Is Knowledge Justified True Belief?

The millennia old tripartite theory of knowledge was called into question when Gettier published his 1963 paper 'Is Knowledge Justified True Belief?', which features examples wherein the alleged necessary conditions for knowledge are met, yet the resulting belief is the product of luck. In the subsequent academic furore, a swathe of theories attempted to identify exactly where the problem lay, hoping to put forward an improved and possibly definitive definition of knowledge which would mitigate the issue of luck. I will compare virtue epistemology with infallibilism and argue that while both can avoid Gettier-style cases, the strictness of the latter theory severely limits its applicability. With its focus on character, however, virtue epistemology offers us a broader and more practical approach to knowledge.

First, we must identify what has gone wrong. Gettier presents a case in which the necessary conditions of justification, truth and belief seem to have been met: at a job interview, Smith forms a belief (the man with 10 coins in his pocket will get the job); Smith has evidence, i.e., a justification for his belief (he sees Jones counting money after the boss tells him Jones will get the job); while truth of the belief is apparently confirmed when a man with 10 coins is hired. The punchline is that the man in question is not Jones but Smith himself, with Jones being left to look for another job. On the surface, Plato's conditions for knowledge, as put forward in the Theaetetus (K = J + T + B) have been met, yet we intuitively feel that something is awry.

Our discomfort in saying that Smith 'knew' the outcome seems to stem from the element of coincidence inherent in this situation. Whilst all the elements align, Smith arrives at his conclusion by luck. When we check the time on a clock that, unbeknown to us, is broken, yet whose hands in the very moment that we look at them align with the correct time, our proclamation of the time may be correct, but only luckily so. Gettier's essay has alerted us to the fact that even if justification, truth and belief are necessary conditions for propositional knowledge, they are not sufficient. If we can satisfy these conditions yet be luckily correct, the definition either still lacks a condition, or at least one of the existing conditions needs strengthening. This latter approach is at the heart of infallibilism, which seeks to strengthen what counts as justification.

Infallibilism claims that knowledge is the result of a true belief the justification of which is so strong that it cannot be rationally doubted. This is not a question of subjectively feeling certain about a given proposition, but rather that the strength of the justification guarantees the truth of the belief. If there is a ring of deductive-sounding logic here, it should come as no surprise that the main proponents of infallibilism, e.g., Descartes, Leibniz, were themselves rationalists, and that, as I will argue, infallibilism suffers from the same epistemic limitations as rationalism, i.e., how much does this way of operating really allow us to know?

What counts as an infallible justification? The proposition 'I believe it will rain next Wednesday' clearly will not do. This can be doubted without contradiction: 'I believe it will not rain' is as sensical (considerations of living in England aside), as 'I believe it will not rain'. 'I believe I had breakfast' can be doubted without contradiction; memory might have failed us, we might have been so busy at breakfast that we were almost unaware of eating and

simply wish, upon feeling hungry before lunch, to be sure we that had breakfast, though we might not have. Better candidates would be 'I believe I exist', 'I believe I am in pain' and 'I believe 2 + 2 = 4'. The denial of any of these statements results in a contradiction, e.g., if I doubt I exist, who is that is doing the doubting? Thus, we now have some candidates for certainty.

By strengthening the justification criteria to include certainty, our revised JTB formula is more robust: because I cannot doubt that I am in pain without generating a contradiction, I can be sure that the belief I have (that I am in pain) stems from indubitable evidence (my pain, the doubting of which would be as incoherent as doubting my own existence), which therefore must be true. Given that all three necessary (and now strengthened) conditions have been met, I am entitled to draw the conclusion: I know I am in pain. How then does this more stringent version of JTB apply to Gettier-style cases?

Smith is correct in asserting that the man with 10 coins in his pocket will get the job. His assertion has been said to align with the truth in some sense, but does not count as knowledge, the factor of luck having precluded that. The problem seemed to lie in the conditions themselves which, on the face of it, Smith had met. On closer inspection, we might argue that Smith's evidence did not meet the stricter criteria of indubitable evidence. Doubt arises from the ambiguity in the phrase 'the man with 10 coins', since either Jones or Smith could be the man with 10 coins. '**A** man with 10 coins' might have provided leeway but is still ambiguous. The overall ambiguity is what leads Smith to form a luckily true belief, rather than an indubitably true one. Infallibilism clears the way for us and shows that Smith's cannot be a case of knowledge, since his evidence was vulnerable to misinterpretation. By rejecting weak justifications, infallibilism hopes to avoid Gettier-style cases. Are we then to accept that knowledge is a justified true belief which cannot be rationally doubted?

Whilst we must concede some initial success to infallibilism, a number of weaknesses soon become apparent. First, there appear to be few things that cannot be rationally doubted, a criticism often levelled at Descartes' rationalist project. Beyond his own existence, God and the triangles, how much could he claim to 'know'? Indubitable seems too strict a criterion to impose, arguably resulting in an impoverished storehouse of knowledge. Second, definitions work best when they are descriptive rather than prescriptive, and by excluding all elements of doubt from 'knowing' seems to urge us to use this term in a new and highly restricted manner, one that does not conform to everyday practice. We might accuse of infallibilism is failing to solve the problem by simply redefining what the problem consists of. The infallibilist could respond by saying that our common-sense terms need a radical overhaul and that in order to make true epistemic progress, we need to become far more stringent with our terminology. To accept this line of reasoning, however, would require us to jettison many of the things that we conveniently do claim to know. Infallibilism, for all its initial appeal, comes to seem like a hermetic and impractical solution, one which has not, I would argue, furnished us with a clearer definition of knowledge.

More viable is the solution presented by virtue epistemology. Developed from Aristotelian ethics, virtue epistemology is similarly agent-centred, looking at which character traits might lead a person to consistently attain the truth throughout their various endeavours, rather than in isolated cases. Unlike infallibilism, which retains the original formula but resubmits it

in strengthened form, VE replaces the justification condition with epistemic virtue (V): K = V + T + B. What then is an epistemic virtue?

Aristotle's ethical virtues (humility, courage, truthfulness, etc.,) are not dissimilar to Sosa and Zagzebski's epistemic virtues, which include these plus autonomy, empathy, perseverance, to name but a few. How do such so-called epistemic virtues lead to knowledge? In a nod to reliabilism which extends to the overall personality of the individual rather than to a single reliable process, we may consider the following example:

A climate scientist wishing to make predictions about melting icecaps does the following: avoids emotion in their thinking, consults multiple sources and conducts multiple versions of the same or similar experiments, constructs theoretical models, engages in peer reviews and is responsive to feedback. In order words, the scientist does everything possible to increase the likelihood of attaining the truth. A person engaging in such a process and doing habitually rather than just in this one instance, is displaying epistemic virtue. For Sosa, there is a triple A requirement that will ensure we are on the epistemically virtuous track, made vivid by his archery analogy:

1. Accuracy – if the arrow hits its target;
2. Adroitness – if the shot is skilful, i.e., not all shots do hit the mark, the more skill the archer has, the more often the shots succeed;
3. Aptness – if the shot hits its target (accurate) and is the result of skill, the shot is apt.

Of the three, accuracy is the condition that is prone to luck: we might hit the target by accident rather than skill. If so, we must deny the shot's aptness. The shot was not the result of virtue in Aristotle's sense of virtue = skill. Applied to the climate scientist, their discovery of certain factors in melting icecaps has been due to a rigorous process of reviewing information, checking facts and determinedly searching for the truth, an ethic or attitude they bring to bear in every aspect of their lives, i.e., they are the kind of person who searches for the truth. Given this disposition and their cumulative experience of looking for the truth, they have consequently become skilled at finding it, and the results of their new experiment are the fruits of this epistemically virtuous disposition. It is in such cases that Sosa claims the knower to have an apt belief, i.e., they know. Applying this epistemic hygiene to Smith's luckily true belief, we can see clearly that the belief about 10 coins contains no skill whatsoever. Assuming ourselves to be epistemically virtuous, we would not want to take Smith's word for anything. Thus, we might formulate virtue epistemology as a maxim: *those who achieve the most truth are those who strive to find it*. Virtue epistemology neither rejects justification nor seeks to strengthen it, but rather places justification within a framework of personality traits, all of which propel the knower to practice epistemic rigour.

Are we then able to say that, by rejecting Smith, virtue epistemology gives us a non-controversial definition of knowledge? Smith's belief is clearly not true because of virtue, and must be discounted; hence, no problem arises in the first place. It is clearly plain luck and not knowledge. Earlier, it was argued that infallibilism's strictness takes us too far from our ordinary sense of 'know'. Is virtue epistemology not open to a similar criticism? All people claim to know something, yet how common is epistemic virtue? How often is

information received and accepted without being fact-checked, yet who would want to discount such instances as knowledge? Arguably, most school children accept as true their teacher's proclamation that Britain lost to the Normans in 1066. Are we to believe that these children do not know this because they have not cultivated the epistemically virtuous disposition to check their teacher's claims by reading Hume's History of England? Does not virtue epistemology run the risk of excluding more every day, practical uses of 'know' in favour of putting forward its own, highly specialised definition, one to which few could hope to consistently aspire? Is not virtue epistemology merely another prescriptive view of what knowledge ought to be, rather than is?

While there may be a degree of truth to these criticisms, I would argue that rather than explicitly seeking to exclude doubt as infallibilism does (which in turn seeks to justify a highly restrictive definition of knowledge borne out of rationalist necessity) virtue epistemology is far more pragmatic and open, recommending not rigidity, but prudence. What it advocates is that we all take care to enable us to reach the truth more often, and indeed for us to value truth more in the first place. Virtue epistemology certainly represents an ideal, but it recommends the cultivation of positive character traits, the results of which would likely be a more truth-appreciating and communicative society, one in which ideas would be open to scrutiny and feedback. Virtue epistemology is a relatively new area and requires further investigation.

Gettier's essay drew attention to a seemingly hitherto neglected issue with the tripartite theory of knowledge, namely the problem of luck. Of the two theories considered, virtue epistemology is the stronger response. Infallibilism's reductiveness severely limits its applicability and suffers from being a prescriptive rather than descriptive definition. Arguably open to the same charge, virtue epistemology turns out to be a much more fluid theory, one that encourages a sense of open-mindedness, thus refuting the charge of narrowness. Virtue epistemology can clearly state that Smith's belief is the product of luck rather than skill, enabling it to deal effectively with Gettier-style cases, whilst also proposing a way of living that will increase our chances of attaining the truth, and hence knowledge. Virtue epistemology may not yet be an all-encompassing answer to the question: what is knowledge?, but it sets out measurable criteria for distinguishing between skill and coincidence.