one’s total evidence, that E will obtain, the less lucky it is to one that it obtains. So, although it is the case that neither S nor S\* are in a position to know that E will obtain, it might still be the case that when E does obtain, its obtaining is more lucky for S than it is for S\*. The upshot is that in the case in which one’s single ticket loses a lottery with one million tickets, although it is bad luck for one that one’s ticket lost, it is significantly less bad luck than if one’s ticket had lost a lottery with, say, four tickets.

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<sup>20</sup> But if Chance specifies only a necessary condition on luck, what other conditions are necessary for sufficiency? That is an important question, but one that I do not have the space to try to answer here. Nor do I need to answer it here in order to achieve my main goal—to show that the notion of luck does not play the epistemic role the anti-luck epistemologist thinks it does. Chance is a big enough of a wrench into the anti-luck epistemologist’s plans. I thank a referee for *The Southern Journal of Philosophy* for prompting me to elaborate on this point.

Similarly, I am lucky that the meteorite did not hit my house, because before I saw it hit someone else's house I was not in a position to know that it would not mine. I was lucky to have gotten the grant because the competition was fierce, and, therefore, I was not in a position to know I had gotten it before the official result was in and could not have reasonably expected to win it. What is more, if one were asked, right before the relevant event happened, whether it would hold or not, one would not be in a position to knowledgeably answer that question given the evidence one had available at that time. This explains why it seems appropriate for the subject in any of those situations to reply "I don't know" to the question "Will E hold?"

Also, remember that we are taking statements of the form

S is lucky that E

to be elliptical for something like

Given  $k$ , S is lucky that E occurred,

and in which " $k$ " refers to a contextually relevant body of knowledge that does not include the proposition that E has occurred. The idea is that if E is lucky, then one's total knowledge before one learned that E occurred did not exclude the possibility that  $\neg E$ . Steglich-Petersen (2010) has argued for a similar view, arguing that luck involves knowledge and that this throws a wrench in the anti-luck epistemologist's program. The argument in this paper goes beyond his, however, as it rests solely on our common sense understanding of luck and its relation to the limited amount of knowledge of the future we may derive from our (also limited) total evidence. Steglich-Petersen's view, on the other hand, rests on a controversial aspect of Timothy Williamson's account of assertion: the distinction between what is *reasonable* for one to assert and what is *correct* for one to assert. A full treatment of the pitfalls of this distinction is well beyond the scope of the present paper, but suffice it to say that some authors have gone as far as to call the distinction "spurious" (Lackey 2007).<sup>21</sup>

Given this interpretation, if I say, today, that Liz is lucky she won the lottery, and everyone in our context knows Liz won the lottery ten years ago, my statement was elliptical for a statement whose " $k$ " refers not to the body of knowledge that we share in this context of utterance, but to the body of knowledge that we (including Liz) shared *before* we learned Liz's ticket was the winner. So, when I say, today, that Liz is lucky she won the lottery, I assert something that is made true by the state of our knowledge at a time  $t$

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<sup>21</sup> See also Weiner 2006 for objections to Williamson's distinction.

before any of us (including Liz) learned she had won; at  $t$  our knowledge was such that it did not eliminate the possibility that she had lost the lottery.<sup>22</sup>

This account of what seems appropriate for the lucky subject to say fits nicely with the knowledge norm of assertion<sup>23</sup>: the reason why it is appropriate for the lucky subject to assert that he does not know that she will win the lottery in response to the question “Will you win the lottery?” is because, given her evidence, not only does she fail to know that she will win, but she can easily know that she does not know whether she will win, since she knows the lottery odds and that the lottery is fair.

Chance can also make sense of the common feeling of surprise that usually accompanies situations in which one is the subject of good or bad luck.<sup>24</sup> Winners of fair lotteries are usually surprised when they learn that they won the lottery. Normally, one *is* happily surprised when a car passenger miraculously survives a head on collision with a truck. And so on and so forth. In all these cases, the surprised subject (be they the lucky person or some observer who is in a similar epistemic position) is not in a position to know that the relevant event will hold. This creates a justified expectation in the lucky subject that it is likely that the event will not obtain—for all she knows, that is how things will turn out. But, then, when the event *does* obtain, this expectation is frustrated, and the natural reaction is for one to be surprised it obtained.

So, Chance is a plausible candidate for the role of luck.

If we take seriously the anti-luck epistemologist’s suggestion that epistemic luck is just the special case of luck, then we may propose the following principle:

(Epistemic Luck\*) S is lucky to believe truly that  $p$  at  $t$  only if S is not in a position to know at  $t$  that  $p$  is true at a later time  $t_1$ .

Unlike the safety-based version of epistemic luck, this principle does not make reference to the proposition S believes as being contingent or necessary and, thus, has no difficulty dealing with either kind of content. No codicil mentioning the method in which the belief is acquired is needed. Remember also what I said above about S being a position to know that  $p$ : if S is in a

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<sup>22</sup> This applies also in a case in which Claire the clairvoyant foresees her lottery win. In that case, when Claire says to herself “I am lucky to win the lottery,” her statement is elliptical for “Given  $k$ , I am lucky to win the lottery” where “ $k$ ” refers to the body of knowledge Claire had before she foresaw her win.

<sup>23</sup> See Williamson 2000.

<sup>24</sup> I say that the feeling of surprise usually accompanies cases of good/bad luck because in cases in which the attributor is not in a position to know that E will hold but nonetheless is sure it will hold, E might still be lucky for S, but the attributor will most likely not form the expectation that E will not obtain. In such scenarios, S will not be surprised that E obtains, but S is still lucky that E obtains. Thanks to a referee for *The Southern Journal of Philosophy* for this point.

position to know that  $p$ , then  $S$  has the evidence she needs to come to know that  $p$ , and were  $S$  to believe that  $p$  on the basis of that evidence, nothing would prevent her from knowing that  $p$ . However, Epistemic Luck\*, *per se*, is compatible with different explanations of why the subject in a particular situation is not in a position to know.

Now, apply Epistemic Luck\* to Gettier's coin case—a paradigmatic example of epistemic luck. Luck intervenes in that case, because Smith is not in a position to know that the person who will get the job has ten coins in his pocket. One might worry that this gets things backwards. "We want to appeal to the notion of luck to explain why we fail to know in Gettier cases, but now you are appealing to the lack of knowledge in Gettier situations to explain why there is luck in Gettier cases."

There are at least two reasons why inverting the order of explanation in this way should not worry us. First, we always knew Gettierized agents fail to know because their epistemic position is, in some sense, *not good enough*. Some epistemologists called "luck" the factor weakening their epistemic position. The problem is that, as I argued above, luck is itself partially an epistemic phenomenon. Nonepistemic analyses of luck do not account for all the relevant phenomena. Since luck is partially an epistemic phenomenon, we will have to look someplace else for a full characterization of the epistemic position of Gettiered agents.

This brings us to the second reason why inverting the order of explanation is not worrisome. The result that luck is partially an epistemic notion is a problem only for views that take the absence of (epistemic) luck to be a necessary condition for knowledge. I make no such claim here, however. This is bad news for the kind of anti-luck epistemology we are considering, for it says that a necessary condition for knowledge is that it eliminates epistemic luck. In this sense, to the extent that one is inclined to look at anti-luck epistemology for an analysis of knowledge, one should take the discussion in this paper as an indirect argument that knowledge cannot receive a noncircular analysis. So much the worse for anti-luck epistemology's analysis of knowledge.

Finally, philosophers who favor a knowledge-first approach to epistemology usually think that the concept of knowledge is simple, or unanalyzable. They also think other epistemological concepts are to be explained in terms of this simple concept of knowledge.<sup>25</sup> Those philosophers may take the discussion in the previous section which shows the failure of two of the most prominent anti-luck analyses of knowledge as evidence for their inductive argument that knowledge is not analyzable. The view of epistemic luck

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<sup>25</sup> Cf. Williamson 2011.

defended in this section accounts for epistemic luck in terms of knowledge and therefore adds an important epistemological concept to the list of concepts that, according to the knowledge-firsters, have been successfully analyzed in terms of knowledge rather than vice versa.

Besides the issue of the possibility, or not, of a noncircular analysis of “knowledge” that makes use of an anti-luck requirement, the discussion above also raises the specter of a more skeptical view about the place of luck in theoretical investigations in general, not only in epistemology. The idea is that although the talk of events being “lucky” makes good sense in nontheoretical contexts, theoretical scrutiny of the sort I pursue here shows that the use we make of this predicate is strained by philosophical analysis. As a result, the skeptic might suggest that it is unhelpful to try to use the concept of luck to do philosophical work, for this concept cannot withstand such a strain and is, therefore, better left out of philosophical theory-building.

Although I agree that the case I presented against the anti-luck strategy in epistemology may partially motivate the skeptical view in question, I do not believe skepticism is unavoidable. As I said, as long as one is not trying to give a noncircular analysis of knowledge using an anti-luck condition, the fact that knowledge is involved in epistemic and nonepistemic luck should not bother us (e.g., one might be a knowledge-first epistemologist). Given what we saw above, the more general moral of the paper is that either one is okay with the circularity involved in the notion of epistemic luck, or one has a reason to be skeptical of the use philosophers make of luck in theory building.<sup>26</sup>

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