WHY FALLIBILISTIC EVIDENCE IS INSUFFICIENT FOR PROPOSITIONAL KNOWLEDGE

Elliott R. CROZAT

ABSTRACT: In this article, I argue that fallibilistic justification is insufficient for propositional knowledge if veritic luck is involved. I provide a thought experiment to demonstrate that even very strong non-factive evidence is insufficient for knowledge if veritic luck is present. I then distinguish between precise justification (PJ), which I suggest is required for knowledge in cases of veritic luck, and loose justification (LJ), which is sufficient for practical cases in which beliefs are reasonable to hold even if they fall short of being items of knowledge. In addition, I provide a reason for holding that PJ is required for all items of propositional knowledge, and not only for cases of veritic luck. Lastly, I propose that Gettier-style cases pertain to an ambiguity between PJ and LJ.

KEYWORDS: justification, fallibilism, infallibilism, factivity, invariantism, contextualism

Introduction

There are conflicting intuitions about epistemic justification. On the one hand, consider the phrase: "It is safe to say that…" The person who utters this phrase might mean that he is certain about the informational content of his claim. He might say, "Assuming I've done the arithmetic correctly, it's safe to say that I can afford to lease this car." In this case, "safety" is synonymous with some kind of certainty.[1] The person claims to know that *p*; the justification for such knowledge is construed as sufficient for certainty.

On the other hand, many philosophers hold that justification can be fallibilistic.[2] I.e., one can be justified in believing a false proposition or formulating a luckily true belief such that the justification in these cases concerns propositional evidence that might be false or non-propositional evidence that might not be

[1] The certainty might be epistemic or it might be psychological, depending on what the person who uses the phrase means. In either case, the certainty is held on the basis of arithmetic.

[2] For example, Littlejohn (2019, 50) writes: "Most epistemologists would probably hold that the fallibilist thesis is correct."

veridical. For example, in Gettier's (1963) Case I, Smith is thought to be justified in believing the false proposition:

(3) Jones will get the job.

Smith's evidence is:

(1) The president of the company offering the job said that Jones will get the job, and

(2) The president's claim about Jones and the job is true.[3]

Gettier's case presupposes that Smith is justified in believing that (3), although the justification for (3) is fallible, since (2), though reasonable to believe, is false.

In Chisholm's sheep case, the person sees what looks like a sheep in the field, and based on this visual experience formulates the reasonable belief that *there is a sheep in the field*. However, the animal she sees is a sheepdog which is indistinguishable from a sheep at the distance from which she sees it. But luckily for her, there is a sheep in the field behind a hill, although she cannot see the sheep because the hill blocks her view. Hence, she has a justified, luckily true belief but lacks knowledge because her non-propositional evidence – namely, the visual experience of the sheepdog – is somehow inaccurate and because she is helped by luck.[4]

In this article, I will argue that fallibilistic justification is insufficient for propositional knowledge if veritic luck is involved. I will provide a thought experiment that demonstrates that even very strong probabilistic but fallible evidence is insufficient for knowledge if veritic luck is present. I will then distinguish between precise justification (PJ), which I suggest is required for knowledge in cases of veritic luck, and loose justification (LJ), which is sufficient for practical cases in which beliefs can be reasonable to hold even if they fall short of being items of knowledge. In addition, I will provide a reason for believing that PJ is required for all items of knowledge, and not merely for cases of veritic luck. Lastly, I will propose that Gettier-style cases pertain to an ambiguity between PJ and LJ. Given the desire for brevity, I do not have space to raise and answer objections, though I welcome them. I hope that the reader will find the points in this paper worthy of further discussion.

[3] (2) seems to be a tacit assumption in Gettier's story.

[4] For a brief discussion of the sheep case, see Roderick Chisholm (1989, 93).

Key Terms and Assumptions

By "veritic luck," epistemologists mean roughly the sort of epistemic happenstance involved when one forms a belief that happens to be true in the actual world but in other possible worlds very similar to ours is false because the pertinent facts in those worlds are otherwise. This "happening to be true" works for the alethic benefit of the one forming the belief, although the belief-former does not contribute to the happenstance and therefore deserves no epistemic credit for the truth of the belief. Not all epistemic luck is veritic luck. For instance, Detective Green might be lucky to discover evidence for his case, yet he uses that evidence skillfully to build his argument. This sort of *luck of evidential discovery* is epistemic but not veritic. By "sure" below, I mean that which objectively can be counted on as true. By "unsure," I mean that which objectively cannot be counted on as true because it might well have been otherwise.

It is a common assumption in epistemology that propositional knowledge is incompatible with veritic luck. This assumption is intuitive, though usually not supported by argument. Consider the following argument. (i) Propositional knowledge is factive. (ii) Whatever is factive is sure. Hence, (iii) propositional knowledge is sure. But (iv) beliefs in cases of veritic luck happen to be true. (v) Whatever happens to be true is unsure. Thus, (vi) beliefs in cases of veritic luck are unsure. It follows that (vii) propositional knowledge is sure and beliefs in cases of veritic luck are unsure. Now, (viii) for any two epistemic factors, if one is sure and the other unsure, then they are veritically incompatible with each other. Therefore, (ix) items of propositional knowledge and beliefs in cases of veritic luck are veritically incompatible with each other.

Consider the premises of this argument: (i), (ii), (iv), and (v) are uncontroversial. For (i), it is a matter of consensus and it seems intuitively evident that propositional knowledge is factive. For (ii), since whatever is factive is guaranteed to be true, one can count on its being true. For (iv), it is uncontroversial that in cases of veritic luck the true belief happens to be true; such is evident in Gettier-style cases. Concerning (v), if some proposition happens to be true, then it might well have been otherwise and thus cannot be counted on; for the subject, the truth of the proposition is a matter of happenstance and thus the subject is not warranted in counting on the truth of that proposition.

However, (viii) might need explication. If some proposition *r* is true but unsure, then the fact in virtue of which *r* is true might well have been otherwise and hence the truth-value of *r* might well have been false. S's belief that *r* is therefore epistemically open, and hence the negation of *r* is epistemically possible. But if some proposition *m* is true and sure, then *m* can be counted on and therefore S's belief

that *m* is epistemically settled for S, thereby making the negation of *m* epistemically impossible for S. Since an epistemically open belief is not an epistemically settled belief, such beliefs are veritically incompatible with each other; i.e., a belief cannot be both epistemically open and epistemically settled for S at the same time.

Thought Experiment

Suppose that there is a jar of exactly 10,000 jelly beans. 9,999 of them are completely and invariantly red. One is a color-shifter: it is completely blue under some lighting conditions and completely red under others. Smith is aware that the jar contains exactly 10,000 jelly beans, that 9,999 of them are completely and invariantly red, and that one is not.

Without looking, Smith reaches into the jar and secures exactly one bean: the color-shifter. This event is unlikely but possible. While the secured bean is in the jar, the lighting conditions make it blue. As Smith pulls the bean out of the jar and into the light, the bean shifts to red, although it would remain blue if Smith were to hold it under the light at a specific angle. With eyes closed, Smith says to himself "I believe that the bean I just pulled out of the jar is red."

Now, Smith's belief is true, since the bean is red, given the lighting conditions. And Smith's belief is reasonable, since its probability is .9999. It is hard to find an inductive degree of strength higher than this. Therefore, in some sense of 'justified,' Smith has a justified, true belief that the bean he pulled from the jar is red. However, his belief is luckily true. The bean is a color-shifter. While in the jar, it was blue. It is red at the time Smith formulates his true belief only because Smith happens to be holding it under the light in a specific way; were he to move his hand an inch to the left, the bean would revert to blue.

Given the veritic luck in this situation, and assuming that such luck is incompatible with knowledge, Smith does not *know* that the bean is red. This thought experiment indicates that in such cases, even a very high degree of fallible probabilistic evidence is insufficient for knowledge if veritic luck is present.

Precise Justification and Loose Justification

Nevertheless, it is quite plausible to hold that a probability of .9999 is sufficient to make a belief reasonable, even if that belief falls short of knowledge. It seems evident that Smith is in some sense justified in believing that the bean is red, even if he is not justified in claiming to *know* that the bean is red. Suppose that Smith is going on an outdoor walk this afternoon and the weather report includes a claim that there is a .9999 probability of light rain – the kind of rain that one can walk comfortably in if one uses an umbrella. It is hard to deny that Smith is reasonable to believe that

it will very probably rain, and therefore that he is justified in taking his umbrella with him, even if, mirabile dictu, it turns out that there is no rain during his walk.

To address the difference between the justification that seems required for propositional knowledge in cases of veritic luck and the justification that seems adequate for reasonable belief which is not knowledge, consider a distinction between precise justification (PJ) and loose justification (LJ). PJ is factive; i.e., if one is precisely justified in believing that *p*, then *p* is true on the basis of evidence *e*, which is also true. As Neta (2018, 43) puts it, since evidence is the source of substantive rational constraints on an agent's credal state, an agent's evidence must be true. This point is consistent with what Alvarez (2018, 161) calls "the factive turn," a current shift in epistemology toward the view that reasons which justify a belief are factual reasons. I propose that PJ is required for knowledge in epistemic situations involving veritic luck.[5]

LJ is not factive; i.e., it is possible for one to be roughly justified in believing that *q* on the basis of *e* and yet *q* is false. LJ is therefore fallibilistic. In practical situations, such as Smith's walk, LJ is sufficient for reasonable beliefs that turn out false and thus do not count as knowledge, assuming that knowledge is factive. LJ is adequate for practical affairs but not for knowledge when luck is present. As Sosa (2019, 152) writes, fallibilistic justification is not knowledge: "When one deduces a truth from a justified falsehood, with no other access to that truth, one's belief is not knowledge, since it is not even apt." It should be noted that the sort of practical reasons addressed here are practical *epistemic* reasons, since they support belief. These are not practical motivations for action. One might say that practical motivations for action are axiological; i.e., they are considerations that guide a seeker toward attaining some end the seeker deems valuable. For example, if one desires to attain goal G, and achieving means M is necessary to obtain G, then one will desire to act to achieve M. This is a standard view of practical rationality in the literature.[6] In contrast, epistemic reasons are supporting points of evidence directed at believing the truth. For instance, if one believes that the price of crude oil has recently increased and that such a surge tends to produce a corresponding increase in gasoline

[5] One might use 'warrant' to refer to PJ, since warrant is sometimes thought of as evidential support which guarantees that a belief is true. Warrant is thus factive.

[6] As John Broome (2010, 289) puts it: "It is commonly recognized that rationality requires you to intend what you believe is a necessary means to an end that you intend." And R. Jay Wallace (2020) writes: "Instrumental rationality, in its most basic form, instructs agents to take those means that are necessary in relation to their given ends. In the modern era, this form of rationality has widely been viewed as the single unproblematic requirement of practical reason."

prices, then one might conclude that the proposition "The price of gas will soon rise" is true.

Here is another jar experiment. The jar contains exactly 10,000 beans. 9,999 are red and one is blue. Smith is aware of the ratio. Smith is being held hostage by a madman who proposes the following: if Smith pulls exactly one bean from the jar and forms a true belief about its color, the madman will release Smith. Smith has a maximum of five seconds to do so. Smith accepts the proposal, believing reasonably that he has a very good chance of going free. He pulls the bean, and forms the belief that the bean is red. His belief is highly plausible, given the probability of .9999. Yet horribile dictu, the improbable happens: the bean is blue. For the practical purposes of this scenario, Smith's belief is loosely justified but false.

Now suppose that Smith pulls a red bean. In this case, his belief is true and fallibly justified. He says to himself "I knew I'd pull a red bean. Now, I'm going free!" Does his true belief count as propositional knowledge? Arguably not, since it is both logically and (to a minimal degree) epistemically possible that the pulled bean is blue, and Smith did not eliminate this relevant possibility before pulling the bean, since he did not have the time to do so. Hence, Smith's belief that the bean is red is loosely justified, though the looseness is a matter of very high probability – indicating a wide range for LJ, say, anywhere between greater than .5 and less than 1. However, Smith's belief is not precisely justified.

Invariantism or Contextualism?

Yet why isn't LJ sufficient for cases of knowledge which do not involve veritic luck? One might be inclined to hold that PJ is necessary for knowledge in cases involving veritic luck, but LJ is sufficient for knowledge regarding cases in which such luck is absent. This view might be construed as a version of epistemic contextualism in which the standard for knowledge varies according to the epistemic context; i.e., in cases of veritic luck, PJ is required, but in cases of absent luck, LJ does the job. However, as Belleri and Coliva (2019, 95) have argued, contextualism does not sufficiently handle the problem of veritic luck, and thus contextualism fails to account for Gettier problems, given that they involve luck. Moreover, one can construct arguments for the claim that epistemic invariantism is superior to contextualism. For example, Climenhaga (2021) argues that infallibilist invariantism provides a better explanation for several plausible epistemological claims than do versions of fallibilism and contextualism. For example, infallibilism offers a better explanation for why there is a lack of knowledge in Gettier cases, why knowledge is more valuable than non-knowledge, why knowledge enables rational action, and why knowledge permits one to stop inquiring into that which is known. Given the

weakness of contextualism and the strength of invariantism concerning veritic luck and other epistemic factors, one might reasonably conclude that PJ is required for all cases of propositional knowledge, and thus that the standard for justification is uniform across all cases. Consequently, justification is not fallibilistic.

But is infallible justification sufficient for knowledge? Suppose that *p* is true and Brown believes that *p*. Moreover, Brown believes evidence e_1, which entails *p*. Thus, *p* is epistemically certain for Brown. Hence, Brown has a true belief that is epistemically certain, or infallible, given e_1. Nevertheless, at the moment Brown formulates the belief that *p*, Brown is not aware of e_1, which is a dispositional belief for Brown. And Brown is not aware at this moment that e_1 entails *p*. Instead, Brown believes that *p* on the basis of e_2, which is fallible. In this case, arguably, Brown does not know that *p*. It might be that what Brown needs is the awareness that he possesses the occurrent beliefs that e_1 and that e_1 entails *p*, and moreover it might be that Brown should formulate his belief that *p* based on e_1. This suggests that propositional knowledge is a matter of S's having a precisely justified, true belief such that the precise justification is sufficient for epistemic certainty, and a matter of S's being sufficiently epistemically skilled in virtue of being aware that and how the belief is precisely justified. This awareness appears to be a kind of self-knowledge or knowledge by acquaintance with one's mental states.[7] The basing relation (i.e., S's basing his belief on the relevant evidence) seems to require this self-knowledge.

Conclusion

In this article, I have contended that, for items of propositional knowledge, PJ is required. PJ is factive. If *r* justifies *p*, then *p* is true on the basis of *r*, which is also true. Given *r*, one cannot be wrong that *p* if one forms the belief that *p* on the basis of *r*. In other words, PJ is sufficient for epistemic certainty.[8] Fallibilistic justification, or LJ, is insufficient for knowledge, though practically adequate for reasonable beliefs which fall short of the knowledge standard. Since Gettier-type cases contain fallibilistic justification and veritic luck, beliefs in such cases do not contain adequate

[7] The awareness cannot be a matter of propositional knowledge, for that would make the definition of propositional knowledge circular, since propositional knowledge would be defined in terms of propositional knowledge that one's belief is precisely justified.

[8] Here is a common analysis of epistemic certainty: if *p* is epistemically certain for S, then S cannot be wrong that *p* given S's evidence for *p*. Epistemic certainty differs from psychological certainty, which is a matter of one's being convinced or confident that one's belief is true. Psychological certainty is subjective; epistemic certainty is non-subjective. The claim that epistemic certainty is required for knowledge is consistent with several recent arguments, such as those of Moti Mizrani (2019) and Climenhaga (2021).

support to count as knowledge, though they contain enough to count as practically reasonable beliefs. Thus, in one sense, Gettier cases are examples of justified, true belief, since the justification is loose. However, in another sense, Gettier cases are not examples of justified, true belief since the justification is not precise. Gettier cases are thus germane to an ambiguity between two senses of justification: PJ and LJ. Such cases are matters of loosely justified, true belief – which is insufficient for knowledge, since knowledge seems to require precisely justified belief.

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