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50 Years of the Gettier Problem: A Review

Very few philosophical articles have had an impact on their field comparable to the one Edmund L. Gettier's short paper 'Is justified true belief knowledge?' published in *Analysis* in the year 1963 had on epistemology. Even though Gettier was not the first to pose counterexamples to the traditional view of knowledge as justified true belief; his paper triggered a completely unprecedented and intensive discussion about the correct definition of knowledge. New theories of knowledge – whether designed to solve the “Gettier problem” or not – began to develop, such as defeasibility theories, externalist theories etc. Apart from that, Gettier's paper helped trigger the development of new interests and topics in the field: The rise of social epistemology is just one example. Furthermore, as the immediate post-Gettier debate became more and more intricate and complicated, skepticism grew not only about the prospect of finding a correct definition of “knowledge”, but also about a certain kind of conceptual analysis in epistemology and in philosophy more generally. One struggles to think of any development in epistemology in the past 50 years that has not been, directly or indirectly, triggered by Gettier's paper.

The 50th anniversary of the publication of Gettier's paper is thus an excellent occasion to consider where we are 50 years later (post 2013). The main aim of this paper is not only to discuss the “Gettier problem” and potential “solutions” to it; but also to honor Gettier's contribution by exploring new directions in epistemology. Among the major questions to be considered are the following: How has Gettier's paper progressed epistemology? What was good about the changes it triggered?

So, we start with the standard definition of knowledge (in propositional sense) — going back to Plato — as Justified True Belief (JTB). This means that for something to count as knowledge, the epistemic agent's belief about a certain matter has to be both true and justified. For instance, let's say that S believes that the earth goes around the sun, rather than the other way around. This belief is, as far as we can tell, true. But can it be justified? That is, if someone asks S 'why S holds that belief?' - can S actually give an account of it? If yes, then S can say that 'I know that the earth goes around the sun'. Otherwise S can simply say that 'I am repeating something, heard or read somewhere else'. The latter account is pragmatically fine but it doesn't count as knowledge. Now, the above approach was fine for about two and a half millennia, until some people — like Bertrand Russell (*The Problems of Knowledge*) — began questioning it and thinking about its limitations. But the big splash on the definition of knowledge was triggered by the short paper by Gettier, which according to John L. Pollock “fundamentally altered the character of contemporary epistemology”.

In order to show the inadequacy of the traditional definition Gettier offered two counterexamples. In both these examples Gettier has shown the absence of knowledge in the presence of justified true belief.

In the first counterexample two men Smith and Jones are found to have applied for a job. Smith had been told by the president of the company that Jones would get the job. Further, Smith had counted the coins in Jones' pocket a few minutes ago. This gave Smith sufficient justification for believing the conjunctive proposition "Jones will get the job and Jones has ten coins in his pocket". Smith derives the proposition "The man who will get the job has ten coins in his pocket" from the conjunctive proposition. However, Smith gets the job, though he did not expect it. And unknown to Smith there were ten coins in his pocket. The proposition "The man

who will get the job has ten coins in his pocket" becomes true and Smith is justified in believing the proposition and he actually believes it. Thus, Smith has justified true belief but he cannot be said to know, for his being right in this case is due to chance or luck.

The second counterexample runs as follows. A person called Smith (not the same person as in the first example) has ample evidence, for believing the proposition (1) "Jones owns a Ford". The evidence may be that Jones has given Smith a ride while driving a Ford and he remembers that Jones had always in the past owned a Ford. Now Smith has a friend called Brown regarding whose whereabouts Smith is totally in the dark. Smith picks up three place names quite at random and constructs the following three disjunctive propositions:

- (2) Either Jones owns a Ford or Brown is in Boston
- (3) Either Jones owns a Ford or Brown is in Barcelona
- (4) Either Jones owns a Ford or Brown is in Brest Litovsk

All the three propositions (2), (3), and (4) are entailed by (1) and Smith knows that and comes to believe each of the propositions.

Surprisingly enough, Jones does not own a Ford. The car he is seen driving is a rented car. However, quite accidentally, Brown happens to be in Barcelona. The proposition (3) thus happens to be true. Smith is justified in believing the proposition and he believes it. But he has no knowledge about it for he does not know where at present Brown is.

These two counterexamples are, however, based on three presuppositions of which the first two are mentioned by Gettier himself.

The presuppositions are:

- (i) A person may be justified in believing a proposition which is in fact false.
- (ii) If S is justified in believing a proposition p and if p entails q and S derives q from p and comes to believe q as a result of this derivation, then S is justified in believing q.
- (iii) There may be false justifiers.

The reactions against Gettier took three forms:

- a) One consisted in questioning the genuineness of Gettier counterexamples. They are held suspect because the presuppositions on which they are based are found to be questionable. Some questioned the first presupposition, others the second, and some others the third;
- b) another in strengthening or modifying the traditional definition;
- c) the third consisted in giving a completely new definition.

The first response was for the epistemologists to seize the fact that Gettier cases depend on the presence of false premises and simply **amend the definition of knowledge to say that it is justified true belief that does not depend on false premises**. As it turns out, however, one can easily defeat this move by introducing more sophisticated Gettier cases that do not seem to depend on false premises, so called general Gettier-style problems.

Here is one possible scenario: I am walking through a park and I see a dog in the distance. I instantly form the belief that there is a dog in the park. This belief is justified by direct observation. It is also true, because as it happens there really is a dog in the park. Problem is, it's not the one I saw! The latter was, in fact, a robotic dog. So my belief is justified (it was formed

by normally reliable visual inspection), true (there is indeed a dog in the park), and arrived at without relying on any false premise. (Notice that the premise that my observations are reliable under normal conditions is not false.) And yet, we would be hard pressed to call this an instance of knowledge. It's more like a lucky coincidence.

There is a move that can be made by supporters of the no false lemma solution (Richard Feldman) to repair their argument, for instance adding that the epistemic agent needs to (consciously or even unconsciously) consider the possibility of both deception and self-deception, claiming knowledge only when those have been ruled out. The problem with that solution is that if we accept this then it turns out that we hold to a lot fewer justified beliefs than we think. A related, but distinct, move, is to say that Gettier cases are not exceptions to JTB because it does not make sense to say that one can justify something that is not true (Robert Almeder). That may be, but this moves the discussion away from the concept of knowledge and onto the concept of justification, which is both interesting and complicated. A completely different take is adopted by philosophers who have tried to “dissolve” rather than resolve the Gettier problem by agreeing that all cases of true belief, including accidental ones, count as knowledge (Crispin Sartwell). Thus we end up having much more knowledge than we thought; the bad news is that we have to count lucky coincidences as knowledge that are really hard to swallow for an epistemologist.

Regarding strengthening or modifying the JTB analysis, one option was suggested Fred Dretske (conclusive reasons) and separately by Robert Nozick, and is known as the “**truth tracking**” account: it basically says that the epistemic agent wouldn't believe proposition P if P were not true. This immediately leads to the question of what accounts for agents having this or that belief. A second modification of JTB is known as Richard Kirkham's skepticism, and it is an

acknowledgment of the fact that there will always be cases where the available evidence does not logically necessitate a given belief. This move in turn leads to a split: on the one hand one can simply embrace skepticism about knowledge and be done with it. On the other hand one can adopt a **fallibilist position** and agree that a belief can be rational even though it doesn't rise to the lofty level of knowledge.

The last area of discussions for the Gettier problems consists in providing the so-called “**fourth condition**” to the JTB account. One is represented by Alvin Goldman's causal theory of belief, which says that it is the truth of a given belief that causes the agent to hold to a belief in the proper manner (an improper manner would fall back into Gettier-style cases). This again raises the issue of how we account for the difference between appropriate and inappropriate beliefs (the very same question we have seen raised by one of the dissolution approaches, the one that says that Gettier cases involve a wrong concept of justification, as well as by the Dretske-Nozick response). Goldman himself was happy to proceed by invoking some form of reliabilism about justification, which will not be discussed in this paper.

Keith Lehrer and Thomas Paxson have advanced the possibility of defeasibility conditions: knowledge gets redefined as “undefeated” justified true belief (a justified true belief counts as knowledge if and only if it is also the case that, there is no further truth that, had the subject known it, could have defeated her present justification for the belief). The problem here is the notion of a defeater cannot be made precise enough to rule out the Gettier cases without also ruling out apriori (like logical and mathematical knowledge) cases of knowledge.

Finally we can talk about Roderick M Chisholm's non-defectively evident. Chisholm represents the traditional definition of knowledge as evident true belief. His own definition of knowledge as offered by him in the third edition of his *Theory of knowledge* is the following:-

H is known by S = Df = (i) H is true. (ii) S accepts H. (iii) H is evident for S and (iv) If H is defectively evident for S, then H is implied by a conjunction of propositions each of which is evident for S but not defectively evident for S. (Chisholm 98)

Chisholm defines "defectively evident" as – H is defectively evident for S = Df = (i) There is an e such that e makes H evident for S and (ii) Everything that makes H evident for S makes something that is false evident. (Chisholm 98)

Throughout all his endeavors to give definition of knowledge, it must be noticed, Chisholm's main motive was to eliminate what may be called the defectively evident. Now this definition can cope with Gettier's second counter example. In the second Gettier counter example, the fourth condition is not satisfied. Here the proposition H ("Either Jones owns a ford or Brown is in Barcelona") is made evident by the conjunctive proposition p ("Jones has a ford in his garage, Jones has been driving a ford, Jones has at all times in the past within Smith's memory owned a car and always a ford etc").

This conjunctive proposition also makes the false proposition "Jones owns a ford" evident. Thus the antecedent of the fourth condition namely "H is defectively evident" is fulfilled. The proposition H is implied trivially by the conjunction of H with p. But then everything that makes the conjuncts evident also makes the false proposition "Jones owns a ford" evident. Thus here the antecedent of the hypothetical is satisfied but the consequent remains

unfulfilled. The fourth clause of the definition is not satisfied. Since this is not a case of knowledge, this is what is desired.

Now the question is: so, after all this, what is the answer to Gettier-style problems? What is the true account of knowledge?

Unlike science, where we seek answers to questions determined by empirical evidence, philosophy explores possibilities in logical space. There are often many such possibilities, since the constraints imposed by logic are weaker than those imposed by empirical facts. At the end of this sort of discussion we are left with a much better appreciation for the question: what is knowledge? An exploration of several possible alternative accounts of knowledge, a number of options still standing, some of which may be more promising than others and a number of possibilities that need to be discarded because they just don't work when put under scrutiny. Philosophical progress is different from scientific progress. Philosophy is concerned with logical possibilities as opposed to empirical ones. That is why philosophers don't usually settle on one "correct" theory or analysis of anything. And that is how philosophy makes progress. And in this way Gettier's paper progressed epistemology.

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