

Against Epistemic Accounts of Luck

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ABSTRACT

Epistemic accounts of luck define luck's chanciness condition relative to a subject's epistemic position. This could be put in terms of a subject's *evidence* or *knowledge* about whether the event will occur. I argue that both versions of the epistemic account fail. In section 1, I give two types of counterexamples to the evidence-based approach. In section 2, I argue—contrary to the knowledge-based view—that an event can be a matter of good or bad luck for a subject even if she knows that it will occur. In section 3, I argue that epistemic accounts cannot explain some instances of constitutive luck. Because of these problems, luck's chanciness condition cannot be adequately defined epistemically.

Luck is typically defined in terms of two necessary and jointly significant conditions: significance and chance. One way of capturing the sense in which a lucky event is chancy is via an epistemic condition. More precisely, epistemic accounts of luck define luck's chanciness condition relative to a subject's epistemic position. This could be put in terms of a subject's evidence (for example, Stoutenburg 2015, 2019, 2020) or knowledge (for example, Steglich-Petersen 2010, 2020) about whether the event will occur.

Epistemic accounts are *prime facie* plausible. For example, why are you lucky to win a significant, fair lottery in which millions of people enter? According to epistemic accounts, this significant event is a matter of luck for you because given your evidence or knowledge about the lottery it seems incredibly unlikely that you would win. Another advantage of epistemic accounts is that they can easily handle several cases that are putative counterexamples to modal, control, and objective-probability-based theories (Steglich-Petersen 2010).

Despite these advantages, I will argue that luck's chanciness condition cannot be adequately defined in epistemic terms. This result is important as epistemic accounts have not

received enough critical attention¹, especially compared to how much has been written in response to control and modal-based theories.

1. Evidence-based Epistemic Accounts Fail

One way of defining luck's chanciness condition is in terms of an *Epistemic Probability Condition*:

(Epistemic Probability Condition): Event E is improbable to some degree for subject S if and only if immediately prior to E's occurring, S's evidence did not guarantee that E would occur. (Stoutenburg 2019: 5105)

The basic idea behind the *Epistemic Probability Condition* is that 'how lucky an event is depends directly on *how probable* the event is *conditional on a subject's evidence*', and by 'guarantee that E would occur', it is meant that the event has 'an epistemic probability of 1 on one's evidence' (Stoutenburg 2019: 5104, emphasis in original, Stoutenburg 2015: 329).

Additionally, an evidence-based account allows for degrees of luck based on how significant and epistemically improbable the relevant event is:

Holding fixed the significance of some event, if the event has an epistemic probability of 1, then the event is not at all lucky, to any degree whatsoever; if the event has an epistemic probability of .95, then it was a little bit lucky; if the event has an epistemic probability of .1, then it was very lucky; and so on. (Stoutenburg 2015: 329)

A lot here depends on what counts as evidence. One way of thinking about evidence is in terms of 'facts accessible to the subject upon reflection, including the subject's experiences, knowledge, and justified beliefs' (Stoutenburg 2019: 5106).

Unfortunately, significance and epistemic improbability are not jointly sufficient for an event's being a matter of luck as one can construct counterexamples involving non-lucky events

¹ Hales (2016, 2020) gives several putative counterexamples to probabilistic accounts of luck. However, the views that Hales attacks (Rescher 1995, McKinnon 2013) are not epistemic, and Hales's counterexamples are stymied by Stoutenburg (2019, 2020) and Steglich-Petersen (2020). One exception is Kvanvig (2021) who offers a skill-based objection to the epistemic account.

that satisfy both these conditions. To construct such a counterexample, simply take any significant event whose occurrence is non-chancy because it is necessarily true or the result of a controlled process but make it such that the relevant subject's epistemic evidence for the occurrence of this event is low. For example, suppose that there is a lottery in which a million people participate. Furthermore, Roger has bought a ticket and believes that he has a one-in-a-million chance of winning the lottery. However, Roger's friends have rigged the lottery in his favor such that he is certain to win. It is true that Roger will regard himself as quite lucky when he wins. But events that are rigged (or events that are under an agent's total control) are typically thought of as non-lucky. To be clear, Roger may be lucky that he has friends who are willing to rig a lottery in his favor, and his win is still significant for him. But, intuitively, that 'Roger won the lottery' is either *non-lucky* or involves *very little luck* depending on how skilled his friends are at rigging such an event.

Perhaps the evidence-based theorist will deny this intuition and reply that Roger really is lucky to win the lottery. For example, in discussing cases of odd luck where a subject's epistemic probability assignments are out of step with our own, Stoutenburg notes that 'it is possible for a proposition to be justified to some degree for some individual while that same proposition has a different probability for some other person' (2015: 331). Furthermore, in odd cases in which a subject has a degree of belief that is different from what is widely accepted, that subject's evidence must still be conducive to truth and her beliefs must still be justified.² The evidence-based theorist

² This is an improvement over subjectivist accounts. Suppose a million people participate in a fair lottery with one winner. Of these million contestants, some will believe that they have a one-in-a-million chance of winning the lottery, some no chance, others .1, etc. Suppose Irene is certain that she will win the lottery. She has a credence of 1. However, Irene has no evidence that her odds are better than anyone else. Her certainty concerning the lottery is unjustified. Suppose that Irene does happen to win the lottery. Irene will not judge that her win was lucky. She was certain that it would occur. She believes that this event is non-chancy or perhaps a matter of fate. But while it is true that Irene will not regard herself as lucky to win the lottery, this does not mean—contrary to the subjectivist—that it is not a matter of luck for Irene that she won. Winning a fair lottery is, after all, a

would thus respond that in the above example Roger's evidence does justify his belief that he is incredibly lucky to win the lottery, and it is only from our own perspective (that is, when we know that the lottery was rigged) that Roger's win is either non-lucky or involves very little luck.

However, the point of this example is not that people cannot have different, justified beliefs about the probability of an event. I agree that Roger should believe that he is lucky. The point is that there is a difference between being justified in believing that something is true and with that belief being true and that Roger's beliefs about how lucky he is cannot be correct because it is not a matter of chance that he won the lottery. One is almost certain to win a lottery that has already been rigged in one's favor. The fact that an evidence-based account holds that one can be very lucky to win an event that is rigged in one's favor shows that epistemic probability is the wrong kind of probability for luck.

An evidence-based account is also subject to counterexamples in which a significant event is lucky for a subject even though she has no evidence (or hardly any evidence) regarding its occurrence. Suppose a serial killer picks me out as his next potential victim and that this serial killer uses an indeterministic gun to murder his victims. This odd gun successfully shoots 99.99 percent of the time, but whether it fires is genuinely chancy. Furthermore, this serial killer will only attempt to shoot his targets once, and I have no evidence that I am his next target. Suppose that this serial killer attempts to murder me, but his gun does not fire. Intuitively, I am very lucky to survive. However, according to an evidence-based account, my survival involves no to very little luck since given my evidence (or lack thereof) the odds of my being shot are near zero. It is

paradigmatically lucky event, and an evidence-based view can explain why Irene is very lucky, that is, based on her evidence it was extremely improbable that she would win this significant lottery.

a counterintuitive result that a victim is not lucky to survive such an attack if she never becomes aware of having been a target.

The evidence-based theorist would likely respond by pointing out that my not being shot is not epistemically guaranteed so this event is still chancy. I worry that due to our fallible nature no future event is ever guaranteed, which would mean that any event regardless of whether it is lucky or non-lucky passes the *Epistemic Probability Condition*. But this would mean that every significant event is a matter of luck. While luck is a more common phenomenon than we would like to admit, this seems absurd. Furthermore, evidence-based accounts get the *degree of luck* in this case wrong. Just before the serial killer pulled the trigger there was a 99.99 percent chance that I would have been shot regardless of one's epistemic perspective.

The evidence-based theorist would also respond that the proposition 'I am lucky that I was not shot by the serial killer' is ambiguous. For example, Stoutenburg holds that luck attributions can only be 'made and evaluated from an epistemic perspective' (2015: 332). So, from my own perspective in which I am ignorant of the serial killer and his special gun, I am not very lucky to survive, whereas from the serial killer's perspective I would be very lucky not to be shot. The problem with this response is the same as in the Roger case. The evidence-based view makes it impossible for a subject to be mistaken about how chancy an event is if the subject is rationally weighing his or her evidence. Unless one is already an epistemic theorist, I see no reason why this remarkable claim should be accepted. People can be wrong about how chancy an event is, especially if—as in the above counterexamples—they are ignorant or have misleading evidence.

2. Knowledge-based Epistemic Accounts Fail

The other way of epistemically defining luck's chanciness condition is via a knowledge condition:

The knowledge condition: S is lucky with respect to E at t only if, just before t, S was not in a position to know that E would occur at t. (Steglich-Petersen 2020: 2388)

The idea behind the knowledge condition is that ‘If an event is to count as lucky *at all*, the lucky agent cannot have been in a position to know that it would occur’ (Steglich-Petersen 2010: 369, emphasis in original). This condition is only necessary for an event’s being lucky. It is unclear whether knowledge-based theorists view the conjunction of a significance condition and the knowledge condition as sufficient for an event’s being a matter of luck or if additional conditions are necessary (Steglich-Petersen 2010: 362).

Unlike the evidence-based view, the knowledge-based account is not probabilistic, but it is gradable:

[The knowledge condition should be read as] a ‘minimal’ condition on luck, which may be satisfied to a greater or lesser extent, depending on how good the lucky agent’s epistemic situation is in regard to the lucky event. ... if the agent were *almost* in a position to know that it would occur, we might be inclined to say that although the event was lucky in the weak sense of satisfying the minimal requirement, it was not *very* lucky. On the other hand, if the agent were epistemically very far from knowing that the lucky event would occur, the event would be lucky to a greater degree. (Steglich-Petersen 2010: 369, emphasis in original)

Obviously, a lot here depends on one’s theory of knowledge and what it means to be ‘almost in a position to know’ versus ‘very far from knowing’.

Since knowledge-based theorists do not offer an account of what luck is in terms of necessary and jointly sufficient conditions, our approach will have to be slightly different.³ In this section, I will argue that there are counterexamples to the knowledge condition in which S is lucky regarding E at t even though, just before t, S knows that E will occur.

³ If the knowledge condition and a significance condition are supposed to be jointly sufficient for an event’s being lucky, then the counterexamples from section 1 apply to the knowledge-based account. My criticism of the knowledge-based view in this section could also be made to apply to the evidence-based approach.

Consider the following case *Olga*:

Olga is one of a dozen domestic servants to Mr. Drake. One of Olga's many duties is to clean up Mr. Drake's notoriously messy study. One day while organizing Mr. Drake's desk, Olga notices that Mr. Drake has just made a new will. Glancing at the will, Olga discovers that Mr. Drake has disinherited his relatives and left his fortune to the servants of the household. Olga is shocked by her discovery; Mr. Drake's decision seems to have come out of nowhere. Furthermore, Mr. Drake is an old man who is dying from an incurable disease. Later that day, Mr. Drake falls into a coma. A doctor is sent for, and it is clear to everyone that Mr. Drake does not have long to live. Olga then forms the justified belief that she will inherit a tidy sum. A day later Olga's belief turns out to be true. Mr. Drake passes away, and the servants of the household inherit his fortune.

Olga's belief that she will inherit a tidy sum is justified and true. This is probably not enough for knowledge, but we can stipulate details of the case such that her belief is almost certain to be true. For example, suppose that Olga's society always upholds the details of a last will and testament and that Olga knows that Mr. Drake never had a chance to make a new will before falling into a coma. Given these details, Olga is in a position to know (or come very close to knowing) that she will inherit a tidy sum before this event occurs. Thus, according to the knowledge-based account, the fact that Olga inherits a tidy sum is either non-chancy or nearly certain. Thus, Olga's inheritance is either *non-lucky* or *only slightly lucky*. This seems wrong. Intuitively, it is *very lucky* for Olga that she inherited the money. This is because this significant event is chancy. Had Mr. Drake gone into a coma before changing his will, which is possible given his state of health, then his relatives would have inherited the money instead of Olga. Furthermore, if Mr. Drake's decision was made on a whim, then he could have done otherwise and not left any money to Olga.

The knowledge-based theorist could respond that I have misidentified where the luck is in this case. Perhaps it is not a matter of luck that Olga inherited a tidy sum since she knew this would happen. Instead, it is Mr. Drake's changing of his will that is lucky since Olga had no idea that this significant event would occur.

The problem with this response is that Mr. Drake's changing of his will is significant for Olga only if Olga inherits the tidy sum. So, while the first event (the changing of the will) is what makes the second event (Olga's inheriting the money) chancy, the second event is what makes the first event significant. But since both significance and chanciness are necessary conditions, it is difficult to claim that only the first event is lucky. Instead, that Olga inherits a tidy sum is lucky because it is significant and a matter of chance since its primary cause is chancy.

Alternatively, perhaps the knowledge-based theorist could reply that what is lucky about the case is that Olga was employed in a household where the employer would (in the future) leave his fortune to his servants.⁴ If this is correct, then the knowledge-based account would survive this counterexample. This is because when Olga is hired, she does not know that this will eventually lead to her inheriting a large sum of money.

First, my response to the previous objection applies here as well. What is significant about the case is that Olga inherits the money. It thus seems odd to pick out other events that are only significant given that Olga inherits the money as being where the luck actually resides. Second, it does not follow from the fact that Olga is hired that she will eventually inherit the money. It seems incorrect then to locate this event as what makes Olga's inheritance a matter of chance. Third, there will always be some time in our past in which we do not know that a future event will occur. Infants, for example, have few (if any) propositional beliefs, and what happens to us as infants is relevant to our future choices.⁵ The point being that many events could pass the knowledge condition if we are willing to look far enough back in the past.

Lastly, the knowledge-based theorist could respond that Olga does not really know that she will inherit the money and so this event is lucky. After all, she could have died before the will was

⁴ I would like to thank an anonymous reviewer for this objection.

⁵ See Coffman (2007: 395-397), however, for some subtleties concerning this point and luck's significance condition.

read. This response suffers from two problems. First, the knowledge-based account gets the *degree of luck* in the Olga case wrong as even though Olga is close to knowing that she will inherit the money she is still quite lucky to do so. Second, if our standards for knowledge are this high, then every event will be a matter of luck, and the knowledge condition will thus be powerless to distinguish between lucky and non-lucky events.

3. Constitutive Luck on Epistemic Accounts

One last problem with all versions of the epistemic account is that they deny the existence of some forms of constitutive luck, that is, luck in ‘the kind of person you are ... [in] your inclinations, capacities, and temperament’ (Nagel 1993: 60). Consider a case in which a subject, S, is born with a genetic disease that is both subjectively and objectively bad for S. Here the relevant event, E, is that S has a genetic disease. The main concern with constitutive luck on an epistemic account is that the probabilities in question are always conditional on there being an S who either knows or has evidence regarding E. However, for some instances of constitutive luck, there is no body of evidence that is relevant to S’s having some property prior to S’s existing, and by the time S exists, E has already occurred and has a probability of 1. This would make such instances of constitutive luck non-lucky.

Although the above argument seems fatal to an evidence-based approach, perhaps the knowledge-based theorist could slightly amend her view to account for the existence of constitutive luck.⁶ Consider the following revised version of the knowledge condition:

Knowledge condition*: S is lucky with respect to E at t only if it is not the case that, just before t, S was in a position to know that E would occur at t.

⁶ I would like to thank an anonymous reviewer for this point.

This version of the knowledge-based view can make sense of cases of constitutive luck. Whereas the original version of the knowledge condition ran into the problem that S does not yet exist before E, this revised condition avoids issues concerning reference failures. This is because it is true that it is not the case that just before t, S was in a position to know that E where E is, again, that S has a genetic disease.

This new view suffers from, at least, two problems. First, it is *ad hoc*. It seems against the spirit of the epistemic account to view such cases in this way and not in terms of how close an actual subject is to knowing that E. Second, this new view would entail that all instances of constitutive luck are equally chancy. However, instances of constitutive luck are usually viewed as luckier if the trait in question is either unlikely to occur or is rarely instantiated.

Alternatively, an epistemic theorist could respond that cases of constitutive luck are better described as matters of fortune or fate.⁷ As Rescher puts it:

[A] person can be fortunate to have a good disposition or a talent for mathematics, but she cannot be *lucky* in these regards, because chance is not involved. ... One has to be there to be lucky. ... It is not as though there were some world-external, fertilization-preceding version of oneself who has the luck to draw a good [or bad] assignment (1995: 30-31, emphasis in original)

First, it is not clear that chance is not involved in cases of constitutive luck. Not all instances of constitutive luck involve essential properties, and whether a subject has a particular property can be modally fragile and/or vary within a relevant reference class. Second, many people (for example, Latus 2003, Levy 2011) would object that being born with a debilitating disease is terribly unlucky and that one's epistemic position regarding such cases is irrelevant. Lastly, epistemic accounts have the rather odd consequence that S's being born with a genetic disease—

⁷ Such a response is not open to Stoutenburg (2015: 324) who argues that 'luck and fortune are one and the same.'

while not a matter of bad luck for S—could still be unlucky for S’s parents or those who care about S.

4. Conclusion

My argument in this paper can be summarized as follows. First, if one favors an epistemic account of luck, then one will view luck’s chanciness condition in terms of either a subject’s evidence or knowledge that an event will occur. However, both evidence-based and knowledge-based approaches are subject to counterexamples. Furthermore, epistemic accounts have difficulty explaining some instances of constitutive luck. Because of these problems, we should not define luck’s chanciness condition in epistemic terms.⁸

References

Coffman, E. J. 2007. Thinking About Luck, *Synthese* 158/3: 385–398.

Hales, S. D. 2016. Why Every Theory of Luck is Wrong, *Noûs* 50/3: 490–508.

Hales, S. D. 2020. *The Myth of Luck Philosophy, Fate, and Fortune*. London, UK.: Bloomsbury Publishing Plc.

Kvanvig, J. 2021. Skill, Luck, and Epistemic Probability, *Acta Analytica* 37/1: 25-31

Latus, A. 2003. Constitutive Luck, *Metaphilosophy* 34/4: 460–75.

Levy, N. 2011. *Hard Luck how Luck Undermines Free Will and Moral Responsibility*. Oxford: Oxford University Press.

McKinnon, R. 2013. Getting Luck Properly Under Control, *Metaphilosophy* 44/4: 496–511.

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Nagel, T. 1993. Moral Luck, in *Moral Luck*, ed. D. Statman, Albany, NY.: State University of New York: 57-71.

Rescher, N. 1995. *Luck: The Brilliant Randomness of Everyday Life*. Pittsburgh, PA.: University of Pittsburgh Press.

Stoutenburg, G. 2015. The Epistemic Analysis of Luck, *Episteme* 12/3: 319–34.

Stoutenburg, G. 2019. In Defense of an Epistemic Probability Account of Luck, *Synthese* 196/12: 5099–5113.

Stoutenburg, G. 2020. Luck, Knowledge, and Epistemic Probability, *Logos & Episteme* 11/1: 97–109.

Steglich-Petersen, A. 2010. Luck as an Epistemic Notion, *Synthese* 176/3: 361–77.

Steglich-Petersen, A. 2020. Does Luck Exclude Knowledge or Certainty?, *Synthese* 197/6: 2387–2397.